



LUNDS
UNIVERSITET

Book of Abstracts

SCORAI Europe Conference 2025

8-10 APRIL 2025, LUND SWEDEN



EDITORS

Dr. Matthias Lehner (*Conference Chair*)

Senior Lecturer, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Dr. Jessika Luth Richter

Associate Senior Lecturer, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Josefine Henman

Doctoral Student, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Marianne Ekdahl

Project Assistant, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Prof. Göran Finnveden

Professor of Environmental Strategic Analysis, Department of Sustainable Development, Environmental Sciences and Engineering, KTH Royal Institute of Technology, Sweden

Assoc. Prof. Marlyne Sahakian

Associate Professor of Sociology, Department of Sociology, University of Geneva, Switzerland

Prof. Oksana Mont

Professor in Sustainable Consumption Governance, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Prof. Doris Fuchs

Director, Research Institute for Sustainability – Helmholtz Centre Potsdam (RIFS), Germany
Professor of Sustainable Development, University of Münster

Prof. Mikael Klintman

Professor of Sociology, Department of Sociology, Lund University, Sweden

This Book of Abstracts represents the entire agenda for the **SCORAI Europe 2025 Conference**, 8-10 April 2025, Lund, Sweden. Abstracts underwent a double-blind peer-review process facilitated by the conference's Scientific Committee.

The SCORAI Europe Conference 2025 was supported by:

- The EU Horizon EU 1.5° Lifestyle Project
- The Mistra Sustainable Consumption Programme
- The SCORAI Europe Network
- The International Institute for Industrial Environmental Economics at Lund University



A publication by:

The International Institute for Industrial Environmental Economics (IIIEE) at Lund University

ISBN: 978-91-8104-559-8

Cover Image Front "Keynote audience" by Håkan Rodhe

Cover Image Back "Blommande magnolia" by Mikael Risedal

Published in 2025 by IIIEE, Lund University, P.O. Box 117, 221 00 Lund, Sweden, Te.: +46 46 222 02 00, e-mail: iiiec@iiiee.lu.se

SCIENTIFIC COMMITTEE

Prof. Aimée Ambrose

Professor of Energy Policy, Centre for Regional Economic and Social Research (CRESR), Sheffield Hallam University, United Kingdom

Dr. David Andersson

Researcher, Division of Physical Resource Theory, Department of Space, Earth and Environment, Chalmers University of Technology, Sweden

Dr. Shoaib Azizi

Senior Researcher in Digitalization and Climate Impacts, KTH Royal Institute of Technology, Sweden

Ms. Julia Backhaus

Research Associate, Living Labs Incubator, Human Technology Centre (HumTec), RWTH Aachen University, Germany

Prof. Françoise Bartiaux

Professor and Senior Scientist, Institute for the Analysis of Change in Contemporary and Historical Societies (IACCHOS), Université catholique de Louvain, Belgium

Ms. Lea Melissa Becker

Research Associate, Research Institute for Sustainability (RIFS), Helmholtz Centre Potsdam, Germany

Dr. Alexandra Benitez Burgos

Lecturer of Marketing, Amsterdam University of Applied Sciences (HvA), Netherlands

Prof. Karin Bradley

Professor of Urban and Regional Studies, Department of Urban Planning and Environment, KTH Royal Institute of Technology, Sweden

Dr. Janis Brizga

Researcher, Department of Geography and Earth Sciences, University of Latvia; Head of the Board, NGO Green Liberty, Latvia

Prof. Kate Burningham

Professor in Sociology of the Environment, Department of Sociology, University of Surrey, United Kingdom

Dr. Luca Coscieme

Programme Lead for Sustainable Lifestyles, Hot or Cool Institute, Germany

Prof. Dr. Maria Csutora

Professor of Sustainability Management, Corvinus University of Budapest, Hungary

Dr. Annelise de Jong

Researcher, IVL Swedish Environmental Research Institute, Sweden

Fürspr. Rico Defila

Senior Researcher, Department of Sociology, University of Basel, Switzerland

Prof. Piergiorgio Degli Esposti

Associate Professor, Department of Sociology and Business Law, University of Bologna, Italy

Dr. Antonietta Di Giulio

Senior Researcher, Program Man-Society-Environment (MGU), University of Basel, Switzerland

Prof. Angela Druckman

Emerita Professor of Sustainable Consumption and Production, University of Surrey, United Kingdom

Prof. Dr. Adina Dumitru

Professor of Psychology and Director of the Sustainability Specialization Campus, University of A Coruña, Spain

Dr. Patrick Elf

Associate Professor of Sustainable Business, Centre for Enterprise, Environment and Development Research (CEEDR), Middlesex University, United Kingdom

Ms. Ana Espinosa-Seguí

Lecturer and Researcher, Department of Human Geography, University of Alicante, Spain

Prof. Frances Fahy

Established Professor of Geography, School of Geography, Archaeology and Irish Studies, University of Galway, Ireland

Prof. Göran Finnveden

Professor of Environmental Strategic Analysis, Department of Sustainable Development, Environmental Sciences and Engineering, KTH Royal Institute of Technology, Sweden

Prof. Dr. Doris Fuchs

Director, Research Institute for Sustainability – Helmholtz Centre Potsdam (RIFS), Germany
Professor of Sustainable Development, University of Münster, Germany

Dr. Anna Furberg

Postdoctoral Researcher, Department of Sustainable Development, Environmental Science and Engineering, KTH Royal Institute of Technology, Sweden

Dr. María Purificación García Miguélez

Associate Professor of Labor Law and Social Security Law, University of León, Spain

Dr. Mary Greene

Assistant Professor, Environmental Policy Group, Wageningen University, The Netherlands

Dr. Georgina Guillen-Hanson

Postdoctoral Researcher, Gamification Group, Tampere University, Finland

Prof. Mattias Höjer

Professor of Environmental Strategies and Futures Studies, Department of Sustainable Development, Environmental Science and Engineering, KTH Royal Institute of Technology, Sweden

Dr. Tullia Jack

Associate Senior Lecturer, Department of Service Studies, Lund University, Sweden

Prof. Johan Jansson

Professor of Business Administration with specialization in Marketing, Umeå School of Business, Economics and Statistics, Umeå University, Sweden

Dr. Steffen Kallbekken

Research Director, Climate Economics Group, CICERO Center for International Climate Research, Norway

Dr. Minna Kanerva

Senior Researcher, Sustainability Research Center (artec), University of Bremen, Germany

Prof. Mikael Klintman

Professor of Sociology, Department of Sociology, Lund University, Sweden

Dr. Halliki Kreinin

Senior Research Associate, Research Institute for Sustainability (RIFS), Helmholtz Centre Potsdam, Germany

Dr. Kārlis Lakševics

Researcher, University of Latvia; Member, NGO Green Liberty, Latvia

Dr. Gracia María Lanza Castillo

Research Team Lead, ecolytiq GmbH, Germany; Postdoctoral Fellow, Georg-August-Universität Göttingen, Germany

Dr. Jörgen Larsson

Associate Professor, Division of Physical Resource Theory, Department of Space, Earth and Environment, Chalmers University of Technology, Sweden

Dr. Matthias Lehner

Associate Senior Lecturer, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Dr. Michael Lettenmeier

Managing Director, D-mat Ltd., Finland

Dr. Sofia Lingegård

Researcher, Division of Water and Environmental Engineering, KTH Royal Institute of Technology, Sweden

Dr. Sylvia Lorek

Chair, Sustainable Europe Research Institute (SERI) Germany e.V., Germany

Dr. Luisa Losada-Puente

Assistant Professor, Department of Specific Didactics and Research Methods and Diagnosis in Education, University of A Coruña, Spain

Ms. Line Valdorff Madsen

Researcher, Department of the Built Environment, Aalborg University, Denmark

Dr. Pia Mamut

Senior Researcher, Research Institute for Sustainability (RIFS), Helmholtz Centre Potsdam, Germany

Dr. Jack McCarthy

Head of Research, Rediscovery Centre, Ireland

Prof. Oksana Mont

Professor of Sustainable Consumption Governance, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Ms. Heike Müller

Researcher in Subject-Matter Didactics (Work Studies), Technische Universität Berlin, Germany

Prof. Luis Mundaca

Professor, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Dr. Jonas Nässén

Senior Researcher, Division of Physical Resource Theory, Department of Space, Earth and Environment, Chalmers University of Technology, Sweden

Dr. Nathalie Ortar

Senior Researcher in Anthropology, Laboratoire Aménagement Économie Transports (LAET), ENTPE – University of Lyon, France

Dr. Bryony Parrish

Postdoctoral Researcher, Environmental Change Institute, University of Oxford, United Kingdom

Dr. Andrius Plepys

Lecturer and Project Manager, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Prof. Dr. Henrike Rau

Professor of Social Geography and Sustainability, Department of Geography, Ludwig-Maximilians-Universität München (LMU Munich), Germany

Dr. Jessika Richter

Associate Senior Lecturer, International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Dr. Marlyne Sahakian

Associate Professor of Sociology, Department of Sociology, University of Geneva, Switzerland

Dr. Prof. Laura Scherer

Associate Professor, Institute of Environmental Sciences (CML), Leiden University, The Netherlands

Dr. Filip Schmidt

Assistant Professor, Department of Social Practice Research and Theory, Faculty of Sociology, Adam Mickiewicz University, Poland

Dr. Iljana Schubert

Senior Researcher, Sustainability Research Group, University of Basel, Switzerland

Dr. Sara Skarp

Postdoctoral Fellow, Department of Sociology, Lund University, Sweden

Dr. Bas Spierings

Associate Professor in Urban Geography, Department of Human Geography and Spatial Planning, Utrecht University, The Netherlands

Dr. Elisabeth Süßbauer

Head of Junior Research Group "PuR – Systemic Solutions for Packaging Prevention", Center for Technology and Society, Technische Universität Berlin, Germany

Dr. Åsa Svenfelt

Associate Professor in Urban and Regional Planning, Department of Culture and Society, Linköping University, Sweden

Ms. Virvatuli Viveka Uusimäki

Consultant, D-mat oy, Finland

Dr. Edina Vadovics

Research Director, GreenDependent Institute, Hungary

Mr. Kristóf Vadovics

Executive Director, GreenDependent Institute, Hungary

Prof. José Luis Vázquez Burguete

Professor, Department of Management and Business Economics, University of León, Spain

Dr. Sari Verachtert

Postdoctoral Fellow, Department of Psychology, Norwegian University of Science and Technology (NTNU), Norway

Dr. Emilie Vrain

Senior Research Associate, Environmental Change Institute, University of Oxford, United Kingdom

Prof. I-Liang Wahn

Professor, Department of Sociology, Tunghai University, Taiwan

Mr. Stephan Wallaschkowski

Researcher and Lecturer, Bochum University of Applied Sciences and Leuphana University Lüneburg, Germany

Dr. Daniel Welch

Senior Lecturer in Sociology, Sustainable Consumption Institute, University of Manchester, United Kingdom

CONFERENCE AGENDA & ABSTRACTS

Date: Tuesday, 08/Apr/2025

8:00am - 9:00am Registration

9:00am - 9:20am Welcome speech

Location: **Stora Salen**

Session Chair: **Matthias Lehner**

Keynote Frank Trentmann - Consumption and Sustainability: History of a Troubled Relationship

Location: **Stora Salen**

Session Chair: **Jörgen Larsson**

In this keynote, I will pair the history of consumption with that of sustainability. Our contemporary interest in sustainability is frequently seen as a reaction to mass consumption since the Second World War and the environmental damage resulting from it. This is too convenient and wrong. Instead, the rise of consumption and sustainability needs to be understood as an intertwined process running across modern times. The talk will unfold this longer history and highlight key stages. In a first part, we will follow the dynamic of a new consumer culture emerging after c. 1600 and the role of novelty, empire and a mental shift towards a material self. Concerns about development and conservation arose in response in central Europe and the Scottish Highlands in the 17th and 18th centuries: these led to the first formulations of "sustainable" ("nachhaltige") policies. The meanings of "sustainability" underwent a transformation in the 1970s-2000s, as the "limits to growth" gave way to the Brundtland report. Consumption acquired new prominence in the Sustainable Development Goals (SDG 12), but it had become linked to a paradigm of choice and markets with an individual conception of the consumer that was radically different to earlier ideas. In a second part, the talk will zoom in on three mundane fields of consumption in everyday life: water, energy, and mobility. Each of these has seen dramatic growth in the nineteenth and twentieth centuries and each of them has been the subject of interventions to promote a more sustainable of resources, with mixed results. These examples show how consumption is shaped by social habits, norms and politics, and not merely by choice and technology. Understanding this history, therefore, is not merely background knowledge but an integral element in the dynamics of consumption to the present.

9:20am - 10:25am

Consumption corridors: guaranteeing human wellbeing through upper and lower limits to consumption

10:30am - 12:15pm

Location: **Stora Salen**

Session Chair: **Marlyne Sahakian**

Session Chair: **Doris Fuchs**

Session Chair: **Rico Defila**

Session Chair: **Antonietta Di Giulio**

Advancing the concept of consumption corridors: focusing on production and inter- vs. intra-sectoral corridors

Richard Bärnthaler

University of Leeds, United Kingdom

This contribution seeks to advance the concept of consumption corridors. In particular, it will argue that the literature on consumption corridors – despite taking, in principle, a holistic view on consumption-production systems – insufficiently addresses the *production* of (over-)consumption. This comes with theoretical, political, and policy implications. To address these shortcomings, the concept of production corridors (Bärnthaler & Gough 2023) needs to complement consumption corridors. In addition, the contribution suggests a further conceptual distinction between intra- and inter-sectoral corridors (Bärnthaler 2024). Inter-sectoral corridors gained prominence during the Covid-19 pandemic, underscoring the varying importance of different sectors. Essential sectors, such as health, care, housing, energy, and water, are vital to satisfy human needs, while others, like the luxury industry and extractive finance, can be suspended without jeopardising human well-being. Examining corridors from an inter-sectoral perspective necessitates decisions *between* sectors, involving assessments of 'essentiality.' The intra-sectoral perspective, in contrast, involves decisions *within* specific sectors, such as housing or utilities. Examples, potentials, and challenges for implementing inter- and intra-sectoral corridors will be discussed.

Defining Consumption Corridor Pathways: Modelling Decent Living Standards within Sustainable Resource Limits

Frederike Arp^{1,2}, Johan Andrés Vélez-Henao³, Luja von Köckritz^{1,2}, Sebastiaan Deetman⁴, Vassilis Daioglou^{1,2}, Roel Brouwer⁵, Raoul Schram⁵, Christine Staiger⁵, Stefan Pauliuk³, Detlef P. van Vuuren^{1,2}

¹Copernicus Institute of Sustainable Development, Utrecht University, Utrecht, the Netherlands; ²PBL Netherlands Environmental Assessment Agency, The Hague, The Netherlands; ³Faculty of Environment and Natural Resources, University of Freiburg, Freiburg, Germany; ⁴Institute of Environmental Sciences (CML), Leiden University, Leiden, The Netherlands; ⁵Information and Technology Services, Utrecht University, Utrecht, The Netherlands

Problem Definition

Achieving sustainable consumption patterns is crucial to meeting global climate and environmental targets. At the same time, global achievement of decent living standards (DLS) will certainly require a

vast amount of resource use. Existing integrated assessment models (IAM) study both the achievement of human needs and resource consumption, but so far no attempt has yet been made to explore how DLS can be fulfilled while limiting primary resource consumption to a sustainable level. This study aims to explore how we can stay within safe boundaries in future scenarios while achieving DLS in terms of resources. We do this using the IAM IMAGE and focus on different scenarios that simultaneously consider sustainability goals and material use in the categories of metals, non-metallic minerals, biomass, and fossils.

Method

The integrated assessment model IMAGE aims to represent the interactions between human activities and the environment across sectors like energy and land use, enabling the exploration of future socio-economic and environmental scenarios. With recent advancements in more detailed resource supply and demand modelling in IMAGE, we provide a framework for assessing DLS in a holistic manner. A bottom-up material flow analysis (MFA) connected to the sectors like buildings, transport, and energy, and top-down calculation of total material demand to enrich the MFA results is applied to project the total demand. This simulation will be connected to previous work by Vélez-Henao & Pauliuk (2023) who defined the material requirements for DLS. The scenarios will be constrained by the DLS material requirements and different sustainability and climate-related targets, as well as a combined scenario.

Expected Results

Several key findings are expected from this study. First, we aim to analyse whether feasible pathways can be identified that maintain material consumption within a set of sustainability goals, thus providing a corridor between a lower boundary (achieving DLS) and an upper boundary (within environmental limits). We expect that these scenarios are likely to show that current consumption patterns, particularly in high-income regions, will need to be significantly reduced in order to achieve sustainability targets, while low-income regions will still have a high demand for resources to achieve DLS. It can be expected that the limits for material consumption will differ between regions, reflecting local environmental, and socio-economic conditions.

Significance to Mainstreaming Sustainable Consumption

This research effort contributes to the mainstreaming of sustainable consumption by providing a concrete framework for defining material demand pathways within a safe consumption corridor for DLS in a sustainable world. By setting a lower and upper limit for resource consumption, this study provides an important tool for policy makers to achieve human well-being with sustainability. Furthermore, the disaggregation of sectors can help to identify hotspots of unsustainable consumption and allows us to analyse shifts in consumption patterns.

Challenges in Implementing Consumption Corridors: Attitudes Toward Choices of Transport Modes in Poland

Anna Horodecka¹, Jolanta Zralek²

¹Warsaw School of Economics, Poland; ²University of Economics in Katowice, Poland

Problem definition:

The concept of "Consumption Corridors" aims to establish minimum and maximum consumption limits to ensure equitable access to essential services while maintaining environmental sustainability. In Poland, rising incomes have led to increased private vehicle ownership and a decline in public transport usage—a form of self-exclusion from public goods associated with higher income levels. This shift is driven by desires for comfort, time-saving, and the "keeping up with the Joneses" effect, reflecting economic and social status and conspicuous consumption. This trend exacerbates environmental impacts and social inequalities since reduced public transport usage results in decreased funding, leading to service cuts and transport exclusion for lower-income populations who rely on these services. This research explores the attitudes of Polish citizens resulting from government policies, rising incomes, transport exclusion, self-exclusion from public goods, and conspicuous consumption, drawing insights from measures adopted in other EU countries that experienced similar trends before Poland.

Method:

The study conducts a focused analysis of current literature related to people's attitudes towards mobility choices influenced by rising incomes, transport exclusion, self-exclusion, conspicuous consumption, and policy measures. It also considers survey results on people's attitudes and motivations. The research examines specific measures such as taxing high-emission and luxury vehicles, implementing low-emission zones that restrict access for certain vehicle types, and evaluating the availability, accessibility, and reliability of public/shared transport options

Results:

The findings reveal that rising incomes in Poland correlate with increased private car ownership—also influenced by conspicuous consumption patterns—and decreased public transport usage, indicating a shift in attitudes. Literature insights highlight factors such as comfort, economic and social status, time-saving, accessibility, and reliability of transport (including strikes and traffic jams) that contribute to the preference for private transport. This decrease in public transport patronage reduces funding, leading to service cutbacks and further limiting access for those dependent on these services. Grassroots movements in Poland, such as youth protests demanding affordable public transport (e.g.,

a 50 PLN monthly ticket), underscore the societal impact of these trends.
Significance to mainstreaming sustainable consumption:

This research underscores the importance of addressing rising incomes and public transport exclusion to effectively implement Consumption Corridors in Poland. By focusing on government measures and learning from the successes and failures of EU countries that experienced income rises earlier, the study provides actionable insights for policymakers. Strategies such as imposing higher taxes on luxury and high-emission vehicles, restricting urban access for such vehicles, increasing parking taxes, and enhancing preferential treatment for public transport (e.g., dedicated bus lanes), along with improving bike lanes and ensuring public transport accessibility and reliability—both physically and financially—are crucial. These measures aim to incentivize a shift away from private vehicle dependence and promote shared or public transport alternatives, especially in less accessible areas.

Access to clothing in a context of material abundance: the role of income

Irene Maldini, Kirsi Laitala

Oslo Metropolitan University, Norway

Problem definition

Reducing consumption in affluent societies is essential to achieving social justice within planetary boundaries (Alfredsson et al., 2018; Lorek and Fuchs, 2019). However, clothing consumption volumes continue to grow in affluent regions, together with their associated environmental impact (Niinimäki et al. 2020). For example, the quantity of new clothing and footwear sold in Europe increased by 21% between 2000 and 2019 (Manshoven et al., 2023). The per capita volume of new clothing consumed is a key indicator of the sector's environmental impact, as production accounts for most of the lifecycle environmental burdens. This volume varies significantly across and within nations, influenced by factors such as gender, age, and income (Coscieme et al., 2022; Laitala & Klepp, 2020).

This paper examines how the relationship between household income and clothing consumption can inform policies aimed at reducing overall clothing volumes in affluent economies while maintaining access for lower-income individuals, aligned with the concept of consumption corridors (Di Giulio and Fuchs, 2014). Lower-income individuals in affluent regions have access to significant volumes of clothing, due to falling prices of new products and through alternative channels such as donations and second-hand markets. Globally, the consumer price index for clothing decreased by 32% between 1996 and 2020 (World Bank, 2024). The growing volumes of reusable clothing disposal have led to an expansion of second-hand markets (Lingås et al. 2023), and people of lower income tend to acquire more preowned garments (Laitala & Klepp 2020). However, greater inequalities in terms of freedom of choice and the quality and types of garments accessible to lower-income groups are expected.

Method

The study explores the relationship between household income and clothing consumption volumes across five affluent nations, based on two consumer surveys. The first survey was conducted in Germany, Japan, the UK, and the USA in 2019 (N=881), while the second was conducted in Norway in 2023 (N=1200). A regression analysis was performed using data from these surveys, including individual demographics and clothing acquisition practices. Previous research about inequality in clothing acquisition and ownership has used statistical data about expenditure (Coscieme et al., 2022). In this study, we build on the number of clothes owned and acquired as reported by their users.

Results

Preliminary analysis shows that, after controlling for gender and age, income level does not significantly influence the total number of clothing acquisitions when all acquisition forms are considered, including gifts, hand-me-downs and purchased second-hand clothing. This aligns with expectations given the overabundance of clothing in affluent economies. However, particularly in Norway, income is positively and significantly correlated with a higher number of purchases of new clothing items as well as increase in clothing expenditure. Additionally, the average price of acquired clothing is strongly influenced by income.

Significance to mainstreaming sustainable consumption

Building on this analysis, we reflect on the implications for future policies aimed at enabling lower and more equitable consumption levels in affluent economies, considering the role of various stakeholders such as clothing companies, charities, and clothing resellers.

How many clothes are enough? The right to adequate clothing.

Megan Fames

University of Manchester, United Kingdom

Clothing is essential and forms a fundamental part of our everyday lives. It is perhaps because of this familiarity that it is often taken for granted. The right to adequate clothing is a basic human right, listed under Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966, which recognises everyone's right to an adequate standard of living. This means that adequate clothing should be available and accessible for consumption by all. However, despite billions of new garments being produced, consumed and disposed of each year, clothing deprivation and inadequacy

is a problem faced by many. Despite the right to adequate clothing being an extremely visual expression of one's dignity, it is a human right which has been given scarce attention or evaluation, compared to other needs (e.g. food and shelter), alluding to its status as a forgotten right. Due to the poorly defined nature of the right to adequate clothing, claims for such a right are not being made.

Could imposing upper and lower limits to clothing consumption support a more equitable society, whilst also working towards a just and safe environment for future generations? In line with the concept of sustainable consumption corridors and human rights' minimum and maximum standards, this research explores whether it is possible to define an "adequate" amount of clothing. The research seeks to offer an approach to environmentally sustainable fashion which not only has sustainability benefits but also increases clothing accessibility for the clothing deprived.

This study uses qualitative semi-structured interviews with individuals who have experienced clothing deprivation. Using grounded theory and affect theory, the research explores the meaning of clothing (in)adequacy. The act of dressing is both intensely private and inherently social, and it is a practice that manifests in multiple social, cultural, economic, and aesthetic dimensions. In gaining a deeper understanding of the complexity of people's sartorial choices, there is scope to better understand and advance the field of sustainable fashion and consumption. Furthermore, in analysing a group who have previously been disregarded from clothing consumption studies, the research provides a deeper understanding of the role clothing and consumption plays in everyday life. It also provides an opportunity to learn from a group who have valuable knowledge and lived experience with strategies for living with less.

Data collection from the semi-structured interviews will be completed in January 2025.

Universal Basic Services in Finland: public support and potential implications

Alessia Greselin¹, Tuuli Hirvilammi¹, Sini Numminen²

¹University of Tampere, Finland; ²Aalto University, Finland

Problem definition

Welfare states with extensive public services have played a major role in providing wellbeing and regulating the consumption patterns of individuals and households. Recently, it has been suggested that welfare states should be revised to further develop this potential when steering societies towards planetary boundaries. Research discussion on sustainable welfare and eco-social policies acknowledge the need for welfare state to consider environmental boundaries, break their interdependencies with the current growth-driven economic system and design public policies that proactively pursue social and ecological goals. These proposals include Universal Basic Services (UBS). The idea of UBS entails the use of services, goods and infrastructures that allow individuals to participate in society either for free or at an affordable cost, thus making consumption a public matter. It has been increasingly discussed also in post-growth as it is strictly connected to the idea of sufficiency because it promises to provide enough for all "so that everyone can have enough" (Coote, 2023).

Certain universal services already exist and, in fact, have traditionally constituted the backbone of welfare states - especially in Nordic countries – such as healthcare or education. When it comes to energy and water, they are rarely provided free-of-charge. However, in countries where there has been absolute energy poverty or water poverty and large segments of population have lacked complete access to these services, minimum standards have been proposed (see Pachauri, 2014).

Method

In this paper, we explore public support for UBS in the Finnish welfare state, adding further empirical knowledge (see Lee et al., 2022). Our empirical analysis is based on nationally representative survey data investigating public attitudes toward several eco-social policies, including different type of social services (healthcare, education, care services), infrastructures (mobility, housing), and basic goods or commodities (water, electricity). We explore the public acceptability of moving from existing public services to UBS, especially concerning the possibilities of providing them free of charge.

Results

Our preliminary results show higher support for traditional welfare state services being offered free of charge compared to goods or infrastructures: while education and disability services received up to 66% and 50% of support, for electricity and housing it was 32% and 24%.

Significance to mainstreaming sustainable consumption

The concept of sufficiency has been the link through which UBS has been connected to consumption corridors (Coote, 2021). UBS has the potential to address both sides of the sustainable consumption corridors: on the one hand, it helps to achieve minimum levels of consumption for everyone to satisfy their basic needs such as need for shelter, basic healthcare and basic energy services. On the other, UBS can help reducing excessive private consumption since resources like energy and water become public goods and not commodities, thus being more subject to regulations (Coote, 2023). Our results reflect these discussions, by investigating which domains of consumption are socially acceptable to be taken care of at the individual or household level and which are expected to be, or can be addressed at a public level.

10:30am - 12:15pm

Strategies for inclusive and innovative communication approaches in sustainable consumption.

Location: **Lilla Salen**

Session Chair: **Birgit Teufer**

Ethnographic filmmaking practices as method to opening windows to relatable and possible stories of sustainable everyday life

Anne Sofie Møller Askholm

Aalborg University, Denmark

The dominant and common understanding of a good and prosperous life in Danish consumer culture entails affluent consumption. For many people these ingrained understandings make it difficult to reshape and imagine how lowering consumption levels can still feel good and bring meaningful opportunities. It can seem like a distant and unreachable utopia that involves big sacrifices.

During my PhD project where I have researched what role environmental ethics can play in changing everyday practices in more sustainable directions, I have applied audiovisual methods by using a video camera to record participant observation, conversations and interviews, and I edited a film as part of the analysis. I did this as an experiment to see how the use of these methods could expand understandings of the process of change and the role of environmental ethics in it. I worked with different people and families who in various ways and under different circumstances tried to change their ways of living and consuming.

The ethnographic film created windows into different people's lives and how they try to change their practices and consume more sustainably. It includes different more or less subtle messages and glimpses of conflicting discourses about what sustainable change means and entails. I argue that we – researchers, citizens, politicians, industry professionals - need to see, experience and feel how living sustainably in different ways is possible, how we all get confused and drawn into different conflicting understandings and have to navigate an uncertain sea of information, social and material structures. The ethnographic filmmaking practice revealed important aspects of sensory, material and aesthetic changes and how they become anchored in the bodymind. By attuning our sensory and perceptual experiences the ethnographic filmmaking practice can be a useful method for understanding change toward sustainable modes of living and consuming. The practice can extend beyond fieldwork and analysis to dissemination to non-academic audiences where the stories of real people who are in a process of change can help to show how life can be meaningful without affluent forms of consumption and bring us closer to experiencing and understanding such lives as normal, good and valuable.

How to improve product labelling for greater sustainability

Birgit Stoltzenberg, Matthias Unfried

Nuremberg Institute for Market Decisions, Nuremberg, Germany

Problem definition

Dietary choices contribute to approximately 25% of global greenhouse gas emissions (Crippa et al., 2021). However, consumers often find it difficult to assess the degree of sustainability of food products (Camilleri et al., 2019), as this is often considered "credence information" that cannot be easily verified before purchase. Labels can help by indicating the quality of a product, reducing the effort required for pre-purchase evaluation, and facilitating purchase decisions based on personal preferences (Thøgersen et al., 2012). In addition, labels can also serve as reminders of sustainability and ethical concerns, helping consumers to focus on them despite limited attention at the point of sale (Peschel et al., 2019).

However, the sheer volume of information and variety of labels on products can be overwhelming for consumers, who often struggle to interpret and understand the associated information. Depending on their level of knowledge, consumers may find it difficult to differentiate between advertising claims and third-party certifications. The broader sustainability discourse now covers multiple dimensions, such as nature, biodiversity, ethics, fairness, and climate, making product evaluation even more complex. As a result, consumers may experience confusion, stress, anxiety, and biased decision-making due to this information overload (Mitchall & Papavassiliou, 1999).

Method

To address this issue, online experimental studies will be conducted to test various methods of organising, sorting, selecting, and evaluating product labels to reduce consumer confusion. Following a preliminary review and pre-study on sustainability dimensions, two online between-subjects experiments will be conducted.

The first experiment (n=400) tests methods to improve the visibility of labels by organising and sorting them. The presentation of the labels is experimentally manipulated, distinguishing between third-party certified labels and advertising by spatially separating them and assigning them to categories. The second experiment (n=400) focuses on improving the comprehensibility of the information by evaluating and selecting the labels. This includes adding the rating of binary labels, in line with Thøgersen et al. (2024) who found that graded labels are more effective than others. In addition, the study investigates whether removing redundant information improves label comprehension.

Results

Data collection is ongoing, and the full paper is expected to be completed by April next year for presentation at SCORAI 2025. The aim of the experiments is to identify the causes of consumer confusion regarding the diversity of sustainability labels and to explore measures to reduce confusion. It is hypothesised that consumers will identify sustainable products more easily if they can distinguish between certified labels and advertising, are aware of the meaning of labels, have access to detailed information, and are not overloaded with redundant information.

Significance to mainstreaming sustainable consumption

The results of this study could improve the presentation of product labels, making it easier for consumers to assess sustainability.

Assessing 20 years of information-based strategies to mainstream sustainable consumption

Dara O'Rourke

UC Berkeley, United States of America

Problem Definition: In February 2024, the EU passed a new directive on “empowering consumers for the green transition through better protection against unfair practices and through better information.” Despite 20 years of efforts to advance sustainability information and growing public awareness of environmental issues, mainstream consumer behavior remains largely unsustainable. The latest IPCC report highlights that current consumption patterns, particularly among high-income individuals, are key drivers of increasing greenhouse gas emissions and other environmental and social problems. While numerous initiatives have attempted to inform and influence consumers towards more sustainable choices, their impact has been limited. This study evaluates these efforts, identifies barriers to success, and proposes strategies for more effective mainstreaming of sustainable consumption.

Method: This research employs a comprehensive review and typology of over 50 information-based strategies to support sustainable consumption launched between 2000 and 2024. These include efforts by various stakeholders to provide sustainability information, decision-support tools, ratings, eco-certifications, and sustainable shopping sites. The study conducts an in-depth analysis of three leading consumer-information strategies: 1) independent rating systems; 2) product labeling and certification schemes; and 3) retailer sustainability information initiatives. We examine their strategies, successes, and shortcomings, while analyzing consumer surveys and behavioral studies to understand the disconnect between information provision goals and actual purchasing behaviors.

Results: Our findings reveal that while consumers increasingly express concern about sustainability, translating this concern into action remains challenging. Key barriers include:

1. The complexity of sustainability information and difficulty in making it accessible during time-constrained shopping decisions.
2. Limited effectiveness of scientific information alone in changing consumer behavior.
3. Struggles to maintain comprehensive and up-to-date product sustainability data at scale.
4. Most consumption decisions not being based on analytical assessments of product attributes.

More successful strategies identified include:

1. Focusing on health-related information.
2. Simplifying decision-making processes through defaults.
3. Leveraging peer influence and social norms.
4. Integrating sustainability information into existing shopping experiences.

Significance to Mainstreaming Sustainable Consumption: This study provides critical insights for policymakers, businesses, and NGOs seeking to promote sustainable consumption. By identifying what has and hasn't worked over the past two decades, we offer potential recommendations for more effective strategies. Our findings suggest that future initiatives that seek to influence mainstream consumers should:

1. Design interventions that align with consumers' existing decision-making processes and current consumption patterns.
2. Focus on B2B strategies, working with retailers and brands to integrate sustainability into existing shopping experiences.
3. Focus on overall product “quality” rather than asking consumers to focus on detailed trade-offs.
4. Utilize machine learning to provide personalized, context-specific sustainability recommendations.

By learning from past efforts and adapting strategies to overcome clear barriers, there is potential to more effectively mainstream sustainable consumption and contribute to mitigating climate change and environmental degradation.

The paradoxes of sustainable consumption as constructive resources: Reflexive learning in Swedish public organisations' production of communication for sustainable consumption

Ann Grubbström, Lars Hallgren, Emily Montgomerie

Swedish University of Agricultural Sciences, Sweden

Problem – to learn from paradoxes, challenges and dilemmas in communication for sustainable consumption

The mainstreaming of sustainable consumption is a massive communication project which has been taken on by public and non-governmental organisations in late-modern societies e.g. in Sweden. Since the late 1980s such organisations have published books and leaflets, organized workshops and events, and made campaigns in social and printed media. Communication for sustainable consumption is also difficult and paradoxical. For example, communication for sustainable consumption appears in a media- and communication landscape which is dominated by messages about the pleasure of consuming more, rather than less. The relevance of communication campaigns as a tool, as well as the ideology of responsabilisation of consumers, is often questioned. The efficiency of fear and hope message framing has been debated. Yet another difficulty concerns ambiguities about the aim, purpose and ideologies of the public institutions which conduct the communication campaigns. The environmental communication professionals are facing these challenges in their work and it is of course important that their experiences of success and failure, of dilemmas and paradoxes, of constructivity and destructivity, contribute to the understanding of the problem of communication for sustainable consumption. It is however not at all self-evident that individuals and organisations can learn from such experiences. It is therefore important to understand under what conditions learning about communication for sustainable consumption is facilitated. In this paper we are interested in how professional sustainable consumption communication campaign makers learn from their experience.

Method – Learning moments in focus group generated narratives

Communication officers and sustainability strategists from Swedish municipalities participated (N=37) in a total of 10 focus group discussions with 3-6 participants in each, with the theme to "exchange experiences of conducting communication campaigns for sustainable consumption". Participants were asked to bring with them one or two examples. One typical comment appeared with approximately the form "before we thought xxxxx, but then yyy happened and now we know zzzz". We categorized narratives of this kind as narratives about learning.

Result –Instrumental and reflexive learning

Two different kinds of attentions were recognized in the focus group conversations: Focus on the instruments of communication, and reflexive attention, with focus on own assumptions and expectations. When the conversation takes the instrumental attention questions are asked and answered about design and strategy and typically how, what, who, where and why. Focus group participants talked about different ways of dealing with difficult emotions connected with consumption and about the efficiency of providing different kinds of information. When the conversation takes the direction of reflexive attention, the focus group participants reframe their own and their organisation's assumption and expectations in relation to resistance and inner and outer conflicts. Finally we recognize that the participants self-identified as eccentric creatures in their own organisations and the focus group experience was assessed as an unusual opportunity to speak with colleagues about theory and practice of mainstreaming sustainable consumption.

From Skeptics to Enthusiasts: Strategies for Inclusive Risk Communication on Biofuels

Katrin Arning, Maïke Keil, Regina Gimpel

RWTH Aachen University, Germany

Problem definition

Despite the need for sustainable mobility solutions to combat climate change, significant proportions of the public are still uninformed about viable alternatives, such as biofuels, which have the potential to reduce carbon emissions from existing combustion engines. Traditional models of information-seeking behavior assume that a lack of knowledge results in a need for more information, or that higher levels of knowledge eliminate this information need. However, this assumption overlooks the complexity of individual information needs, which can vary independently of existing knowledge. For example, some individuals with substantial knowledge still seek more information, while others with limited knowledge may express no interest. This study therefore investigates the information needs of German citizens regarding biofuels, particularly in relation to their existing knowledge levels, attitudes, and sociodemographic factors. Understanding these dynamics is crucial for developing communication strategies that address the unique concerns and needs of different audience segments.

Method

In 2024, a quantitative survey was conducted with a representative sample of 501 German citizens to assess their subjective knowledge of biofuels, information needs, and interest in adopting biofuels as an alternative to fossil fuels. Additionally, the survey measured socio-demographic factors (age, gender, education), mobility behaviors, and attitudes (climate change awareness, institutional trust,

and openness to innovation). Cluster analysis and MANOVAs/nonparametric tests were used to identify and characterize distinct groups based on differences in knowledge levels and information needs.

Results

The results revealed three distinct clusters: Cluster 1 (Information Seekers) consisted of comparably older individuals with lower levels of education and moderate interest in biofuels. Although their awareness of biofuels was limited, they expressed a strong need for more information. Cluster 2 (Informed Enthusiasts) included younger, well-educated individuals with high levels of subjective knowledge, climate change awareness, and the highest willingness to adopt biofuels. Cluster 3 (Disengaged Skeptics) comprised individuals with moderate education and income levels, exhibiting low interest in biofuels and low institutional trust. Their willingness to adopt biofuels was the lowest, primarily due to high perceived affective and cognitive risks.

Significance to mainstreaming sustainable consumption

Based on the cluster profiles, recommendations for inclusive information strategies on biofuel risk communication were derived: Cluster 1 (Information Seekers) is responsive to clear, accessible messaging that enhances their understanding of biofuel technologies and builds trust in institutions. Cluster 2 (Informed Enthusiasts) requires expert-driven communication with detailed, technical insights that match their sustainability-related attitudes. Cluster 3 (Disengaged Skeptics) shows low interest and trust, so communication efforts should focus on trust-building and addressing their perceived risks regarding biofuels and encourage behavior change.

The study demonstrates that effective risk communication for biofuels as sustainable fuel solutions must be tailored to audience-specific characteristics. By recognizing that information needs are not solely influenced by knowledge levels, policymakers, and communicators can better target messaging to engage and inform diverse segments of the population.

Contested Futures of Sustainability

Daniel Welch¹, Nina Heidenstrøm²

¹University of Manchester, United Kingdom; ²Oslo Metropolitan University, Norway

Problem definition

Over the last twenty years or so there has been growing social scientific interest in the future, understood as a contested object of social action (Beckert & Suckert 2021), and the potentially performative role of 'imaginaries' of the future in transitions towards more sustainable societies (Adloff and Neckel, 2019; Oomen et al, 2022). While there is growing intersection between consumption studies, future studies and sustainability (e.g. Jensen et al, 2022; Hebrok and Mainsah, 2022; Sahakian et al, 2023) there are limited empirical explorations of imaginaries of sustainable consumption, and the role they may play in mainstreaming sustainable consumption.

Method

The paper reports on research from a major international research collaboration, 'IMAGINE: Contested Futures of Sustainability'. IMAGINE, led by SIFO, Oslo Metropolitan University (PI Heidenstrøm, 2021-24) brought together scholars from sociology, design studies, anthropology, cultural studies, philosophy, fashion studies, and art practice, from Norway, the Netherlands and the UK. The project has investigated, in a Northern European context, the power of cultural imaginaries of sustainability to influence societal change, in three currently unsustainable areas of consumption: food, clothes and mobility. Work packages have explored imaginaries through analysis of cultural texts and policy documents, interviews with practitioners, workshops with stakeholders, engagement with design practice, and a qualitative survey of lay understandings of the future.

Results

The paper reports some headline results from across these work packages, and some synthetic reflections, including on the utility of the concept of imaginaries for research and action on sustainable consumption.

Significance to mainstreaming sustainable consumption

Today, positive imaginaries of radical societal change towards sustainable consumption must contest not only visions of the future that legitimate the reproduction of existing, unsustainable socio-economic arrangements. They must also contest widespread cultural imaginaries of socio-environmental collapse, poly-crisis and dystopia (identified in IMAGINE's research). For sustainable consumption to become mainstream advocates must navigate this recently emerged cultural terrain. The paper reflects upon this contemporary historical condition.

Powering Transformation: Pathways to Mainstream Sustainable Energy and Low-Carbon Societies

Location: **Nya Fest**

Session Chair: **Jenny Palm**

Session Chair: **Katharina Reindl**

Session Chair: **Daniela Lazoroska**

10:30am - 12:15pm

The impact of consultants reports on the development and vision of smart grids in Sweden

Katharina Reindl, Jenny Palm

Lund University, Sweden

We need to transform our energy systems. Many factors contribute to this urgency as for instance increased environmental concerns, growing demand for electricity, driven by urbanization, population growth and accompanying housing construction, automation and electrification of industries, and the need for electricity in the transportation sector to enable fossil-free transportation. In Sweden, as in many countries, there is a need to modernize the energy infrastructure. The grid today is not designed to meet the increasing use of intermittent energy sources, higher demand for electricity, the need to reduce the carbon footprint, or the electrification of transportation and industry, leading to major challenges and opportunities for the grid. Here the smart grid is often seen as a “solution” for all these interlinked issues. So far “the smart grid” is more of a vision than reality, even though elements of the grid might already be smart. This gives tremendous opportunities for the future of the grid.

This study focuses on the role of consultant reports in shaping and developing a vision of smart grids in Sweden; thus, the aim is to understand the influence of consultancy reports on the envisioning and development of the smart grid. We want to explore how these reports can contribute to defining problems, setting agendas, and recommending solutions for the future of the electricity grid in Sweden.

The study follows a qualitative research approach and combines first an actor mapping of key stakeholders, a document analysis of 24 consultancy reports conducting a thematic analysis

So far, preliminary results show that these consultant reports largely emphasize the technical aspects of smart grids, such as the integration of renewable energy sources, grid management, and balance. Other themes commonly discussed in the reports are the role of Artificial Intelligence (AI) and Machine Learning (ML) in enhancing grid efficiency, the interplay between smart grids and the transportation sector, energy efficiency, and conservation strategies. Also, concerns about cybersecurity and data privacy in the context of increased digitalization is a topic brought up in the reports.

These consultant reports are instrumental in shaping the smart grid discourse as they stand behind all the major governmental initiatives or reports in Sweden. Thus, they not only guide technological choices but also influence policy decisions. The reports highlight the importance of a transition towards renewable energy, efficient grid management, and the integration of digital technologies. While the reports provide valuable technical insights and recommendations, there is a need for a more holistic approach. Some gaps we have defined concern for instance the socio-economic implications and user engagement in smart grid development. In our study, we thus highlight the importance of diverse inputs for policymaking to ensure the successful implementation of smart grids.

The consultant reports can be seen as important when it comes to mainstreaming sustainable consumption by demonstrating their central role in shaping the smart grid discourse, which in turn has an impact on energy policy and how the smart grid materializes. This will impact future energy consumption as well as production.

The gendered structure of the circular economy and the energy sector: synergies between two research fields

Daniela Lazoroska, Jenny Palm

Lund University, Sweden

Problem definition and method

The following presentation addresses some synergies between two projects wherein we examined the intersections between gender in the energy sector, and gender in the circular economy (CE), respectively. The findings are based on two literature reviews. We placed an emphasis on how gender dynamics play out on the levels of consumption, labour and resource distribution, and decision-making structures and processes. Perhaps unsurprisingly, both these studies found that women and minorities groups are overrepresented in undervalued roles. We found that women's fields of action are often tied to the household and their communities, while their interests and views are underrepresented in industrial leadership and policy making. Opportunities for increasing diversity and inclusion are limited, fragmented, and often placed in the hands of those who lack the power.

Results

Nevertheless, we were surprised to find that this societal underrepresentation was mirrored in the social sciences research. While it is seemingly axiomatic to agree that women are indeed excluded from STEM-based positions of power, and that this should be corrected, there are few research findings that directly address how they might be included, and what the effects of that process might be on these industries.

Significance to mainstreaming sustainable consumption

We thus share our call for an increased awareness of gender perspectives among researchers too, and some burgeoning findings on their role in increasing innovation and sustainable development.

Low Technology, High Relevance? Low-Tech in Supply Chain Models for Resilient Energy Transition

Martin Cerny^{1,2}, Eva Frankova³

¹Charles University, Prague, Czech Republic; ²Vienna University of Economics and Business, Vienna, Austria; ³Masaryk University, Brno, Czech Republic

Problem definition

In the face of advancing climate change and associated risks of supply chain disruptions, there is an urgent need for more sustainable, energy-saving and resilient technologies in critical sectors. Degrowth-aligned, convivial, “pluriversal” or simply low technologies can help substantially. Low-tech can increase resilience by moving away from dependence on complex supply chains while reducing energy consumption, either directly (e.g., cycling instead of driving) or indirectly (repairing instead of manufacturing new products).

However, low-tech practices rarely appear explicitly in relevant supply chain models such as global multi-regional input-output (MRIO) models. They often take place outside the monetary economy and are thus implicitly included in the household sector. Previous research has attempted to look in more detail at households in input-output models, however, it has not focused specifically on low-tech. Such “invisibility” of low technologies makes it difficult to assess the impact of their scale-up on supply chains and thus their potential contribution to a more resilient low-carbon economy.

Method

Arguing that it is preferable to use physical energy MRIOs instead of monetary ones since productive household activities are not recorded in monetary terms, we propose how to advance such a model to include low-tech production. Based on available literature and data, we elaborate a list of low technologies assumed to be conducive to energy savings, including information on which industrial (particularly high-tech) production they can substitute. Subsequently, we develop their taxonomy according to (1) the potential to reduce energy consumption (in particular non-renewable resources); and (2) their supply chain resilience (independence from complex supply chains). We examine what data and classifications to use in order to meaningfully incorporate low-tech practices into the MRIO model in the form of technology-specific production functions that operate as separate sectors. We illustrate the proposed approach by constructing production functions for selected examples.

Results

Substitutions of industrial production relevant for energy savings and supply chain resilience may take place in activities such as travelling and commuting; heating and water supply; production of electricity; maintenance and repair (vs. new production); growing of food; manufacture of textiles, etc. We propose to work with time use statistics such as the United Nations ICATUS (International Classification of Activities for Time Use Statistics) in combination with economic activity classifications such as NACE (Statistical Classification of Economic Activities in the European Community). We conclude that the low-tech alternatives are in many cases better positioned to increase resilience of the energy system due to lower energy (and, in turn, also material) requirements, decentralization, and longer lifetimes due to lower technological complexity and thus easier reparability. However, not all activities are conducive to reducing consumption and increasing resilience at the same time.

Significance to mainstreaming sustainable consumption

Our efforts bring into play low technologies as often a more sustainable and resilient consumption option. Making low-tech “visible” in economic supply chain models is a first necessary step for assessment of their potential and eventual systemic support.

The relationship between energy consumption and well-being in Iceland

Anna Kristín Einarsdóttir, Kevin Dillman, Jukka Heinonen

University of Iceland

Problem: Human activity has driven the planet toward environmental collapse, with the Industrial Revolution marking a significant turning point. While fossil fuels were intended to improve and simplify life, the growth imperative shifted the focus from reducing labour to increasing production. Consequently, technology is now leveraged to achieve more within the same timeframe, rather than to lessen the workload. Central to this discussion is energy, which is the foundation needed for humans to meet their basic needs and facilitates human development. However, beyond a certain point, additional energy does not lead to significant increase in quality of life. The Global North far exceeds energy sufficiency thresholds, while many in the Global South face energy poverty, exposing significant inequalities in energy access. Technological advancements made towards green energy have therefore mainly been an addition to our current fossil fuel energy consumption rather than substituting as our increasing consumption in the Global North requires additional energy. Adopting demand-side solutions to reduce energy consumption could foster a more equitable distribution of resources and improve living conditions for all. Understanding the relationship between energy use and well-being is essential for crafting effective energy policies that balance environmental protection with human development.

Method: We use a carbon footprint calculator survey converted into energy footprints. The dataset consists of approximately 1,600 respondents from Iceland collected between 2021 and 2022. The dataset includes responses to 10 questions about subjective well-being, which are used to investigate

the relationship between energy consumption and well-being in Iceland. We also explore the lives of individuals living within a defined sufficiency thresholds and analyse the socio-economic factors common among these individuals, as well as whether their reported well-being is lower than that of those who consume more energy. The primary method employed is regression analysis to determine whether increased energy consumption is associated with higher levels of well-being.

Results: The results demonstrate that increased energy consumption does not lead to a significant increase in subjective well-being among the respondents. Additionally, the small portion (~10%) of individuals living within the sufficiency threshold do not show significantly lower well-being scores. This could be due to energy poverty being low in Iceland and the majority of Icelandic residents consume energy way above what is necessary to meet basic needs and have therefore reach a saturation point in the relationship between energy use and well-being. There is a pressing need for affluent nations to reduce consumption; without this climate targets will not be met. These findings highlight the potential for demand-side solutions to be implemented in wealthy nations.

Significance to mainstreaming sustainable consumption: This research highlights how an affluent nation consumes far more energy than necessary for a decent quality of life. It underscores the need for a shift in how energy use is managed in these societies, advocating for demand-side policies that promote reduced consumption while maintaining well-being and protecting the planet.

Climate Transition Scenarios across Alternative Growth Paradigms: A Comparative Study

Giulia Garzon, Benjamin Kirchler, Franz Schönburg, Andrea Kollmann

Energieinstitut an der Johannes Kepler Universität Linz, Austria

The European Union has made considerable progress in its green transition. However, recent evidence suggests that additional and more robust measures are needed to ensure consistency with its climate change objectives. Historically, economic growth, primarily measured by GDP, has been the central focus of economic policy, leading to increased disposable income but also to significant trade-offs, including environmental degradation, resource depletion and pollution. Building on research conducted as part of the MultiFutures project[1], this paper develops climate transition scenarios under alternative growth paradigms, proposing a broader set of indicators 'beyond GDP'.

Our analysis is conducted in three stages. Firstly, existing climate transition scenarios – such as those developed by the European Commission, IEA, IRENA, IPCC and the World Energy Council - are assessed in terms of their underlying storylines and quantitative assumptions, including those related to population growth, technology costs and other factors. Secondly, these are compared with assumptions from alternative paradigms, identifying gaps, particularly with regard to the mechanisms by which certain variables, such as population growth, are expected to change. Thirdly, based on this inventory of paradigms, we develop a set of transition scenarios that also incorporate alternative assumptions. Additionally, the findings are discussed in light of the views of policymakers, which are collected during a co-creation workshop.

Key differences in scenario assumptions are found in the emphasis on technological advancements, the roles of public and private sectors, government intervention, and the impact of behavioural and social practice changes. Scenarios also differ in their implications for quantified indicators such as population growth, economic growth, and resource allocation. Notably, current scenarios lack assumptions about economic degrowth, and suggestions are made to address these gaps. Where existing knowledge is insufficient, recommendations are provided on the knowledge needed to fill these gaps. Results include quantitative descriptions of the key elements of alternative paradigms, which lay the foundation for preliminary 'beyond GDP' indicators.

The significance of this research for mainstreaming sustainable consumption lies in its ability to shift the focus from traditional growth metrics to those that better reflect environmental and social well-being. The incorporation of alternative growth paradigms into transition scenarios serves to highlight the necessity for the implementation of policies that prioritise environmentally and socially sustainable consumption patterns over unchecked economic expansion. The examination of deficiencies in existing scenarios, particularly with regard to economic degrowth, highlights the necessity of rethinking consumption and production models in order to align them with planetary boundaries. Furthermore, the development of "beyond GDP" indicators paves the way for a more comprehensive understanding of progress, one that values environmental sustainability and social equity as much as economic performance. These insights can inform the formulation of policies that promote sustainable consumption, ultimately contributing to the integration of these principles into the mainstream economic discourse and policy frameworks.

[1] This project has received funding from the European Union's Horizon Europe Programme under the grant agreement No 101137713

Karolina Södergren

Lund University, Sweden

Significance to mainstreaming sustainable consumption

Industrial urban symbiosis (IUS) is a circular solution with a potential to lower consumption of materials through multi-actor sharing of wastes and resources. With IUS gaining momentum in recent years, it presents an opportunity to mainstream sustainable consumption practices – especially on local levels.

Problem definition

Previous research has confirmed that local authorities are key players for developing IUS. However, much focus has been put on external activities such as facilitation and coordination of external actors and activities. Less attention has been paid to how local authorities manage and govern IUS internally. This research aims to address this gap by investigating internal governing strategies that support IUS management.

Method

The data for this study was collected through a case study of the municipality of Malmö, and complemented by a questionnaire of 22 responding municipalities across Sweden.

Results

The results show that internal governing strategies are key for ensuring the successful implementation of IUS projects within municipalities. These strategies include activities such as creating political anchoring, incorporating symbiosis thinking into different municipal processes (such as governance documents, procurement, establishment, and permit processes), developing internal symbiosis and material flows within the municipal administration, leading engagements with municipal corporations, providing strategic leadership, and bringing cross-sectorial thinking and a broad sustainability perspective into the symbiosis process. The results also indicate that the number and roles of employees working with IUS within municipalities matter for the potential impact of IUS efforts, as does the involvement of different municipal administrations.

10:30am - 12:15pm

Transformation pathways for food systems through direct selling and short food supply chains

Location: **Gustafscenen**

Session Chair: **Ana Espinosa-Segui**

Growing local food systems through direct selling strategies. A case-study of foodservice sector in the region of Valencia

Ana Espinosa-Segui¹, Raffaella Rose¹, Obdulia Monteserín-Abella²

¹Universidad de Alicante; ²Universitat Jaume I

Problem definition:

Agrifood systems in a planetary scale account for more than one-third of the global emissions (Crippa et al., 2021), being widely the consumption area with the highest environmental impact. According to Tubiello et al. (2021), agrifood systems pollute the soil and the environment along the value chain of the products due to the food waste, transportation, refrigeration of the products but also, because of the land-use change. Foodservice agents can perfectly embody an aware and sensitive demand for local food production and distribution, strengthening social networks with local producers and supporting farmers to produce according to their needs. However, there is a lack of connection and communication between restaurants and local producers, who do not meet their needs in a local and short food supply chain.

Method

The method used was a combination of desk research and qualitative analysis of case studies in the Region of Valencia to both agroecological producers and foodservice agents with already working network connections. Semi-structured interviews and video-interviews were used as the main method for gathering information between April and October 2024. Two different questionnaires for the producers and foodservice agents were used in the interviews, with some related questions about the perception they had about the establishment of social connections among them. Geolocalized social network analysis of the connections among producers and consumers was used to detect the strength of the interdependencies among both groups of agents.

Results

Although good practices were found in the Region of Valencia during the gathering of the data, that included strong connections among agroecological producers and foodservice sector agents, there is still a big obstacle that prevents producers from increasing their participation in the supply chain of food on a local/regional scale. At the same time, foodservice agents have difficulties establishing long-term agreements with few farmers who could, exclusively or partially, provide them along the year.

Significance to mainstreaming sustainable consumption

Restaurants, catering companies and foodservice agents in general are trendsetters and prosumers for enhancing production and consumption of local varieties of food products. By mainstreaming local varieties of produce and boosting the use and consumption of local products, eaters and consumers can get informed of the presence of local varieties of food, prioritise them in their diets, and respect and empower local connections in food supply chains.

Cross-sectorial and multi-actor collaboration for innovative and local food system in Horten municipality, Norway

Christine Hvitsand

Telemark Research Institute, Norway

Problem definition

There is a need for knowledge about how to work with complex social challenges and transition processes related to agriculture, food safety, health, nutrition and inclusion. To think more holistically about challenges and opportunities, and to collaborate and co-create across societal sectors and actor types can contribute to identify new, innovative solutions.

The research aims to contribute to increased knowledge about how innovative collaborations across municipal sectors and between public and private entities can realize a scheme for local and organic food systems despite extensive regulations related to public procurement. The research includes studying which political and administrative steps have been taken, who is involved, and which factors prevent and support a lasting collaboration between the vegetable producers and different municipal departments and entities. Furthermore, the research seeks to highlight the breadth of positive outputs and outcomes arrangements of local and organic food purchase can have, and how the researcher facilitated co-creative processes contributed to further strengthening collaboration, commitment and activities.

Method

The research had the aim to contribute to the further development of the innovative collaborations in the municipality, and therefore the methodology was transdisciplinary and action-oriented. The data collection included analysis of municipal documents, interviews, and the facilitation of a workshop. The workshop consisted of co-creative processes to deepening the collective understanding of experiences with the scheme and how continuation and further development of the collaborations could be strengthened.

Results

The research suggests that the scheme is made possible through solid anchoring in political decisions, engaged and committed individuals in the municipal organization, extensive collaboration across sectors and departments, and collaboration with local vegetable producers. Positive outcomes of the transition to include local produce in kinder garden and schools are that children experience increased enjoyment of food and learning about nature, ecology and different types of vegetables, which can contribute to healthy eating habits and good health in their future lives. Furthermore, the scheme is made possible through the collaboration with a day care center, providing both reasonable distribution and meaningful activities for people outside the ordinary working life. From the organic vegetable producers' perspective, increased demand for organic vegetables and an established infrastructure for logistics have provided more predictable sales, and the opportunity to collaborate with schools on learning activities. Still, the research discover challenges that need to be addressed for the scheme to last.

Significance to mainstreaming sustainable consumption

Through an exception in the procurement agreement, Horten municipality takes the lead and contributes knowledge about practices with environmentally friendly procurement and innovation in public sector. The comprehensive collaboration and scheme is unique in the Norwegian context, and facilitate the shift to more sustainable consumption. The "Horten model", i.e. the infrastructure and collaboration between multiple municipal sectors and between public and private actor, can be scaled out to other municipalities, through involvement of local actors and adjustments to the local context in different countries.

Enhancing Accessibility and Inclusion in Community-Supported Agriculture: Pathways for Expanding Direct Sales to Diverse Consumer Groups through Pricing Strategies

Vivien Marx, Birgit Teufer

Ferdinand Porsche FERNFH, Austria

Current food systems degrade environmental quality, harming air, water, soil, and biodiversity while exacerbating social inequalities by exploiting rural communities, concentrating market power, and threatening small-scale farms (Springmann et al., 2018; Kelly-Reif & Wing, 2016). Community-supported agriculture (CSA) offers a sustainable alternative, connecting consumers with local farms to promote healthier diets (Volz et al., 2016). However, CSAs have been widely criticized for being accessible primarily to higher-income individuals, excluding those with fewer financial resources (Egli et al., 2023; Sitaker et al., 2020). To address this, cost-offset CSA (CO-CSA) models aim to improve access for low-income households (Jilcott Pitts et al., 2022). While these models show benefits like better food literacy and stronger community ties, existing research has focused primarily on the perspectives of farmers and current members, overlooking the barriers and needs of low-income individuals. This gap in the research is critical, as failing to understand the specific challenges faced by the target group risks undermining the effectiveness of CO-CSA initiatives.

To assess the relevance of CSA participation for low-income Austrians, we conducted an online survey targeting those in the two lowest income tax classes. This quantitative study examined the appeal of CSA, subsidization options, willingness-to-pay, and participation barriers. Data from 184 respondents showed that 35.3% strongly agreed, and 30.4% agreed, that they could envision regularly receiving a harvest share. Most respondents (89.1%) preferred weekly over seasonal payments, with an average willingness-to-pay of €24.12 per week (compared to about €30 real average costs). Public funding was the most favoured subsidy option ($M = 1.84$, $SD = 1.20$; scale 1 highest agreement to 5 lowest agreement), significantly more attractive than both voluntary co-payments ($M = 2.38$, $SD = 1.28$, $p < .001$) and income-adjusted pricing ($M = 2.34$, $SD = 1.36$, $p < .001$), which did not significantly differ from each other. Open answers showed that public funding was valued for financial relief and regional support, though concerns included costs for municipalities and required income disclosure. Voluntary co-payments were seen as fair, but concerns about potential exploitation arose. Income-adjusted pricing was viewed as fair by many but unfair by others, with debates over equal pricing for all participants. Key barriers included a desire for product choice and the ability to consume only what was needed, underscoring concerns about pre-packed shares.

This research fills a significant gap by focusing on low-income households' perspectives, advocating for inclusive cost-offset models to improve CSA accessibility. Previous research favored member donations due to the farmer and member perspective, but these findings show that the target group would clearly prefer public subsidies. The results highlight the importance of involving low-income groups in planning processes to ensure accessibility and counter criticisms of exclusivity. Effective subsidizing schemes that respect the dignity of low-income families are vital for fostering more sustainable, equitable food systems. This study provides critical insights for policymakers to promote CSA accessibility, integrate public funding, and support local food systems to advance both public health and environmental sustainability.

Cultivating Circularity: expanding the definition of local for peri-urban food systems.

Nancy Brett, Karin Tonderski

Environmental Technology and Management Linköping University, Sweden

Problem definition

The potential of peri-urban areas (PUA) for food production has been well-documented (Edmondson et al., 2020). However, despite the benefits, it is at risk of being transformed for alternative uses. While many benefits have received attention and formal valuation practices (Brinkley, 2012), the role that short-food supply chains (SFSC) can have in increasing circularity, e.g. by efficient nutrient recycling from organic waste, has yet to be fully explored (Chiffolleau, 2020).

PUA are sites of efficient recycling of animal and human waste, a vital component of a sustainable future. This strategic positioning facilitates waste management and leads to the production of valuable organic fertilizers. Farmers expect an increase in demand for these fertilizers in the next decade, driven by the need to improve soil health (de Morais Lima et al, 2024). As the concept of 'locally produced' goods gains traction among consumers, the role of PUA in connecting buyers and producers of local products becomes significant.

This paper asks how sense-making of 'local produce' can include other aspects of cultivation practice such as the use of organic fertilizers. Secondly, we ask if this sense-making differs depending on which supply chain practice is employed.

Methods

This paper considers the current practices for those who operate in peri-urban spaces in one Swedish region, Östergötland. Data collection occurs in two phases. The first is a spatial distribution mapping of the producers and sellers within the region. The second phases employs a case study approach to examine the existing value chains and infrastructure. This includes interviews with fourteen local producers along with five re-sellers of local produce along with six larger grocery stores in the area. The interview data is combined with observation and participation in meetings targeted towards practitioners engaged in promoting local food. Lastly, the results are presented in a workshop with both researchers and practitioners who are involved in local food chains. Analytically we combine the spatial distribution and experiences of different sales channels to understand the positioning and sense-making of 'local' and what is contained in the meaning of local dependent on location and type of sales channel used.

Results

The findings are anticipated to demonstrate variations in the significance of local nutrients in branding products as "local," based on factors like size, production location, and the specific product. Preliminary findings indicate producers have various options for selling their goods, including local markets, known as 'REKO markets', and to some extent, traditional grocery stores. Secondly, that certain product categories, such as egg production, are more inclined to prioritize the inclusion of local nutrients as a key aspect of their branding.

Significance to mainstreaming sustainable consumptions

There are several well-known challenges to successful business models for short-food supply chains. However, we also believe that there is untapped potential in the sector's ability to create a broader definition for 'local' food. This expansion could contribute to improved positioning of the product, which

would also mean the heightened importance on nutrient recycling would contribute positively to other sustainability goals.

Digitally reducing food waste: How surplus food platforms reconfigure household practices

Christian Fuentes¹, Emmelina Eriksson¹, Manisha Anantharaman², Live Bøyum³, Arne Dulsrud³, Jennifer Heung⁴, Noemi Linares-Ramirez⁴

¹Lund University, Sweden; ²Sciences Po, France; ³OsloMet, Norway; ⁴Saint Mary's College of California, USA

Problem definition

Digital food provisioning platforms have been suggested as tools to fight food waste. Surplus food platforms, such as TooGoodToGo, allow consumers to “save” food that otherwise would have gone to waste. Similarly, food-sharing apps and social media make it possible for consumers to share food rather than throw it away.

However, while these digital platforms seem promising for reducing food waste, we know little about how they are used in everyday practices. How do these newly launched digital food provisioning platforms fit into the nexus of food/non-food practices that households perform?

Previous research on the digitally enabled reduction of food waste has explored the value that various food provisioning platforms provide for businesses and users (Mazzucchelli, Gurioli, Graziano, Quacquarelli, & Aouina-Mejri, 2021; Vo-Thanh et al., 2021), and what factors make the use of these platforms more likely (Zaman, Vo-Thanh, Hasan, & Babu, 2021). While existing research offers an insightful exploration of the value(s) provided by these platforms and the “barriers” that may stand in the way of their use, it seldom provides any insights into how these platforms are integrated into households’ everyday routines.

Aim, theoretical approach and method

This paper aims to explore under what conditions and through which mechanisms surplus food platforms reconfigure household food practices to promote sustainability. To make sense of these issues we take a practice theory approach and take a particular interest in the interactions between the surplus food platform and household practices. Empirically, the analysis draws on ethnographic interviews with users of TooGoodToGo in Sweden, Norway, and the USA.

Preliminary Results

The preliminary results show that while these digital surplus food platforms are framed as food waste reduction devices, consumers only use them as such under specific conditions. We discuss under what conditions these apps become part of broader sustainability efforts, how their integration reconfigures multiple food and non-food practices in the household, and what impact this has on sustainability.

Significance to mainstreaming sustainable consumption

This issue is important to our understanding of sustainable consumption for two reasons. First, as previous studies have shown, the integration of new digital food provisioning platforms into everyday practices is complicated and often fails (Fuentes, Cegrell, & Vesterinen, 2021). New digital platforms have to fit into existing complexes of practices and be given space within already-established household routines and in relation to competing forms of food provisioning (Heidenstrøm & Hebrok, 2022; Samsioe & Fuentes, 2021). This is demanding and typically requires considerable consumer work (Fuentes & Samsioe, 2020). It is therefore important to understand the mechanisms by which digital platforms are made part of existing household practices. Second, answering these questions is also important when discussing the sustainability potential of these platforms. How, if, and under what conditions digital food provisioning platforms enable the sustainable reconfiguration of household practices cannot be understood without examining the relationship between the platform, the practice(s) it makes possible, and the connecting nexus of household practices.

Swiss consumers' attitude towards true cost accounting for food and true pricing

Bárbara Franco Lucas¹, Kate Dassel², Joachim Marti², Thomas A. Brunner¹

¹Food Science and Management; School of Agricultural, Forest and Food Sciences (HAFL); Bern University of Applied Sciences (BFH), Länggasse 85, 3052, Zollikofen, Switzerland; ²Department of Epidemiology and Health Systems; Centre for Primary Care and Public Health (Unisanté); Rue du Bugnon 44, 1011 Lausanne, Switzerland

Current food systems are one of the major contributors to environmental burdens. At the same time, obesity, malnutrition and non-communicable diseases increase in many countries. To support a transition to more sustainable food systems and more nutritious and sustainable diets, the concept of true cost accounting for food (TCAF) was developed. This methodology aims to uncover the health, environmental and social costs associated with current food systems. Uncovering these externalities may result in more conscious and sustainable food choices by consumers. In this context, the present study aimed to evaluate how consumers in Switzerland perceive the true cost accounting approach and true pricing. An online survey was conducted in June 2024 with random German-speaking Swiss

residents leading to a final sample size of N=224. Results indicated low previous knowledge of TCAF among Swiss residents. However, after providing some basic information on the approach, respondents reported a positive attitude towards TCAF (mean 4.72 ± 1.22 , on a 6-point Likert scale) and true price implementation to reduce health, environmental and social externalities. The participants showed high general health interest (4.56 ± 0.96), interest in local and seasonal production (5.06 ± 0.87), in protecting the environment (4.74 ± 0.94) and in the natural content of the food (4.76 ± 0.97). Females reported having higher levels of trust in TCAF than males, while respondents with university degrees showed higher previous knowledge of externalities. We then conducted a linear regression using the backward method to reveal predictors of a positive attitude towards the true cost. The regression model revealed four predictors affecting the attitude towards TCAF: "trust in TCAF", "green trust", "environmental protection" and "affordability importance". Trust in TCAF and true price characteristics (green trust) strongly influenced the positive attitude towards the methodology. In addition, the higher their interest in protecting the environment, the more positive their attitude towards TCAF. The model also revealed that participants with more positive attitudes towards this approach will give less importance to the affordability of food. These consumers seem to be more open to paying the true price for the externalities associated with food production. The results support the implementation of TCAF and true pricing in the Swiss context. Stakeholders, policymakers and the food industry can use this information to develop targeted interventions to transform the food system towards more sustainable.

10:30am - 12:15pm

Communicating Sustainable Consumption - Crosspollination to transfer knowledge and enable action

Location: **Sängsalen**

Session Chair: **Georgina Guillen**

Session Chair: **Stephan Wallaschkowski**

Session Chair: **Ashley Colby**

Choose re-use: Exploring human interaction vs. technological default nudges to promote the use of reusable cups

Ann-Kathrin Nies-Tolschnibbe

Leuphana University Lüneburg, Germany

In this presentation, Ann-Kathrin will highlight the role of default nudges in promoting the adoption of reusable coffee cups. It will focus on the effectiveness of technological and human interaction default nudges and their underlying mechanisms. The discussion will address how food retailers can effectively design default nudges and nudge combinations to increase the adoption of reusable coffee cups.

Clim@venture: unlocking the power of pan-European youth storytelling

Angelika Bachmann

Bachmann Education, Germany

In this presentation we will discuss opportunities and challenges of a pan European youth storytelling approach that was developed and applied in the context of the Erasmus+ funded Climate Education and Action project "Clim@venture 1.5". Following a design thinking scheme, the storytelling approach was co-developed and tested with both: educational partner organizations from Italy, Sweden, Germany and Austria as well as with teachers and students from high schools from these countries to test its real world potentials and limitations.

Communicating energy innovation in communities

Pia Laborgne

Karlsruher Transformationszentrum für Nachhaltigkeit und Kulturwandel (KAT)

The presentation is based on the project "Strengthening and consolidation of innovation communities to implement the recommendations of the Climate Citizens' Council of the Freiburg region". By fostering collaboration among diverse sectors, including civil society, science, politics, and business, it aims to promote a sustainable and inclusive energy transition. Key questions are: How can climate protection and, in particular, the energy transition become more inclusive and be carried more broadly into society and shaped by more people together? What can local innovation communities contribute to the implementation of a sustainable energy transition? What can local innovation communities contribute to the social sustainability of cities?

A case study of a Belmont Forum-funded project on sustainable food supply chains

Ashley Colby

SCORAI, United States of America

In this short talk, Ashley will highlight the successes and challenges of working in a multinational, transdisciplinary project to communicate important findings on sustainable food supply chains. Ashley will share what she has developed as best practices, and highlight some challenges she has faced and elicit feedback.

Communicating sustainable clothing consumption - What's gender got to do with?

Stephan Wallaschkowski

Bochum University of Applied Science / Leuphana University Lüneburg, Germany

In his presentation, Stephan will outline the connections between gender (the social dimension of being a man or a woman) and sustainable and unsustainable consumption patterns in clothing. He will show how prevalent gender roles and resulting gendered expectations - in particular the prevalent reduction of women on how they look - create strong internal and external pressure on women's appearance, which in turn drives excessive fashion consumption. Therefore, communicating sustainable clothing consumption must be gender-sensitive and deconstruct these common expectations. If done right, it can contribute to both, gender equality and sufficiency.

Gamification as a responsible innovation - sustainable consumption apps as a case of sustainable human-computer interactions.

Georgina Guillen

Gamification Group. Tampere University, Finland

Problem definition

With the ever-rising consideration for contemporary technology HCI solutions to enable sustainability, in the case of individual consumption, there is a dearth of knowledge of how pursuits among design can and have been responsibly re-configured toward this end. We explore the potential of responsibly implementing gamification as an innovation in gamified sustainable consumption apps (SCAs) to deepen the understanding and knowledge about the development process of sustainable human-computer interaction (SHCI). Analyzed through the prism of responsible research and innovation (RRI) dimensions, the data gathered among 21 SCA creators highlights the existence of both desirable and undesirable consequences of gamification in SHCI. The overview of all findings is presented as recommendations for SCA creators, HCI practitioners, and interested stakeholders to use RRI dimensions as a guideline to make informed decisions for the responsible development of SCA.

Method

The study was structured according to Stahl's 4P of RRI: Product - Gamified SCAs; selected from a database created for a previous survey of SCAs that systematically analyzed them. Process - key-informant, semi-structured interviews with 21 SCA creators to learn about their value-oriented practices and how they represent the RRI dimensions, juxtaposing their concerns with the app users' requests and risk considerations; Purpose - provide a creator perspective about the main issues of concern when implementing gamification in SCA; thus consolidating a user-creator landscape toward the responsible design of gamified SCA; People - SCA creators presenting their accounts of identified societal consequences beyond the use of the app.

Results

Most creators include RRI-oriented practices throughout their journeys, although these vary according to their resources and approaches to creating SCAs. Notwithstanding the differences, this study consolidated several recommendations that anyone embarking on the creation of an SCA could heed.

1. Defining sustainability values and ethical stances as a prerequisite for topical, marketing research, and decision-making
2. Enabling creative problem-solving through participatory design.
3. Implementing holistic approaches and cross-cultural cooperation for socially desirable outcomes.
4. Developing and maintaining responsiveness strategies for transparent communication and accessible solutions.
5. Nurturing a sense of shared responsibility between app creators and users.

Each recommendation includes several suggestions, drawn from the interviewees' accounts to kickstart or consolidate existing RRI practices.

Significance to mainstreaming sustainable consumption

The novel approach to gamification as an innovation, as well as the study's findings, contribute to practices of sustainable human-computer interaction, where sustainable consumption (and hence more sustainable ways of living) could be endorsed by technological innovation through design.

10:30am - 12:15pm	Workshop: Conceptualizing Enough: Navigating the Sufficiency Landscape Location: Aula Session Chair: David James Abson Session Chair: Ernest Aigner Session Chair: María Fernanda Godoy León Three complementary 'strategies' (efficiency, consistency and sufficiency) are often proposed as means of achieving sustainable production and consumption. However, despite an increasing awareness of the limitations of efficiency and consistency approaches (rebound, spillover effects, lack of normative orientation, failure to challenge growth paradigms, etc.), they remain the dominant focus of research, accounting for more than 99% of papers published in the field between 2022-2023. Here we argue that sufficiency remains marginalized in the sustainable consumption discourse, despite its potential to address the limitations of efficiency and consistency, largely due to its inherent complexity compared to the relative simplicity of the other two approaches. In particular, there are a number of unresolved characteristic tensions in the conceptualization of sufficiency that potentially inhibit its use. These tensions include, but are not limited to, the understanding of sufficiency as minimum or maximum level of consumption; as a means of achieving some desired goal or a goal in its own right; as individual or system-oriented concept; as defined by ecological or social criteria; as a primarily objective-scientific concept or a normative-political concept. If sufficiency is to take its place as a 'defining goal' within the field of sustainable consumption it is vital that these tensions are surfaced and resolved. In this workshop we will use participatory mixed methods approach to begin to explore and resolve these conceptual tensions inherent to the notion of sufficiency. As a first step we will explore the positionality of the workshop participants regarding the tensions in sufficiency by collectively mapping the multi-dimensional space that sufficiency thinking inhabits and identifying archetypical approaches to sufficiency. As a second step we will use participatory dialogue methodologies (structured fishbowl discussions/world cafes, etc.) to explore ways in which those characteristic tensions can be resolved. The knowledge co-produced during the session will be the starting point for development of a co-authored paper (with all session participants) that seeks to tackle the characteristic tensions in the notion of sufficiency, in order to help mainstream the concept as a core component within research and practice related to sustainable consumption.
10:30am - 12:15pm	Workshop: Systemic Innovation for Cyclic Consumption Location: 133 Session Chair: Rhiannon Pugh In this panel session, we wish to open up the discussion about cyclic consumption, and understood from a systems of innovation perspective. What do we mean by this? Firstly, by cyclic consumption we refer to consuming goods and services that engage in circular economy principles of a cyclic nature (Camacho-Otero et al., 2018). This could mean the recycling or products into new ones, using waste or by products from one process and inputs into another, or innovative ways to reuse and extend the life of products by using them in new ways. If we are to embed sustainability into our lives, and also avoid the exceeding of planetary boundaries in the near future, it is clear that our consumption practices need to become more cyclic in nature. Secondly, by systemic innovation, we mean that consumption within the circular economy need to be understood within a broad systemic perspective. The systems of innovation approach was pioneered in the 1990s and 2000s by prominent researchers at CIRCLE, LTH and Lund University more broadly (Asheim et al., 2011; Edquist, 2013), and is still a cornerstone theoretical approach that informs our work in innovation studies and Design Science today. By a systemic approach to innovation we mean appreciating and studying the various institutions (including norms and cultures), actors, and organisations that taken all together make up the environment and context against which innovation happens. We view innovation as key in establishing circular economy principles and sustainable modes of future development and organisation going forwards, and advocate a broad systemic perspective to advance our understanding of these matters in a nuanced, holistic, and evolutionary manner. A systemic approach enables to examine the different stakeholders within the system and the interactions between them, rather than viewing the situation as siloed. In this session, we thus zoom in on cyclic consumption but from a wide systemic perspective. We take a number of different perspectives and case application of the above rubric: Concepts of cyclic consumption- theoretical foundations (Jessica Wadin) Cyclic consumption in the fashion industry (Rhiannon Pugh) Food systems and cyclic consumption (Lena Krautscheid) The consumer perspective on cyclic consumption (Per Kristav) Cyclic consumption and the packaging question (Nathalie Silva) After a short presentation by the panel of the above perspectives on cyclic consumption derived from their own research, we open into a guided "roundtable" format where participants in the session reflect on their own perspectives and contributions in the area, creating an open and interesting environment to share ideas and thoughts in an engaged and supportive spirit.
12:15pm - 1:15pm	Lunch Location: Stora Sparbanksfoajén
1:15pm - 3:00pm	Charting the Course: Exploring Strategies and Pathways to 1.5° Lifestyles amid Deep Barriers to Transformation Location: Stora Salen Session Chair: Doris Fuchs Session Chair: Halliki Kreinin Session Chair: Edina Vadovics Session Chair: Kristóf Vadovics

Designing 1.5°C Lifestyles: Using Personal Agency to Drive Systemic Transformation

Raz Godelinik

Parsons School of Design - The New School, United States of America

Problem definition: As climate challenges escalate, transitioning to 1.5°C lifestyles is essential. However, this shift requires both individual behavior change and systemic transformations. This paper presents a project conducted with graduate students at Parsons School of Design, exploring how behavioral changes can activate individual agency and catalyze systemic interventions. The project applies a design-centered approach, positioning behavior change as a tool to help individuals recognize and influence the systemic factors shaping their lifestyles. By empowering individuals to understand their agency to affect broader systems, the project demonstrates the potential for individual action to influence large-scale change.

Method: The project was conducted in three phases. First, students selected and implemented three personal lifestyle changes from a list of 61 actions classified by the IPCC under the Avoid-Shift-

Improve (ASI) framework—one from each category. Over five weeks, they documented their experiences, challenges, successes, and key drivers and barriers. In the second phase, students reflected on the structural barriers influencing their experiences and designed an intervention ("hack") to address a key barrier. In the final phase, students tested their interventions over five weeks, reporting weekly on progress. Surveys conducted at the beginning and end of the project assessed shifts in attitudes and perspectives.

Results: Students identified key barriers such as convenience, cost, and cultural norms, designing creative interventions like leveraging technology for meal planning, creating communal food-sharing systems, and developing campaigns to shift social norms around public transportation use. These interventions highlighted the potential for small-scale actions to catalyze larger systemic changes in areas like food systems and transportation. The project also revealed various pathways individuals can explore to drive 1.5°C lifestyles, including activism, design, and innovation.

Surveys conducted at the beginning and end of the project revealed notable shifts in attitudes. At the outset, some students expressed skepticism about the potential of individual actions to effect broader systemic change. However, by the end of the project, 85% of participants reported feeling more empowered to influence systemic barriers through small, intentional actions. Additionally, 70% indicated that their perspective on the role of businesses in supporting 1.5°C lifestyles had evolved, with a greater understanding of the need for structural interventions alongside personal behavior changes.

Significance to mainstreaming sustainable consumption: This project offers a replicable framework that integrates personal action with systemic change, providing practical insights into achieving 1.5°C lifestyles. Engaging students in strategic design processes demonstrates how individual behavior change can influence broader systemic structures. The framework shows the potential of integrating demand-side interventions with structural shifts and offers a model that educators, organizations, and policymakers can adapt to mainstream sustainable consumption. (*Slight rewording for clarity.*) The project contributes to the ongoing discourse on the role of design in fostering sustainability transitions, particularly in the shift to 1.5°C lifestyles.

Evaluating the effectiveness of a carbon footprint calculator on environmental citizenship and policy support: Insights from randomised controlled trials and user segmentation analysis in the context of the 1.5-degree target

Ryu Koide^{1,2,3}, Sho Hata¹, Ryo Tajima¹, Hide-Fumi Yokoo^{1,4}, Michael Lettenmeier^{5,6,7}, Keisuke Nansai¹

¹National Institute for Environmental Studies, Japan; ²Delft University of Technology, the Netherlands; ³Institute for Global Environmental Strategies, Japan; ⁴Hitotsubashi University, Japan; ⁵D-Mat Ltd., Finland; ⁶University of Helsinki, Finland; ⁷Wuppertal Institute for Climate, Environment and Energy, Germany

Given the urgent need to promote climate-friendly behaviours, the implementation of carbon footprint calculators with actionable recommendations is increasing. When combined with personalised recommendations and commitments (pledges), carbon footprint calculators are expected to encourage users to reflect on their personal responsibility for climate impacts and adopt more sustainable lifestyles. However, most studies on carbon footprint calculators have focused primarily on individual consumption-related behavioural changes and do not address the significant gaps in personal carbon footprint reduction that are needed to meet the 1.5-degree target.

In this study, we conducted two analyses using the Japanese carbon footprint calculator 'jibungoto-planet' (which translates to 'making the planet your own concern'), which was developed as part of a collaborative effort by some of the authors and civic-tech volunteers. The first analysis utilises data from more than 7,000 users, including self-commitments to 34 decarbonisation actions related to housing, mobility, food, and goods. Multivariate statistical methods were employed to examine the characteristics of voluntary commitments to decarbonisation actions, identify subgroups of users more inclined to undertake additional actions, and assess their gaps relative to mitigation targets.

The second analysis involved a randomised controlled trial (RCT) using a demographically representative sample to evaluate the effectiveness of the carbon footprint calculator. The outcomes assessed included not only daily consumption behaviours (e.g., energy saving, transport choices, and dietary habits), but also environmental citizenship (e.g., engagement with volunteering, voting, and influencing producers and policymakers) and support for different policies. Drawing on Stern's Value-Belief-Norm (VBN) theory, we also investigated socio-psychological mechanisms by assessing respondents' awareness of consequences and the ascription of responsibility.

Our analysis of user data revealed that the footprint reduction potentials presented by the calculator primarily reached specific subgroups, such as younger and male users. In terms of the mitigation gap, the actions voluntarily committed by users through the footprint calculator were insufficient to meet the 2030 personal carbon footprint target, with only up to 31% of users potentially achieving the target, depending on the consumption domain. The seven user segments that were identified displayed markedly different levels of engagement; for example, 'lifestyle change enthusiasts' committed to as many as 25 actions, which is equivalent to a potential footprint reduction of 2.8 tCO₂e, while 'curious bystanders' rarely committed to any actions.

Preliminary results of the RCT using 600 samples confirmed that calculator use increases willingness to adopt climate-friendly actions through elements of the VBN theory, such as awareness of consequences and ascription of responsibility. Additionally, the use of the calculator influenced not

only the willingness to reduce personal footprints, but also encouraged environmental citizenship actions, such as participation in volunteering, influencing stakeholders, and supporting more stringent climate policies.

Our findings contributed to a deeper understanding of the roles of carbon footprint calculators in promoting 1.5-degree lifestyles. We demonstrated that voluntary commitments facilitated by calculator use are insufficient for achieving the 2030 climate target. We also highlighted the expanded role of footprint-based interventions in facilitating not only individual behavioural actions, but also systemic change, which are central to mainstreaming sustainable consumption.

Global consumption trends and the plausibility of deep decarbonization by 2050

Eduardo Goncalves Gresse

Universität Hamburg

Global consumption patterns are marked by extreme inequalities and shaped by the interplay between production and consumption processes as well as by socioeconomic factors, symbolic interactions, social relationships, and everyday practices. Increasing consumption worldwide, especially among the wealthiest, along with projected global population growth until 2050 pose enormous challenges to climate action. To reach deep decarbonization by 2050 and thus attain the 1.5 temperature goal of the Paris Agreement, substantial changes in consumption patterns are needed. Building on the plausibility assessments of the three editions of the Hamburg Climate Futures Outlook and on its Social Plausibility Assessment Framework, this paper examines the dynamics of global consumption and their impact on the plausibility of deep decarbonization by 2050. It starts by analyzing consumption trends in four sectors that have some of the greatest impact on global emissions and decarbonization efforts: energy, transport, food, and garment. Next, it highlights key enabling and constraining conditions for low-carbon consumption patterns. Finally, it provides a conjecture about the impact of the driver dynamics on the prospects of deep decarbonization by 2050. The assessment finds that the dynamics of this social driver substantially inhibits the pathways towards decarbonization, let alone deep decarbonization by 2050. Despite the unprecedented increase in the deployment and use of renewable energy and the temporarily altered consumption patterns during the COVID-19 pandemic, there has been no structural, large-scale shifts from carbon-intensive to low-carbon consumption in worldwide energy, transportation, food, and garment consumption. Achieving deep decarbonization requires systemic shifts in social and economic structures, stronger climate-related regulations, and widespread societal support for sustainability transformations. Without addressing the barriers to low-carbon consumption, such as the dominant logic of growth and high social inequalities, and promoting climate justice norms alongside inclusive climate policies, significant progress toward decarbonization in global economy and societies remains unlikely. These findings are particularly relevant for the discussion on the extent to which tackling social inequalities and at the same time, promoting low-carbon consumption patterns and human well-being may not only be possible, but also plausible.

Satisfying needs while reducing carbon footprints – Insights from everyday life experiences in Finland

Alisa Rannikko, Tuuli Hirvilammi

Tampere University, Finland

Problem definition

Sufficiency, as in recomposing and reducing consumption, is necessary to tackle the climate crisis. Efficiency improvements alone do not curb emissions fast enough or in a socially just manner. The concept of consumption corridors frames sufficiency between two thresholds: floor defined through satisfaction of human needs and ceiling for excess resource use that would compromise need satisfaction of current or future generations. Sufficiency thus requires understanding of the optimal satisfiers to meet human needs within the floor and the ceiling, and of the policies that would support their use.

Previous research has highlighted the difficulties of satisfying needs within planetary boundaries and identified barriers and enablers to sustainable consumption/lifestyles. However, there is yet a scarce discussion on what optimising needs satisfaction within sufficiency thresholds means at the level of everyday experiences. To design policies enabling sufficiency, it is important to understand how the opportunities and barriers to reducing emissions relate to meeting needs in everyday life.

To this end, we investigate how everyday experiences of carbon footprint reductions relate to need satisfaction. To approach needs in everyday experiences, we investigate what is sought after and how choices are justified. While there are different lists of human needs, we argue that health, relatedness, and autonomy are central in many of them, and thus use them in our analysis.

Method

Qualitative analysis of interviews with individuals (n=24) who have participated in experiments called Sustainable Lifestyle Accelerators in Finland. In the experiments, volunteer households received calculations of their carbon footprints, learned about actions to reduce their footprints towards a 1.5-degree lifestyle and chose some to try out during a one-month trial. The data is collected in 2020-2021.

We looked at data sections in which the participants discuss their actions related to carbon footprint reductions and provide justifications for their choices. Based on the justifications, we coded the sections under needs categories (health, relatedness and autonomy). Finally, we analysed the experienced co-benefits and clashes of need satisfaction and climate actions, and the associated enablers and barriers under each category.

Results

The participants experienced co-benefits of climate actions especially related to health and autonomy. However, dietary worries, lack of time and information and balancing with desires complicate actions. Satisfaction of relatedness needs is yet more complex. For many participants, current norms of desirable behaviour within a household and the society collided with climate actions. While care for future generations and nature motivated action, this in many cases clashed with care here and now.

Moreover, many actions were experienced as out of reach for the participants, suggesting the need for institutional changes related to norms and culture, built infrastructure, and the supply and pricing of goods and services. We discuss policies related to each.

Significance to mainstreaming sustainable consumption

The paper contributes to a better understanding of enablers and barriers to sustainable consumption, as experienced in everyday life. By analysing the experiences in relation to needs categories and satisfiers, the paper provides new nuanced insights into possibilities to bridge low-carbon consumption and need satisfaction.

Attitudes towards lifestyles changes: from idyllic to realistic scenarios

Pablo Ernesto Evia¹, Francisco Alpizar², Shivani Wadehra³, Thong Ho Quoc⁴, Róger Madrigal Ballesterio¹, Åsa Löfgren⁵, Sverker Carlsson Jagers⁵, Niklas Harring⁵, Frida Boräng⁵

¹CATIE, Costa Rica; ²Wageningen University and Research; ³University of Petroleum and Energy Studies, Dehradun; ⁴Ho Chi Minh City University of Economics; ⁵University of Gothenburg

Problem

Unsustainable production and consumption patterns have led to climate change, biodiversity loss, and pollution, highlighting the urgent need for substantial changes to promote human well-being and sustainability. This study focuses on the food, transport, fashion, and waste sectors to understand public preferences for environmental policies in Costa Rica, Ghana, and Vietnam, considering the diverse levels of economic development and environmental awareness in these countries.

Definition

Method

To investigate public preferences, we conducted an online survey (n=4,900) across the selected countries. Participants were randomly presented with various scenarios regarding environmental policies and their associated costs to elicit their preferences. Specifically, we aimed to assess the level of individual support for environmental policies affecting consumers' welfare, with increased costs in the sectors of transport, food, fashion, and waste. The survey included a control scenario (baseline - no cost) and several treatment scenarios: B2. Behavioral cost (e.g., reduced consumption); B3. Financial cost (e.g., increased prices of food, transport, or garments); B4. Stranded assets (applicable only to transport - asset value decreases); and B5. Increased well-being (benefits from new options, such as cleaner transport modes or healthier food availability).

Results

Preliminary findings indicate an environmental "warm glow effect" in all three study countries. Respondents agreed with the necessity of costly options in specific scenarios, suggesting that they are internalizing the effects of climate change on their lifestyles. However, confirming this internalization in a hypothetical study remains challenging. Future analyses will explore preference patterns in relation to respondents' socioeconomic characteristics and compare results across different sectors and countries.

Significance to Mainstreaming Sustainable Consumption

The findings of this study are expected to contribute significantly to global policy processes advocating transformative changes in consumption patterns. By enhancing the understanding of sustainable consumption and production patterns in the Global South, this research can inform and influence environmental policies that promote sustainability, ultimately leading to improved human well-being and environmental health.

Benefits of 1.5°C lifestyles beyond climate

Laura Scherer¹, Lea Rupcic², Sif de Visser³, Stephanie Cap¹

¹Leiden University, The Netherlands; ²Technical University of Denmark, Denmark; ³Norwegian University of Science and Technology (NTNU), Norway

Problem definition

Climate change and One Health are interlinked. Climate change affects human, ecosystem, and animal health, the intersection of which constitutes One Health, while measures to improve One Health also influence greenhouse gas emissions. The severe impacts climate change can have on One Health reinforce the need to limit global warming to 1.5°C as called for in the Paris Agreement. Next

to technological advancements and changes on the supply side, meeting the climate target also requires lifestyle change. This especially applies to high-income countries like in the EU and not only to the few highest emitters but to the population at large.

Method

We estimated the impacts of 1.5°C lifestyles on One Health in five EU countries. The modelling focused on Germany, Hungary, Latvia, Spain, and Sweden. It was conducted using EXIOBASE for input-output analysis. After projecting the lifestyle carbon footprints with changes in population and the economy to 2030, we implemented over 40 lifestyle options across nutrition, housing, mobility, and leisure to bring the household emissions down to 1.5°C-compatible levels. For human health impacts, we used the latest characterization factors, which translate climate change to disability-adjusted life years through heat and cold stress. For ecosystem health impacts, we used recently published characterization factors, which translate climate change to the potentially disappeared fraction of freshwater fish species. For animal health impacts, we estimated the number of animals embodied in household consumption, for which we report both the raw number and a morally adjusted number that aims to reflect their sentience based on the number of (cortical) neurons.

Results

Although 1.5°C lifestyles aim at climate change mitigation to meet the 1.5°C target, they yield substantial co-benefits for One Health. The lifestyle option with the largest carbon footprint reduction potential yields the largest co-benefits for human and ecosystem health: Replacing one's car with cycling and walking. The lifestyle option with the largest reduction in animal-source foods yields the largest co-benefits for animals: Switching to a vegan diet. Across the portfolio of options for 1.5°C lifestyles, Germany yields the largest co-benefits for human and ecosystem health, while Spain yields the largest co-benefits for animals, especially chickens.

Significance to mainstreaming sustainable consumption

Mainstreaming 1.5°C lifestyles is the goal of the Horizon 2020 project "EU 1.5° Lifestyles", within which this study was conducted. The demonstrated co-benefits could strengthen the motivation for lifestyle change. Consumers are often resistant to change, so such additional motivation could prove valuable.

1:15pm - 3:00pm

Things becoming (sustainable) food: edibility, changing foodways and sustainable consumption

Location: **Lilla Salen**

Session Chair: **Jonas House**

Session Chair: **Mike Foden**

The multiple edibilities of offal in contemporary Sweden

Jonas House

KTH Royal Institute of Technology, Sweden

Problem definition

Efforts to improve food system sustainability have emphasised waste reduction and the identification of more sustainable food sources as key goals. In this context, scientific interest in the use of offal as a food source has increased. Consumption of offal – that is, "organ or variety meat, entrails or viscera, innards and extremities" – can potentially help reduce waste and climate impacts. However, offal can only contribute to food system sustainability if people are willing to eat it.

Current social-scientific research on acceptability of offal as food is largely focused on consumer psychology. As I have argued in relation to insects as food, such a focus does not provide the whole picture of 'acceptance' may be achieved. An alternative focus on the achievement of 'edibility', as an effect generated by actors across the supply chain, can potentially enrich debates around the potential of offal as a sustainable food source.

Moreover, given that offal seems perennially on the boundaries of the (in)edible, it provides a theoretically fruitful case study. Offal is a paradigmatic example of a divisive food, both cherished and reviled, with different types of offal oscillating in and out of edibility at different places and times. As such, examining offal's shifting (in)edibilities can provide fruitful grounds for the development of a theoretical account of 'things becoming food' and how this changes over time and space. To do this, I will examine the different trajectories through which offal is articulated as (in)edible in contemporary Sweden. Sweden provides a particularly useful location to examine offal (in)edibilities given its culinary relationship – both historical and contemporary – with organ meat consumption, and the multiple ways that people engage with this divisive foodstuff.

Method

The study draws on interviews and observations with people involved with the production, supply and consumption of offal in contemporary Sweden. It also draws on historical and media sources to contextualise the empirical material within longer-term trajectories of edibility.

Results

The study identifies a number of distinct 'offal trajectories' in Sweden: that is, configurations of practice through which offal is enacted as edible. Some have well-established historical roots, while others are specifically recent phenomena. The study elaborates these trajectories – including the hunter trajectory, the supermarket trajectory, the gastronome trajectory and the paleo trajectory – demonstrating the multiplicity of offal's edibilities, articulated through diverse configurations of socio-material relations.

Significance to mainstreaming sustainable consumption

The study has both applied and theoretical significance for mainstreaming sustainable consumption. A greater understanding of how offal can 'become food' is valuable for efforts to improve food system sustainability – not least because, according to a recent review, edible by-products can comprise up to 40% of an animal's carcass weight. There is also much to be gained from a greater theoretical understanding of how foodways are established and change, which this study contributes towards by demonstrating how multiple (in)edibilities are enacted in practice. Arguably this provides a more sophisticated picture than simply considering the 'acceptance' of potential sustainable novel foods.

Becoming eater and eaten in urban gleaning

Mike Foden¹, Jonas House²

¹University of Bristol, UK; ²KTH Royal Institute of Technology, Sweden

Problem definition

Achieving a healthy, sustainable and secure food system will require changes in how people in the Global North routinely eat. In addition to changing what we eat (e.g. fewer animal products) and how it is produced (e.g. more ecologically responsible agriculture), attention has turned to what we don't, but potentially could eat. Recognition of the scale of losses and waste occurring throughout the food system is growing – from production to retail and consumption – alongside investment in disposal/recycling infrastructure and behaviour change campaigns targeting domestic consumers. Initiatives for recirculating surplus food have also proliferated, from formal arrangements between businesses and food aid providers to grassroots organising and more informal approaches to redistribution.

Central here is the question of what counts as food (or good food), for whom, and under what circumstances. What does it mean to disrupt established boundaries between edible and inedible – whether temporally or spatially demarcated, microbiologically informed, legally prescribed or a matter of sensory discernment – and what are the implications of doing so, for taste, health, social status and enacting care? What practical and symbolic work is performed in (waste) things becoming food (again) and therefore in reproducing or destabilising (in)edibility? To what extent are people's relationships with food/non-food open to change and, if desirable, how might such change be encouraged?

Method

The analysis draws on UK-based ethnographic research with urban gleaners: relatively informal groups and individuals who salvage, share and eat surplus or discarded food from a variety of sources, from suburban fruit trees to supermarket bins. Participant observation shed light on situated moments of doing gleaning, and in-depth interviews explored how and why participants became gleaners, alongside wider impacts on their lives.

Results

The processes by which 'eater' and 'eaten' came into being were intimately connected in and through practice. On the one hand, becoming a particular kind of eating subject required the incremental development and routine deployment of embodied competences, including senses of smell, sight, touch and taste, attuned to the changing materiality of ephemeral foodstuffs and their environments. These competences developed in tandem with ethical and political commitments and the emergence and maintenance of relationships between gleaners and their wider networks. On the other hand, making (and keeping) waste edible required continual work – collecting, sorting and storing; cleaning and cooking; distributing among more or less receptive others – at times helped or hindered by the waste-becoming-food itself.

Significance to mainstreaming sustainable consumption

Besides providing evidence on a grassroots expression of repurposing surplus food, our research contributes to wider understandings of food system transitions for sustainability. By focusing on a marginal, even transgressive response to food waste, we elucidate the unseen maintenance work underpinning normalised ways of eating, as well as the work necessary to create and sustain new ones. In doing so we contribute to theoretical understandings of edibility and how it changes, concluding that edibility is neither a property of food, nor of those who eat it, but of the relationship between the two.

Making seaweeds tasty – the becoming of novel food products

Annabell Merkel

Lund University, Sweden

As global food systems are currently presenting great challenges to our environment and our health, diverse new (sustainable) foods and possibilities to integrate these into consumers' everyday diets are extensively studied. Due to industrialized, standardized food production, approaches from disciplines such as sensory science and consumer psychology play an important role in new product development and dominate our understanding of how to turn new resources into accepted foods. Research in this tradition has found that consumers are positive towards eating seaweed and to expand utilization of

seaweed as a food in Western societies could be promising, with seaweed often portrayed as an environmentally sustainable and healthy food.

Several of these studies emphasize the need for appealing and tasty forms of seaweed food, while taste is conceptualized as a stable product quality. The social, material, and cultural situatedness of tasting as an activity in everyday life is rarely included in the study design or the analyses. Critical discussions about the various dimensions included in tasting food remain outside the main research field. This is problematic, as other research has suggested that tasting is a highly situated activity, embedded in material contexts and taking place in interactions.

Theoretically, this study draws inspiration from research exploring how different materials become edible and food for humans, as well as Science and Technology Studies conceptualizing taste as something that is being co-produced in interactive processes by different entities. These processes involve multiple actors, human and non-human, they are relational, and experienced through multisensorial engagements with the food's materiality.

In Sweden, no major previous traditions of eating seaweed have been reported, and it is currently a niche product that is being introduced into a mainstream culture, through for example innovative food products, chefs, and new (culinary) experiences. As a new food it becomes gradually visible in consumers' everyday life, but it is unclear if and how seaweed will get integrated in people's diet and become an appreciated and tasty food.

Based on ethnographic fieldwork in a sensory science laboratory in Sweden, I explore material dimensions that contribute to making seaweed a tasty food product, during preparations for a sensory testing. As part of an interdisciplinary study investigating the potential of seaweed for food in new markets, a sensory analysis was conducted in January 2022. During the descriptive training and parts of the final sensory assessment, observations and open expert conversations have been conducted.

The study is currently ongoing. The results might support establishing foods new to a specific context as appreciated, mainstream products, and support a dietary transition towards more sustainable, plant-based eating. Moreover, the findings might demonstrate the fruitful interplay of interdisciplinary research on novel foods and highlight the contribution of social theories and qualitative methodologies to product development and consumer science.

Exploring Legume Consumption Trends in Germany: A Comparative Analysis of At-Home and Out-of-Home Consumption patterns

Pauline Suski¹, Melanie Speck^{2,3}

¹University Bonn, Germany; ²Osnabrück University of Applied Sciences; ³Wuppertal Institute for Climate, Environment, Energy

Problem definition

Globally, legume consumption is on the decline, contributing to health and environmental issues such as increased cardiovascular risks, deforestation, and food insecurity. Legumes, as high-protein, high-fibre meat and dairy substitutes, play a key role in sustainable diets, also benefiting agriculture through nitrogen fixation and improved soil quality. The EAT Lancet commission recommends an annual intake of 27 kg of dried pulses per person, yet in Germany, the average is just 2.5 kg—a sharp decline compared to 50 years ago. To address this, the German government has launched the "Legume Strategy," promoting increased cultivation and consumption through retail and foodservice initiatives.

Method

In the presentation, two projects funded under the German Legume Strategy will share their insights. The "Strahl" project focuses on German retail (at-home consumption) and the "LINSE" project focuses on canteens of universities and companies (out-of-home consumption). A combined market analysis highlights current trends in legume consumption in Germany.

The analysis of supermarket purchases is based on commercial data from the GfK Consumer Panel (n = 30,000), examining various types of legumes and product categories in terms of sales volumes for 2017 and 2022. Additionally, an analysis of household typologies provides a breakdown of legume consumption based on life situations (e.g., age and household size/children). A cluster analysis further identifies different consumer groups. For the canteens, data is primarily collected by assessment of canteens' procurement quantities and recipe volumes for the past 10 years.

A main aim is guiding both projects: the increasing consumption of legume-based dishes within modern eating routines. One assumption: Consumers may be more inclined to choose more classical legume-based meals in out-of-home canteen settings, while opting for convenient and modern legume products at home, avoiding a return to "old-fashioned" cooking routines.

Results

Legume consumption remains on a dangerously low level in Germany, but we could identify important market dynamics. On the one hand there are food innovations that make pulse consumption more convenient (e.g. meat substitutes and lentil crackers), but come with possible side effects on health. On the other hand, we could observe an internationalization of the cuisine, which includes for example chickpeas, red lentils and soy, all of which are not part of traditional German cuisine. Results for canteen analysis are still pending.

Furthermore, we may gain insights into the procurement strategies which today often use legumes from non-European countries, due to criteria such as quality, procurement security with high amounts

or even the availability within the main suppliers.
Significance to mainstreaming sustainable consumption

The protein transition is a crucial element of sustainable consumption. By analyzing market trends for plant-based protein products like legumes, we can tap into existing social dynamics to guide future strategic initiatives. The results show a shift in dietary habits in Germany, and more broadly in Western countries, with some encouraging trends. However, a trend reversal in overall legume consumption doesn't necessarily imply a return to traditional eating patterns. Instead, modern factors such as convenience, multicultural societies, time constraints, and evolving tastes must be considered.

Tracing a 'plant-based' backlash? Understanding the contestation of dietary transitions

Jonathan D Beacham, David M Evans

University of Bristol, United Kingdom

Problem definition. Amidst growing calls for the urgent need to transition away from 'Western' diets – characterised by high levels of meat and dairy consumption – on both environmental sustainability and public health grounds, sustainable consumption scholars have contributed to a groundswell of interest in potential dietary shifts. Drawing principally on theories of social practice to articulate these transitions, particular attention has fallen on the reconfiguration of everyday purchasing, cooking and eating practices towards 'plant-based' diets, denoting a significant (if not necessarily total) divestment away from animal-derived foods. However, these transitions are not unidirectional or delivered via consensus. Building on and developing existing contributions, this paper aims to better contextualise and understand an emergent 'backlash' against plant-based diets and the terms on which different dietary transitions are cast as problematic, involving 'unnatural' and/or 'inedible' foods. **Method.** In this paper, we draw on a series of in-depth qualitative case studies (covering, but not limited to, a range of advertising / public relations campaigns, reports from governmental and non-governmental organisations, alongside media content) around dietary transitions. We present some provisional and early findings from this research, with our empirical focus falling primarily on the United Kingdom, however, we offer some comparative insights with other European contexts in order to better contextualise and make sense of the emergence of a 'backlash' against plant-based. **Results.** The results that we are present are organised around three key themes. Firstly, we note the mobilisation of narratives around adverse health outcomes associated with plant-based diets, particularly in terms of macro/micronutrient deficiencies and concerns around the ubiquity of 'ultra'-processed foods. Secondly, we discuss the unintended consequences associated with wholesale shifts to plant-based, which tend to be framed in terms of the detrimental effects of agricultural land use change and the associated socio-economic fallout. Thirdly, and most significantly, we outline the ways in which plant-based and carnist diets have come to be framed through fundamental and competing contestations around 'the natural'. It is through this discussion that we expand on the relational processes through which competing actors frame different diet transitions as constituted by more-or-less 'naturally' (in)edible foods, and thus as desirable or undesirable end goals to be reached. **Significance to mainstreaming sustainable consumption.** Dietary patterns have major environmental and public health consequences. Significant attention has fallen on the ways in which plant-based can be 'mainstreamed' and the potential benefits associated with such a shift. However, significantly less attention has fallen on countervailing narratives which aim to problematise, question and scrutinise these shifts, as well as the terms on which these are mobilised, which we suggest warrants greater attention.

When and why do Flexitarians Flex? Identifying Normativities of Plant-based Eating in Written Accounts

Roosa Luukkanen, Mari Niva, Taru Lindblom, Johanna Mäkelä

University of Helsinki, Finland

Sustainability transformation requires changes in all spheres of production and consumption, and food is one of the most important areas in this enormous effort. More sustainable, plant-based products need to be developed to replace foods that are most problematic from the point of view of ecological and nutritional sustainability. Often plant-based food consumption is studied by examining veganism and/or vegetarianism, where giving up or reducing the consumption of meat and/or other animal-based products is quite systematic. However, a growing number of people are not following or aiming to follow a strictly defined vegetarian/vegan diets but are in the process of limiting their meat and/or other animal based-food consumption. To better understand the practices related to plant-based food consumption, we need to understand the views of such groups (e.g. flexitarians).

This study looks at understandings of 'normal' eating in written accounts depicting eating during one April Friday. The 'What I ate today' data was collected in April 2023 in collaboration with the Finnish Literature Society SKS, the University of Helsinki, the Rural Culture Foundation, and the Forum for Culture and Religion. The data set includes 428 written accounts by Finnish participants describing a single 'food day' including nuanced descriptions of the foods that were favored and avoided, and reflections on food and eating in general. Our analysis indicates that nearly one-third of the accounts (approximately 140) contained reflections on meat reduction/avoidance or plant-based eating in

general. We focused on these accounts to explore exceptions in the context of plant-based eating. By 'exceptions' we mean instances where meat and/or other animal-based products were consumed despite efforts to limit or avoid them.

The aim of the study is to identify normativities of eating by examining the exceptions flexitarians make to their plant-based eating to conform to understandings of what Bente Halkier has called 'expectable' and 'acceptable' notions of 'normal' eating. Our preliminary findings suggest that exceptions in plant-based eating are linked to availability, commensality, differentiation, and nutrition. Furthermore, our findings indicate that dietary flexibility is not necessarily a compromise – but rather quite the opposite. In our data, participants found joy in following a flexible diet, as it allowed them to follow both plant- and animal-based eating practices. Also, we identified signs of omnivores making exceptions towards plant-based eating, signaling that plant-based eating, in certain contexts, is emerging as the new norm. By focusing on the exceptions in the context of plant-based eating, this paper offers valuable insights of the normativities surrounding eating, which may be hindering the mainstreaming of more sustainable, plant-based food consumption.

Exploring the conceptualisation of edibility in consumer food waste behaviours: Connecting waste and taste through negotiations, interpretations and performances

Annesha Makhal¹, Jordan Lazell²

¹Coventry University; ²University of Essex

Problem definition

Global food waste continues to be an abhorrent problem that has vast sustainability consequences. In the UK, like other western nations, consumers continue to be the greatest cause of wasted food (Reid, 2021). The last few decades has delivered a repertoire of knowledge on its causes and mitigation (Dou & Toth, 2021; Schanes et al., 2018) favouring the lens of what is 'avoidable and unavoidable', and 'wasted food' as a sum of edible and inedible parts (Forbes et al., 2021). Such categorisations however overlooked the nuances of the embodied and visceral connections between what can be eaten and what is discarded. An emerging field of work has shown how 'edibility' impacts not only how food waste is measured but also reduction strategies across the waste hierarchy (Moreno et al., 2020). With proxy variables measuring edibility (Nicholes et al., 2019), there has been little exploration of how edibility can be conceptualised. This research furthers understanding of edibility in the context of food waste by exploring the edibility knowledge foundations of extant food waste literature; uncovering the complexities of edibility in research and practice; and understanding the performance of edibility in consumer food management.

Method

We combine a systematic review of edibility in the food waste literature, an expert panel discussion with academics working in the area of food waste research, 25 semi-structured consumer interviews, and a planned eye-tracking experiment to evaluate how edibility is negotiated. This four-pronged qualitative approach explores the complexities of conceptualising edibility and its enactment within food consumption and wider household organisation practices, giving light to how edibility is negotiated, interpreted and performed.

Results

With broad knowledge foundations, edibility is presented as a subjective factor in consumer perceptions of food safety and freshness levels (Samotyja & Sielicka-Różyńska, 2021). Interpretations of edibility are irrational and loosely linked to actual consumption (Nicholes et al., 2019). Edibility perceptions hold considerable limitations as a measure and require decoding through retail and consumer practices (Audet & Brisbois, 2019; Blichfeldt et al., 2015). The expert panel highlighted the role of sociological influences impacting edibility. For practitioners, edibility is constrained by profitability, risk aversion, food safety, and temporality imposed by date labelling laws. Conditioned by wider socio-cultural life experiences, the consumer interviews demonstrated that edibility is enacted through the viscosity and perceived usability of food at the time of consumption and self-efficacy in food management to establish edibility procedures.

Significance to mainstreaming sustainable consumption

Despite recent progress in reducing consumer food waste, research continues to reveal multiple complexities that contextualise how and why food is wasted (Milne, 2012; Moreno et al., 2020). We argue that edibility embodies these complexities, thus having implications for future food waste reduction efforts for mainstreaming sustainable consumption. Understanding the intricacies of edibility supplements our understanding of consumer food waste behaviours. Our findings question the basis of how edibility is understood in practice. Moving forward, this research informs the next stage of edibility studies where we are conducting an eye-tracking/biometric tests to closely analyse consumer edibility decision-making processes.

1:15pm - 3:00pm

Circular Consumption 1

Location: **Nya Fest**

Session Chair: **Sylvia Lorek**

Introducing Everyday Circularities: Rethinking Consumption in the Circular Economy

Mary Greene¹, Kersty Hobson²

¹Wageningen University(Netherlands), Netherlands, The; ²Cardiff University, Wales

Problem description

The Circular Economy (CE) has gained significant attention as a framework for transitioning towards more sustainable production-consumption systems. However, dominant CE discourses prioritise techno-centric and market-driven pathways for change over

social dimensions. As such, everyday practices that are critical to fostering genuine circular transformations, remain under-theorised in the CE. This means the CE fails to fully engage with the complex socio-material demands citizens face when undertaking circular practices such as reuse, repair and material recirculation. This special issue critically interrogates such limitations of the CE framework and advocates for advancing circular society perspectives that acknowledge the importance of understanding CE change through the lens of everyday practices and the socio-material reconfigurations they entail.

Method

This paper is an introduction to a forthcoming (Spring 2025) special issue in the journal 'Consumption and Society'. It draws on discussions and presentations from three back-to-back paper sessions held at the SCORAI-ERSCP-Wageningen conference in July 2023. These sessions, titled Everyday Circularities: Rethinking Consumption in the Circular Economy, brought together empirical and conceptual insights from scholars exploring the everyday dynamics of circular consumption transformations. This paper situates the Issue in relation to key themes in the collected papers, which together aim to address gaps in the majority of policies and research into 'consumers' and the CE to date. This paper outlines the contributions of the collected papers, discussing cross-cutting themes and implications for future CE policy and research.

Results

This paper identifies several key gaps in current CE scholarship. It highlights how sufficiency-orientated circular practices such as repair, reuse, and reducing require significant reconfigurations in arrangements and performances of practices in domestic and community spaces. The contributions to this special issue illustrate how everyday circular practices demand new forms of material-cultural possibilities, enabled and constrained by systems of political-economic provision, infrastructure, norms and socio-economic inequalities.

Significance to mainstreaming sustainable consumption

By advancing a circular society perspective, this paper highlights the necessity of addressing the everyday socio-material realities that shape the uptake and scalability of circular practices. Mainstreaming sustainable consumption through the lens of circularity requires moving beyond individual consumer behaviour to understand how collective practices and systems of provision enable or inhibit circular transformations. An everyday circularities lens provides a critical framework for examining how everyday consumption intersects with broader societal structures, offering valuable insights for policymakers, practitioners and scholars seeking to promote more inclusive and effective circular transitions.

Circular Plastic Consumption in Everyday Life: A Nexus of Practice Perspective

Danai Aberg, Mary Greene

Wageningen University(Netherlands), Netherlands, The

Problem

statement

Plastic consumption poses a critical challenge to global sustainability. However, our understanding of the social and everyday dynamics of how and why people use plastics remains limited. Significant gaps exist concerning how plastics are embedded in households' daily routines and practices, as well as how these dynamics vary across different life stages and settings. This paper addresses this gap by exploring the socio-material dynamics of circular plastic consumption in everyday life across varied Dutch households.

Method

Employing a theoretically and methodologically innovative approach, this study combines a social practice theoretical framework with a future-oriented, multi-modal imaginary methodology. The analysis focuses on how daily practices influence household plastic use, considering diverse households at different life stages and compositions. This mixed-methods approach offers a nuanced understanding of the material, spatial, and temporal dimensions that shape plastic consumption.

Results

The analysis reveals the complex interplay between daily practice arrangements and the systemic integration of plastic use. Plastics are shown to play a key role in shaping social meanings related to preservation, efficiency, flexibility, spontaneity and transportability, particularly within everyday food practices. The study uncovers how social variations in the organisation of daily life and engagement with socio-technical systems either lock households into plastic consumption or enable transformative possibilities for circular practices.

Implications for mainstreaming sustainable consumption

By shedding light on the often overlooked social and everyday dynamics of plastic consumption, this

paper contributes to a deeper theoretical understanding of practice connectivity and opens up new avenues for envisioning transformative changes towards circular plastic consumption. Mainstreaming sustainable plastic use requires policies that engage with the material, social and institutional structures shaping household practices. Without addressing these broader systemic factors, efforts to reduce plastic use will likely remain marginal rather than becoming mainstream.

Circular behaviours of households members - evidence from Poland

Elżbieta Szczygieł

University of the National Education Commission, Poland

Problem definition - Despite the growing popularity of the Circular Economy (CE) concept, only some studies analyse the role of household members in its implementation. This area is often linked to pro-environmental or sustainable consumption behaviours of household members, but there is still a need to systematise behaviours from the point of view of inclusion in the CE. It is possible to gradate (rank) the behaviours undertaken by household members from the point of view of the circularity of their effects. Such an arrangement also allows for the grouping of coherent areas of action to indicate the factors favouring their adoption by household members. The main questions are therefore: 1) Can the Circular Behaviours (CB) taken by the households be grouped and what structure do they form? 2) How are the different groups of such behaviours related to each other?

Method – Data from a representative sample of 1,200 households from Poland selected in a random survey (02.2024-03.2024) was used to analyse the problem posed in this way. The 44 behaviours diagnosed on the basis of the literature review and related to the CE were used. Principal component analysis (PCA) and exploratory factor analysis (EFA) were conducted to extract the structure. Based on the results, a model with using structural model equation (CB-SEM) was developed, which distinguishes between exogenous and endogenous variables.

Results – Based on PCA, groups of factors were identified based on their similarity and homogeneity in content. Based on the EFA results, the circular behavioural components of the individual latent variables were identified and, on this basis, a structural model (CB-SEM) was developed to show the relationships between the latent variables. In effect, five groups of behaviours (latent variables) were obtained: Simple CB, Recovering, Repairing, Re-using and Energy. The strongest causal relationship was found between Recovering and Re-using ($r=0.815$; $R^2=0.733$). Simple CB influenced Repairing ($r=0.582$, $R^2=0.678$). Interestingly, mending things did not strongly affect the desire to use second-hand items ($r=0.549$, $R^2=0.217$). However, the use of renewable energy sources has been linked to the use of second-hand items ($R^2=0.466$). The model developed made it possible to identify which groups of behaviours, and to what extent, are conducive to taking the remaining actions.

Significance to mainstreaming sustainable consumption – The results of the survey indicate which behaviours have a significant impact on the implementation of CE in households. They also indicate which behaviours are undertaken in the households and what their effects can be anticipated. The results make it possible to model campaigns to raise awareness of CE among citizens. Knowing the links between different groups of behaviour makes it easier to propose concrete solutions for household practice, which should be addressed at local and central levels. Knowing the areas of CB in which households are actively involved makes it possible to use them to implement CE and to obtain (in the long term) synergies with other market actors.

Developing a conceptual framework for CircleUp: 100 Households, 100 Circular Stories

Sari Verachtert¹, Carina Hermandi², Christian Klöckner¹

¹NTNU, Norway; ²Hochschule Ruhr West

Problem definition

Given the ongoing climate change, today's society should make the transition to a circular economy approach, including sustainable production and consumption processes. Within a circular economy, we aim to minimize environmental impact and reduce waste by narrowing, slowing down, and closing material flows. In the current field of research, consumer practices have received limited attention. Therefore, the primary interest of our research project (CircleUp 2024-2027, funded by the European Union) is to investigate and disseminate circular consumption behaviour such as reuse, repair, and recycling at the micro level.

Method

One of the main objectives of this project is to establish a new conceptual framework applied to the field of circular economy, with a particular focus on consumer behaviour practices. This conceptual paper aims to identify key factors that might influence consumer behaviour in the domain of food, packages, electronics, and clothing by looking at different concepts such as barriers, drivers, and intervention strategies. We build our framework on both top-down as well as bottom-up practices, integrating existing theories from the literature and hands-on knowledge from project workshops in collaboration with internal and external stakeholders. One of the existing helpful research theories we will employ in our model is the stage model of self-regulated behavioural (SSBC), which was conducted by Bamberg (2013).

Results

One aim of the CircleUp project is to design interventions to promote circular economy practices among households. The four distinct stages of the SSBC (Bamberg, 2013) model provide a solid foundation for both designing and evaluating these interventions. The interventions in the CircleUp project will be based on information, commitment and feedback; three approaches identified as important in the research literature. These interventions will be implemented through a social game, counseling, and a system dynamic model. The paper will present our preliminary constructed framework and give new insights relevant to the field.

Significance to mainstreaming sustainable consumption

Our preliminary constructed framework includes both general motivations for contributing to the circular economy and specific areas such as clothing, food, packaging, and electronics. This approach aims to facilitate individuals' progression through different stages of sustainable consumption.

The role of civil society associations in mainstreaming informal circular consumption patterns

Wim Van Opstal^{1,2}, Nancy Bocken², Jan Brusselaers³

¹VITO, Belgium; ²Maastricht University, The Netherlands; ³VU Amsterdam, The Netherlands

Problem definition

Over the past decade, the circular economy experienced a surge in attention from the scientific community, businesses, and policymakers. While customer acceptance and adoption of circular strategies are increasingly studied, most research focuses on the formal economy, neglecting the existence of many circular activities in the informal economy. Yet, these activities play a major role in mainstreaming sustainable consumption patterns involving lifetime extension of many products through repair, reuse, or sharing which are often performed by households and associations in ways that are not included in the formal economy. Moreover, to ensure a just circular transition we need to evolve towards a circular society involving the participation of all layers in society.

Civil society associations historically played an important role in empowering vulnerable groups throughout societal changes. Giving voice to and ensuring participation of groups such as workers, minorities, women, elderly people, and people with a distance to the labour market, these associations have a correction and prospection function to identify and address new and evolving societal challenges. Also within the circular transition, these organisations organise activities in the informal economy, including community repair, reuse markets, sharing platforms, and educational support for self-repair.

In this research, we investigate if and how civil society associations are helping customer groups to mainstream circular consumption patterns through the informal economy. Moreover, we critically assess when and how they can contribute to reducing inequalities in the uptake of circular consumption patterns.

Method

This research started with explorative semi-structured interviews with civil society associations, followed by a document analysis of their initiatives. Next, we conducted an online survey (n=820) among households in Flanders (Belgium). This data allows for econometric analyses and comparisons with administrative data and earlier survey research. Finally, we conducted a second round of semi-structured interview with civil society organisations and policymakers to validate results and identify recommendations.

Results

Preliminary results show how civil society associations mitigate barriers for the adoption of circular consumption practices, including risk aversion, trust, and habit-formation. However, for some activities they tend to focus overly on already converted groups, running the risk of enhancing existing inequalities. Finally, there is a risk of confusing good intentions with actual good outcomes among initiatives taken by civil society associations. One underlying reason is that these are not fully equipped with the necessary capabilities to assess the systemic implications of the initiatives they organize for the better.

Significance to mainstreaming sustainable consumption

With this research we contribute to the literature on mainstreaming sustainable consumption by providing insights on the role of the informal circular economy and its interaction with the formal circular economy. Secondly, we assess socio-demographic inequalities in the demand-side of these informal circular economy activities and address how civil society associations mitigate (or aggravate) participation levels. Finally, we critically assess the sustainability of these initiatives and the degree upon which they can contribute to a sustainable consumption from a systemic perspective.

Scaling Circular and Sharing Economy Initiatives: A Bottom-Up Approach to Urban Sustainability and Transformation

Janis Brizga^{1,2}, Inese Mavlutova¹, Dzintra Atstaja¹, Kristaps Lesinskis¹, Inga Uvarova¹, Marija Korabovska¹, Michael Søgaard Jørgensen³, Tanja Markussen³, Jens Dorland³

¹Green Liberty; ²Banku augstskola; ³Alborg University

The growing urgency of climate change, inequality, and resource depletion calls for transformative solutions in urban environments. Circular and sharing economy (CSE) initiatives offer potential for sustainable urban transformation, yet their widespread adoption remains limited. Key barriers and enablers for scaling up CSE models must be understood to empower local communities to drive sustainable change. A bottom-up, community-based approach that considers the preferences of consumer citizens is essential to foster inclusive and effective urban transformations.

This study employs mixed and multi-method approaches, including document review, case studies, prospective studies, and practitioner knowledge co-creation. We analyze the role of different actors in scaling up and scaling out urban CSE initiatives in Poland, Latvia, Denmark and Norway as well as their potential for narrowing and slowing down material flows. The research uncovers the multi-level dynamics of CSE adoption. Particular attention is given to how policies, cultural norms, and economic incentives either hinder or promote the mainstreaming of CSE initiatives.

This is still a work in progress with results expected before the conference. However, the preliminary results identify key strategies for scaling CSE models through the development of sustainable business models, social innovations, and collaborative consumption frameworks. These strategies enhance resource efficiency, minimize waste, and strengthen multi-stakeholder collaborations among businesses, policymakers, consumers, and communities.

The findings of this research are significant for mainstreaming sustainable consumption by demonstrating how CSE initiatives can contribute to systemic sustainability transformations. By providing actionable insights on policy tools, stakeholder engagement, and new economic incentives, the study highlights pathways for embedding CSE practices into broader societal frameworks, ensuring sustainable consumption practices.

1:15pm - 3:00pm

At the Intersections of Influence: Exploring the Structure-Agency Nexus for Making Sufficiency a Habit in Consumption and Production Systems

Location: **Gustafscenen**

Session Chair: **Laura Maria Wallnoefer**

Session Chair: **Soumyajit Bhar**

Session Chair: **Sahra Svensson-Hoglund**

Introducing the Intersections of Influence: Understanding the need for coordinated actor action and suggestions for a analytical Framework

Laura Maria Wallnoefer¹, Sahra Svensson-Hoglund²

¹University of Natural Resources and Life Sciences, Vienna, Austria; ²Virginia Polytechnic Institute and State University, Blacksburg, VA, USA

Problem
Mainstreaming sufficiency requires fundamental changes to production (e.g., business models) and consumption (e.g., lifestyles) systems; each with its own set of deeply interrelated actors, such as businesses, consumers, governments (local to international), and community organizations. These actors are required to collaborate in the different transition arenas. Yet, in the literature and public debates the “micro–macro divide” or “structure–agency gap” (Bengtsson et al. 2018; Jungell-Michelsson and Heikkurinen 2022; López Cifuentes et al. 2023; Upham et al. 2020) is present. Accordingly, a “blame game” can be observed when it comes to assigning responsibility in which a limited number of actors are identified as influential, and joint responsibilities are left unaddressed (Wallnoefer et al. 2024). The distribution of responsibilities - assigned to each actor for actions within their respective sphere of agency or influence - requires coordinated actor collaborations for which guiding tools are scarce.

Method

To begin to address this, we propose the actor-based analytical framework of “Intersections of Influence” (IoI), developed from O’Brien’s (2018) “Spheres of Transformation” (see also O’Brien & Sygna 2013; Head et al., 2013), specifying personal, practical, and political dimensions to enable conditions for 1.5-degree lifestyles. The IoI framework aims to delineate these spheres of transformation for different transition actors (e.g., individuals, organizations, and institutions) and thereby provide more clarity about their responsibilities and collaborative potentials. As such, it considers “fractal” (i.e., partial and thereby shared) agency across the consumption and production systems (O’Brien et al., 2023). In the course of a special feature in Sustainability Science, researchers were invited to submit studies on the sufficiency transition within different consumption domains (e.g., energy, food, mobility) in which two or more actors are considered. This sample of about 17 papers was analyzed, based on the following criteria: (1) nature of influence (structural vs. agency); (2) single or shared actor influence, and; (3) practical implications outlined.

Expected Results
The (ongoing) analysis shows a varied degree of actor influence deliberations, and a tendency to focus on a few actors and their sphere, without mentioning other actors with agency over the studied topic/outcome. The analysis of IoIs among different individual, organizational, and institutional actors in the publications uncovered points of intervention to facilitate coordinated action plans to enhance practical outcomes.

Significance to mainstreaming sustainable consumption

To mainstream sufficiency, holistic actor-based systems perspectives are needed to solve systems challenges, particularly considering the current blame game among actors. The responsibility assignments/attribution for each actor within their influence spheres and at the intersection with other actors' influence spheres can reduce the abstraction level in sustainability solutions at large. In a related point, researchers cannot rely on "someone else" to make the "bigger picture" connections and system implications. For this, tools and methods are needed to take a systems perspective and facilitate the applications of findings to make them practically useful in setting sufficiency agendas, across actor groups. To this point, applications of the lol framework can increase the scientific utility of sufficiency research by increasing the practical applicability, or usefulness.

Structure and agency in Bolivian food practices: Transitioning from privilege to sufficiency.

Sarah Kollnig¹, Rodrigo Alvaro Quispe Condori²

¹University of Applied Sciences Wiener Neustadt, Austria; ²Universidad Mayor de San Simon, Cochabamba, Bolivia

This paper analyses the social inequalities inherent in everyday food practices in Bolivia. It does so in order to understand the role that these inequalities play in the perpetuation of unsustainable consumption patterns. While, on the one hand, looking into what makes certain habits persist, it also debates the possibilities for change towards more socio-ecologically sustainable food practices in the Bolivian context. An important aspect of more sustainable food practices is sufficiency, i.e. the notion of "having enough".

The analysis brought forward in this paper is based upon one year of ethnographic fieldwork amongst the privileged population of Cochabamba city, Bolivia. In this context, privilege shows as ethnic identification as White and Western as well as close ties to the political and economic elite. The privileged population of Cochabamba lives in neighbourhoods with excellent infrastructure, oftentimes even in "gated communities" guarded by private security firms. In-depth interviews and participant observations with the members of ten local families show how privilege is expressed through food consumption habits.

Eight more recent in-depth interviews, conducted in 2024 amongst privileged inhabitants of Cochabamba city, focus on possibilities and incentives for change towards sufficiency in food consumption.

The ethnographic data shows the continuation of colonial patterns of inequality and exploitation into the present. This means that food production as well as food consumption are organized to the advantage of the local White and Western elites. For instance, the implementation of chicken meat as "food for the poor" and an everyday food item has benefitted the economic elite while putting small-scale farmers out of business. On the consumption side, being able to consume foreign products sold in the very few supermarkets is one aspect of displaying socio-economic privilege. Increasingly, the consumption of ecologically produced food as well as a general preoccupation with ecology have also become associated with a high social status. This can be seen as a way of joining Western discourses of ecology and sustainability. The more recent interviews bring out that sufficiency potentially clashes with the idea of abundance as an expression of privilege.

This investigation shows how historically grown patterns of consumption and production can hinder a transition towards sustainability and particularly sufficiency. It brings out what hurdles have to be overcome in a post-colonial context in order to mainstream more sustainable consumption patterns.

Paths to more plant-based diets? Storytelling through system archetypes.

Christa Blokhuis¹, Marga Ocké³, Sofia Wolfswinkel¹, Gert Jan Hofstede¹, Emely de Vet²

¹Wageningen University, Netherlands, The; ²Tilburg University, Netherlands, The; ³Dutch National Institute for Public Health and the Environment

Problem definition. A societal "protein transition" is essential for human and planetary well-being. However, current research into why consumers choose animal- or plant-based proteins lacks comprehensive insight into the complexities of the food environment, particularly the importance of system components and temporal delays.

Method. This study explores the application of system archetypes (SAs) as a means to diagnose and understand the feedback loops and temporal delays across European food environments. SAs are dynamic phenomena expressed as causal loop diagrams (CLDs) that occur repeatedly in diverse settings. Through a complex systematic literature review, 47 articles were selected for extraction of variable relationships. Screening of titles and abstracts was performed in ASReview, a machine learning framework for efficient and transparent reviewing of large numbers of studies. To account for the multidisciplinary set of studies collected, variables were organized according to the Determinants of Nutrition and Eating framework and redefined using guidelines for system's variables. SAs were interpreted from the final set of variable relationships and validated with an expert panel.

Results. Six SAs were identified: fixes that fail, shifting the burden, escalation, success to the successful, tragedy of the commons, supply and demand. All archetypes 1) highlight the systemic barriers to reducing consumption of animal-based foods and 2) demonstrate how temporal delays

obscure the relationship between policy implementation (e.g. programs aiming to reduce animal-based consumption) and the manifestation of their long-term, often unforeseen, effects (e.g. resistance to reducing meat).

Significance to mainstreaming sustainable consumption. The SAs discovered in this study demonstrate that a simple structure is underlying the complex system that gives rise to unsustainable consumption. The findings underscore the value of SAs as boundary objects in identifying knowledge gaps and leverage points for accelerating the protein transition. Based on this study the authors stress that future research should focus in particular on the effect of interpersonal dynamics on food choice and consider the socio-political paradigm that develops and maintains archetypes of the food environment. The outcomes of this study emphasize the necessity of methods rooted in systems thinking for enabling and mainstreaming sustainable consumption.

Between efficiency and sufficiency: everyday frictions in building renovation

Karlis Laksevičs^{1,2,3}

¹Green Liberty; ²Wageningen University; ³University of Latvia

Problem definition. While climate change policy is increasingly positioning the state of housing as a moral challenge that requires major interventions on a governance and funding-scheme scale, residents of multi-apartment buildings respond to calls for renovation in multiple, intersectionally diverging and contradictory ways. These contradictions are most visible in debates concerning efficiency and sufficiency – the two types of logic with an aim to reduce use of resources with supposedly positive impacts on reducing greenhouse gas emissions and material waste.

Method. In this paper, I draw on qualitative interviews, participant observation of homeowner meetings and citizen thinking laboratories to explore how multi-apartment building residents in Latvia pursue and resist renovation through logics of efficiency and sufficiency that often become unconventional. By analysing the vernacular discourses of sufficiency and efficiency and tensions presented by (1) uneven incomes, (2) allocations of responsibility and (3) infrastructures for collective action.

Results. The qualitative analysis of sufficiency and efficiency narratives in housing renovation, reveal multiple forms of how both logics are used without environmental concern or even against environmental goals. As some households draw on sufficiency narratives to resist increasing housing costs, others imagine efficiency gains from renovation as supporting the vision that no changes in lifestyle or housing system are necessary. The first perspective results in unsustainable sufficiency, but the second in technocratic efficiency with each fuelling mutual frictions. The key frictions emerge from uneven incomes, unclear and conflicting allocations of responsibility and diverging perspectives and perceived accessibilities for beneficial collective action.

Significance to mainstreaming sustainable consumption. In this context, pursuits for the greening of housing constructed before the 1980s and 1990s opens up a space to explore what a more just and degrowth-inspired housing transition could look like. Despite environmental efficiency and sufficiency narratives gaining traction, economic, responsibility- and collective action-related narratives often create friction with environmental concerns. Without broader mechanisms and support schemes addressing inequalities between households, vernacular sufficiency and efficiency narratives are likely to reproduce unsustainable consumption.

Sufficiency as twofold relationality

Eric Hartmann¹, Laura Beyeler², Melanie Jaeger-Erben²

¹Leuphana University Lüneburg, Germany; ²Brandenburg University of Technology, Germany

Problem definition

To face sustainability crises, production and consumption levels in the Global North must be reduced fast. Hence, sufficiency has emerged as a fundamental sustainability strategy. However, the debate on sufficiency often lacks conceptual clarity, spawning diverse understandings. Simultaneously, the relational turn in the humanities inspires scholars to view sustainability phenomena through a relational lens. On this basis, we propose to discuss sufficiency as founded in a twofold relationality, combining a conceptual and a praxeological perspective.

Results

First, sufficiency can be conceptualized as certain relations, so-called relations of enoughness. Sufficiency scholars investigate different aspects concerning sustainability, such as consumption, production, labor and basic human needs. Diverse uses of sufficiency share a common structure: 'Enough/ too little/ too much of X regarding Y'. Exemplarily, a common use of sufficiency states that currently for many persons in the Global North, there is too much individual consumption regarding limited carbon budgets. Measures to reduce individual consumption like absolute reductions of air travel represent attempts to leave 'too much' and reach 'enough' consumption. Understanding sufficiency as relations of enoughness allows to reflect on sustainable consumption and production levels, contributing to limiting environmental impacts while satisfying fundamental human needs for everyone.

The second relationality of sufficiency is founded in manifold interconnected relationships of people. Sufficiency is a relational concept because humans are vulnerable and interconnected. Everything

that humans do involves either other people, beings or things: nothing is done alone. This relationality is observable in the operationalization of sufficiency in economic practices. Exemplarily, sufficiency-driven businesses rely on collaboration, support and exchange with many different actors to identify what goods or services are essential to be produced or provided. Thus, a quantitative reduction of material consumption is not possible without acknowledging and caring for existing, missing or unjust relationships. Sufficiency is a collective and collaborative transformation project for a state of enoughness.

Significance to mainstreaming sustainable consumption

We advocate for a definition of sufficiency as a bundle of relations, with different levels of enoughness and with attention on existing relationships, with others, with nature, with materialities. This relational character of sufficiency is often concealed. First, relations of enoughness explicate the factual and normative links between overconsumption and environmental impacts, while aligning consumption and production with the fulfillment of basic human needs. They help identify how much of certain entities is necessary in a specific context to reach a state of enoughness. The second relationality of sufficiency reveals the interconnection between different actors and the important role these relationships play in performing sufficiency. This relational dimension puts care at the center of sufficiency practices, striving to provide collaboratively not for profits but for basic human and more-than-human needs. We advocate for future research to recognize and work with both forms of relationality for the performance of sufficiency across sectors.

Beyeler, L. &, Jaeger-Erben, M. (2022). How to Make More of Less: Characteristics of Sufficiency in Business Practices. *Frontiers for Sustainability* 3, 949710. <https://doi.org/10.3389/frsus.2022.949710>

Hartmann, E. (2024). Sufficiency as relations of enoughness. *Sustainable Development*, sd.3090. <https://doi.org/10.1002/sd.3090>

Realising Sufficiency Policies: Examining political responsibilities for reducing aviation within the structure-agency nexus

Halliki Kreinin¹, Lea Becker¹, Josefine Henman², Paula Berendt¹, Jessika Richter², Matthias Lehner², Doris Fuchs¹, Oksana Mont², Andrius Plepys², Pia Mamut¹

¹Research Institute for Sustainability (RIFS) - Helmholtz Centre Potsdam, Germany; ²The International Institute for Industrial Environmental Economics, Lund University

Aviation, as a key sector contributing to climate change, presents significant challenges for sustainability transformations. Despite growing policy attention and awareness, expanding emissions and growth within the sector reveal deep structural barriers preventing the realisation of sustainable lifestyles consistent with the 1.5°C climate goal. These barriers include the current narrow focus of sustainability governance on eco-efficient technologies and individual responsibility, rebound effects and the absolute growth of consumption and production driven by vested interests, the dominant economic growth paradigm and hegemonic discourses around the 'good life'. The fragmentation of policy responsibilities exacerbates these challenges, with prevailing perceptions of sufficiency as sacrifice and the failure to address resource inequalities and social exclusion contribute to political polarisation, undermining social consensus and legitimacy for sufficiency policies in aviation.

Using a comprehensive research approach, including stakeholder thinking labs with policy, business and civil society actors, and citizen thinking labs in two case countries (Germany, and Sweden), this paper interrogates the allocation of responsibilities among various actors in order to facilitate structural change within the hegemonic norm cluster that normalises flying behaviour. This includes an analysis of the role of dominant discourses and norms with regard to aviation and sufficient mobility. The stakeholder labs deliberated on a set of sufficiency policy objectives and political and policy strategies for their implementation, while also discussing the involvement of relevant actors and actor coalitions within and beyond the policy sphere. In parallel, the citizen labs shed light on the contextual factors that influence individuals' ability and willingness to adopt non-aviation lifestyles. We identify dominant as well as sufficiency based norm clusters, and actor- and structure-specific barriers and enablers, including the conditions for acceptance of reduced aviation, highlight challenges and opportunities for effective coordination, and identify overarching political and policy strategies to drive sustainability transformations.

Synthesising these findings, this paper focuses on the allocation of responsibilities among different actors to facilitate structural change in the field of aviation. It identifies actor- and structure-specific barriers and enablers, highlights challenges and opportunities for effective coordination, and identifies overarching political and policy strategies to drive sustainability transformation.

1:15pm - 3:00pm

Parenting & Generational Differences

Location: **Sångsalen**

Session Chair: **Jessika Richter**

Sustainable Parenting in an Unsustainable World

Emy Scheer

ULB, Belgium

Problem definition

Since a 2017 article on how having less children is “one of the most effective individual climate action” (Wynes & Nicholas, 2017), lots of attention has been given to the individuals going childfree “for environmental reasons”. In contrast with this, the concept of “Green Parenthood Effect” emerged in the literature, understood as the “*theoretical idea that parenthood increases proenvironmental engagement* (i.e., attitudes, concerns, and behaviors)” (Shrum et al., 2023). However, limitations are found to such concept effectively creating lifestyle changes: “(1) *the countervailing force of the limitations parenthood places on people’s time, money, and attention, and* (2) *the importance of baseline environmental values and beliefs*” (ibid).

While data can be found specifically on the impact of parenthood on sustainable practices, it is rarely the article’s focus, even more so while including sustainability. Additionally, the data found are often secondary or showing ambiguous relations between parenthood and “sustainable” practices. For instance, caring about energy saving as a way to educate one’s children while, at the same time, consuming more energy since welcoming them (Barreto et al., 2014). The research’s objective was therefore to further investigate the connections between parenthood and sustainable lifestyles. What are the challenges to (dis)engage from certain practices, that are specific to parenthood? What are the potential windows of opportunities for the green parenthood effect to affect the lifestyles of “climate-conscious” parents?

Method

Semi-directed interviews were conducted with 21 parents of pre-primary-age children (0-5), living in the Brussels Region and considering themselves “climate-conscious”. It was centred around their daily practices and organisation, as well as the evolution of certain practices since welcoming children and over the last years. The practices of interest were in the fields of energy (heating and washing), food (consuming meat) and mobility (driving, biking, taking public transportation and flying). Practice theory was used as theoretical framework, and a thematic analysis was conducted to better capture the relevant components at play in the tensions between “good parenting” and sustainable lifestyles.

Results

Descriptive results can be found regarding how practices evolved, and in-depth descriptions on how it happened. For instance, why parents tend to buy a car rather than rent one, despite using the electric bikes for most of their daily journeys. Analytical results shows where the challenges to (dis)engage with the practices are anchored: the materiality of bodies, the “good parenting” meaning in relation to sustainability, learning the parenting competences, as well as windows of opportunities for meanings of environmentalism to reinforce ones of good parenting.

Significance to mainstreaming sustainable consumption

Firstly, the article gathers previously scattered and secondary data from articles tackling the impact of parenting on “sustainable practices”. Second, it contributes to better understand the challenges of parents in (dis)engaging from such practices, and which components are mostly at play. Thirdly, it highlights the tensions between discourses of “good parenting” and the ones regarding sustainable lifestyles, alongside opportunities to mutually reinforce each other.

The climate impact of having children

Jukka Heinonen, Evanthia Voskou, Sarah Olson

University of Iceland, Iceland

Problem: The humanity has driven the globe to the verge of an ecological collapse. Population growth plays a major role in this development. Moreover, while the majority of population growth takes place in the developing world where the impact of an additional household member to the global emissions is low, in the most affluent countries even children drive emissions beyond the globally climate-sustainable level, even several times that. This has been also fairly widely understood at least in the Nordic countries, where it is becoming more and more common to choose not to have children for climate reasons. Moreover, among those making this choice it is often considered as the most impactful choice one can make on a personal level. At the same time, virtually all existing studies looking at the greenhouse gas impact of sharing take within-household sharing as a climate benefit, creating therefore an illusion of larger households driving lower per capita emissions than smaller households.

Method: We use a carbon footprint survey dataset of ~8,000 respondents across the Nordic countries from 2021-2022 to study how the choice of not having children shows in the carbon footprints if we allocate the emissions caused by children to the parents instead of diving the household footprints according to the number of people in the household, as is commonly done in previous consumption-based carbon footprint studies. We look at the personal consumption part of the footprints, that directly related to household spending, and compare the annual footprints and also the over time accumulation of emissions caused by different types of households.

Results: The results demonstrate how previous research has created kind of an illusion related to the sharing benefits from within-household sharing. In global terms, looking at the global emissions, there is a benefit from two adults moving together and sharing the home and other shareable goods, but children do not lead to additional sharing benefits even though they increase the within-household sharing, since they also add to the overall household carbon footprint and only share what was already shared among the adults of the household (in the typical case of a two-adult household). When looking at the accumulated emissions over time, the choice of not having children for climate reasons indeed

appears to be the most influential choice on a personal level. We will also report how many people have taken this choice in our survey sample.

Significance to mainstreaming sustainable consumption: We don't talk about a mainstream decision, but an important issue in climate change mitigation. Moreover, we talk about a bias in our dominant ways of looking at comparisons between different types of households.

Analysing carbon footprints of household consumption in Sweden – are there indications of generational shifts towards sustainability?

Maximilian Forberg

Chalmers Institute of Technology, Sweden

Problem definition

National greenhouse gas emission (GHG) goals are usually formulated based on territorial, production-based emission accounting. This way of emission accounting has some drawbacks, for example on how domestic consumption of goods and services drives GHG emissions elsewhere (Tukker, Pollitt, and Henkemans 2020). Consumption-based accounting provides a framework through which the effect of changes in the consumption patterns of households on emissions can be measured. To understand how future consumption-based GHG emissions might develop, it is important to understand how socio-economic and spatial factors influence consumption behaviour. While numerous studies have examined the effects of variables such as income, household size, population density and age on carbon footprints, changes over time in the effect of these variables have not been studied in detail. In particular, it would be interesting to see how the effect of age changes with time, i.e. if low carbon consumption behaviour is carried on by a given generation over time. Furthermore, one can check if any behavioural change matches changes in stated environmental attitudes.

Method

We use disaggregate survey data on household consumption from Sweden for the years 2012 and 2021 to calculate household carbon footprints using emission factors derived from multi-regional input-output tables. Socio-economic data on household members, such as number of household members, income, living surface, local population density, and household member age, allow for regression analysis on these variables. Results of the years 2012 and 2021 are compared. We aim to extend the analysis to selected years between 1999 and 2011, and to compare outcomes with general trends in environmental attitudes derived from separate surveys.

Results

Preliminary results from an analysis of the household budget survey in 2012 show that, when controlling for income, an average age of adults in a household below 30 years significantly reduces household expenditure compared to the age brackets 30 to 60 and 60 to 90, while there is no significant difference between the two latter age brackets. This suggests that carbon footprints will also be lower for younger households. Computation of carbon footprints will follow in the coming months. Subcategories of types of consumptions will be analysed. A similar type of analysis will be performed on the 2021 dataset, and, depending on availability, on datasets from selected years between 1999 and 2011.

Significance to mainstreaming sustainable consumption

Precise analysis of the socio-economic and spatial variables driving carbon footprints, in particular of age, may contribute to the design of effective and acceptable policy instruments promoting low carbon consumption behaviour. Results could be of relevance for other high-income countries as well. Insights into generational change of consumption will contribute to the building of scenarios for future consumption.

Having a child but not a car: mobility biographies and social practices of couples who do not increase their car use after childbirth

Filip Schmidt¹, Marta Skowrońska¹, Michał Czepkiewicz^{1,2,3}, Marianna Kostecka¹, Dawid Krysiński^{1,4}

¹Adam Mickiewicz University Poznań; ²University of Warsaw; ³University of Iceland; ⁴University of Wrocław

Childbirth is regarded as one of the key events which transform mobility in the life course (Lanzendorf, 2003; Muggenburg et al., 2015). Although it tends to increase households' car use (McCarthy et al., 2017), it is not a universal pattern (McCarthy et al., 2021). People who don't increase their car use, and especially those who reduce it after childbirth, remain understudied, despite being a very policy-relevant category, with transformative and pioneering potential. It is crucial to identify and understand the conditions that make it possible to continue mobility with children without or with little use of the car, and the barriers that make it difficult or impossible to maintain.

To fill this gap, we describe the dynamics, drivers and challenges of pathways of mobility transitions into parenthood with a particular focus on the car-free parents. In response to calls to develop the mobility biographies approach by addressing some of its shortcomings (Rau & Scheiner, 2020, Greene & Rau, 2018) we analyse these pathways in a life-course perspective:

- (1) Accounting for socialisation effects and the intersection of individual mobility biographies with changing social and infrastructural contexts;
- (2) As a product of competing meanings, skills and materialities, as well as social practices that are linked to automobility or compete with it (Kent, 2022; Sattlegger & Rau, 2016).

We identify and describe three typical biographical trajectories leading to car-free or car-low lifestyles: lifelong continuity, opposition and conversion. We find that car-lessness is the result of a confluence of factors. There are strong socialisation effects which go beyond simple copying of parental behaviour, significant effects of relocation, and the need to combine rare skills with the ability to withstand strong normative pressures.

The presentation is based on a mixed-methods study conducted in 2023-24 in two Polish metropolitan areas (Poznań&Tricity), including a geo-questionnaire and individual in-depth interviews with both parents of children aged 0-6 years.

Literature

- Greene, M., & Rau, H. (2018). Moving across the life course: A biographic approach to researching dynamics of everyday mobility practices. *Journal of Consumer Culture*, 18(1), 60–82.
- Kent, J. L. (2022). The use of practice theory in transport research, *Transport reviews*, 42(2), 222–244.
- Lanzendorf, M. (2003). Mobility biographies. A new perspective for understanding travel behaviour.
- McCarthy, L., Delbosc, A., Currie, G., & Molloy, A. (2017). Factors influencing travel mode choice among families with young children (aged 0–4): A review of the literature. *Transport Reviews* 37 (6), 767–781.
- McCarthy, L., Delbosc, A., Currie, G., & Molloy, A. (2021). Trajectories and transitions: Mobility after parenthood. *Transportation* 48(1), 239–256.
- Müggenburg, H., Busch-Geertsema, A., & Lanzendorf, M. (2015). Mobility biographies: A review of achievements and challenges of the mobility biographies approach and a framework for further research. *Journal of Transport Geography* 46, 151–163.
- Rau, H., Scheiner, J. (2020). Mobility across the life course: an introduction to a dialogue. In: *Mobility and Travel Behaviour Across the Life Course*, ed. by J. Scheiner & Henrike Rau. Edward Elgar.
- Sattlegger, L., & Rau, H. (2016). Carlessness in a car-centric world: A reconstructive approach to qualitative mobility biographies research. *Journal of Transport Geography* 53, 22–31.

Climate Measures in Swedish School Meals—Potential for influencing pupils' lifelong food habits

Erik André

Chalmers University of Technology, Sweden

Problem

The food system is a major driver of climate change, accounting for 25–30 percent of global greenhouse gas (GHG) emissions. Dietary shifts, such as reducing meat consumption and increasing plant-based foods, are essential to mitigating these emissions. However, few policy instruments have been implemented to support such shifts. An exception with numerous examples worldwide is strategies targeting public meals, particularly school meals. In Sweden, over 40 percent of municipalities have set targets to reduce the climate impact of school meals. This study explores the potential of these strategies to promote low-carbon diets beyond the school setting by addressing behavioural barriers and opportunities for reducing meat consumption.

Method

The study focuses on 11 Swedish municipalities selected for having some of the lowest climate footprints from school meals. Semi-structured interviews were conducted with school meal coordinators to understand the strategies used to reduce the climate footprint of meals. These strategies were analysed using the COM-B model, which posits that three factors – capability, opportunity, and motivation – are essential for behaviour change. This framework was used to assess how school meal strategies can address known barriers to reducing meat consumption.

Results

Preliminary findings reveal that municipalities primarily focus on measures to increase the share of plant-based meals, adjusting recipes to reduce the use of high-emission ingredients, and modifying the decision environment to nudge pupils toward low-carbon choices. These strategies have the potential to influence all three COM-B factors. By increasing exposure to low-carbon meals and integrating school meals with education, the interventions could improve capability (e.g., increasing knowledge and skills related to sustainable food), opportunity (e.g., shifting social norms to favour plant-based diets), and motivation (e.g., changing attitudes towards low-carbon diets). However, the municipalities lack explicit goals or the focus of the measures are not to promote sustainable dietary habits beyond the school context, as the current focus is on reducing emissions from food consumed in schools.

Even if the most ambitious municipal climate targets for public meals (1.3 kg CO₂e per kg of food) are met, the reduction in national food-related emissions would be less than 2 percent. However, if private food consumption matched the current average emissions level of public meals (2.0 kg CO₂e per kg), Sweden's total food-related emissions could be nearly halved. This suggests that using school meals to promote long-term dietary changes in pupils could have a far greater impact than focusing solely on reducing emissions from the meals eaten in the school canteen.

Significance to Mainstreaming Sustainable Consumption

The study highlights a gap in current school meal climate strategies: the lack of emphasis on promoting long-term low-carbon dietary behaviours. While reducing the climate footprint of school meals is important, focusing exclusively on this may overlook opportunities to foster sustainable food habits. Addressing this gap could significantly enhance the impact of school meals on national food-related emissions.

Children's views of indoor environment, comfort and energy saving in their schools

Maria Gabriela Zapata-Lancaster

Cardiff University, United Kingdom

Schools play a critical role in promoting sustainable consumption by educating children about energy use and conservation. However, there is limited research on how children perceive and articulate energy consumption and energy-saving actions within their school environments. This research explores how children explain energy use and energy-saving actions in their schools and how their understanding relates to their sensory experience, comfort and indoor environmental conditions in their classrooms. The study employed a qualitative research design, engaging with 150 children aged 6-10 years in three primary schools in the UK. Children participated in practical workshops using drawings, group discussions, child-led monitoring and videos. The children discussed their sensory experience, the indoor environmental comfort in their classrooms and how they relate to energy use. The data were analysed using thematic analysis, revealing themes related to energy awareness, knowledge of energy-saving actions, and children's attitudes towards comfort and energy use in schools. The analysis suggests that children have some understanding of energy use, primarily associating it with lighting and electricity use. While they demonstrated awareness of common energy-saving measures, younger children struggled to provide deeper insights into more complex energy systems like heating and ventilation. Yet, children of age groups were able to link their sensory experience to monitoring data and daily activities in the classroom. The findings underscore the importance of integrating more comprehensive energy education into school curriculums. While children showed enthusiasm and a basic understanding of energy-saving actions, enhancing their technical knowledge could empower them to adopt more impactful behaviours. We argue that early engagement in energy-saving initiatives, coupled with targeted practical child-led education, can contribute to mainstreaming sustainable consumption by cultivating environmentally responsible behaviours in young learners that may continue into adulthood. Moreover, engaging children as active participants in sustainability efforts within schools can lead to broader societal impacts as they carry these practices into their homes and communities.

Workshop: Arts and creative approaches to mainstreaming sustainable consumption

Location: **Aula**

Session Chair: **Anastasia Loukianov**

The arts and creative practices remain under-theorised in sustainable consumption research. Yet, they have an important role to play in envisioning, transitioning to, and enacting more sustainable futures. Indeed, it is increasingly clear that transitions to sustainable living must be supported by broad-reaching visions and stories of what it means to live well, and the arts have been proposed as key candidates for generating such visions and stories. Currently, much of humanity lives by the understanding that consumerism is a main pathway to happiness and fulfilment. Taking the arts and creative practices in a broad sense to refer to traditional artistic activities (e.g. painting, writing), everyday creative activities (e.g. taking pictures, social media posts), and arts-based and creative methods, this session aims to explore how such practices can help us shift away from this understanding. Notably, the session is interested in how such practices can offer valuable opportunities for generating new bottom-up understandings, engaging in participatory learning, imagining more sustainable consumption futures, and disseminating productive understandings to wide audiences. This session invites both academics and practitioners to reflect on past and current experiences with the arts and creative practices in sustainable consumption research and advocacy. These experiences can involve the use of arts-based and creative methods for studying sustainable consumption practices, disseminating findings via artistic and creative means, or studying the portrayal of (un)sustainable consumption in art. Taking the arts and creative practices seriously, the session seeks reflections on successes and on challenges and limitations of such approaches to imagining, bringing about, and mainstreaming sustainable consumption. Research beyond the field of sustainable consumption has previously argued that arts and creative practices can contribute to representation, imagination, sensing and experience, dissemination, and democratisation of concepts and knowledges. As arts-based and creative approaches are attracting growing interest from sustainable consumption researchers, it becomes critical that their potentials and limitations be considered in this field. Accordingly, the session invites participants to reflect on the following themes:

- How are the arts and creative practices already used in the representation and communication of (un)sustainable consumption? How is (un)sustainable consumption represented and who creates the representations?
- How can the arts and creative practices support a democratic engagement with sustainable consumption futures? How does this relate to mainstreaming sustainability?
- How can the arts and creative practices support grasping what living more sustainably would mean and feel? How do existing mainstream artistic norms enable and constrain this potential?
- More broadly, what are the relationships between arts, imagination, and creativity, and do the arts have privileged relationships to these coveted qualities?

The session requires 90-minutes in total and follows a hybrid scientific-workshop format to both enable prepared reflections on the themes outlined above and encourage discussion and brainstorming. Please see details below.

1:15pm - 3:00pm

Sustainable living off the grid

Mikael Linnell

Lund University, Sweden

Problem definition: Housing, nutrition and mobility constitute the three consumption categories with the largest environmental impact, and the largest contributor to the environmental impact of housing in affluent regions is energy use (Sandberg 2021). Historically, most research in this area has been devoted to supply-side solutions for reducing energy consumption to sustainable levels. However, a growing body of work is now exploring the potential of profound demand-side reduction in energy consumption as a central strategy for mitigating climate change (EERA 2023; IPCC 2023). Stated differently, in addition to modernist strategies such as greening the energy sector or making energy production and distribution more efficient, strategies are currently being developed which can lead to significantly reduced energy consumption for households in developed parts of the world. Hence, the prevailing energy efficiency strategy will, in due time, be supplemented with an energy sufficiency strategy (Alcott 2008).

Living without connection to centralized power grids can be a viable way to reach energy sufficiency (Pulido et al. 2019; Sell 2019). Other ways to reach sustainable levels of energy consumption, like smart grids, energy sharing and prosumerism, typically presuppose that one's home is connected to central power infrastructures. Accordingly, the question explored in this study is whether, and in what ways, off grid living in affluent regions contribute to achieving energy sufficiency, energy resilience and energy equity, as part of the transition towards low carbon societies. This paper is part of ongoing research, which is why focus will be on discussing the potentiality of the approach rather than results.

Method: Living off grid, without connection to centralized power grids, has to date been studied primarily as an efficient solution for making electricity available in remote areas in developing countries of the Global South. However, living disconnected from centralized power grids could also be a significant part of the transition to fossil-free and sustainable societies in the developed countries of the Global North. With a higher proportion of households providing for their own electricity consumption, pressure on existing grids would be reduced and centralized energy production be made more sustainable.

This project explores socio-material relations among people and energy in households outside of traditional centralized energy infrastructures. The approach is ethnographic and involves qualitative methods such as internet- and document studies, home visits and in-depth interviews with households in Sweden and Norway.

Results: Ongoing research
Significance: The purpose of the study is to better understand how life off grid in the Global North could facilitate the transition to a sustainable society. The project is structured by three themes which highlight different sides of the phenomenon: (1) *off grid cultures* (which explores various types of and motives for off grid living); (2) *off grid aesthetics* (which explores various extra-academic imaginations and societal representations of off grid living, and; (3) *off grid practices* (which explores peoples' everyday lives as they strive for sustainable energy consumption through off grid living. In this session I will present and discuss my work on off grid cultures and off grid aesthetics.

Making sustainability – A wellbeing perspective on local prosumption practices.

Sandra Österlund

Örebro University, Sweden

This presentation will be of my research idea for my PhD-project. The research problem I take departure from is the urgent need for more sustainable production and consumption patterns than what is mainstream today. The most important motivations are its exploitation of natural resources, destruction of ecosystems, climate impact, and of cheap labor in low-income countries. A guiding assumption for the project is that the challenge of changing to more sustainable lifestyles and behaviors in the wealthy parts of the world needs to be compatible with striving for a good life – otherwise mainstreaming will be unlikely.

In my project, I therefore examine practices that have the potential to increase both wellbeing and sustainability simultaneously, including a case study approach on the phenomenon of makerspaces, particularly those that have sustainability as part of their vision or values. Makerspaces are open workshops where members can meet and work on individual projects, sharing tools and machines, and learning skills from each other (Stockholm Makerspace, n.d.). They are typically equipped with a mixture of modern technology such as 3D-printers and laser cutters, as well as more traditional tools for metal- and woodworking, sewing, among other handicrafts. Many makerspaces are member owned, which might foster a sense of community and democratic values to the place. There are also examples of collaborations with libraries and municipal institutions, or run as a business.

In my thesis, Makerspaces are put into the context of the wider DIY (do-it-yourself) and Maker-movement, and analyzed with help from theories of prosumption, sufficiency and human needs. The concept of prosumption describes a blurring of the distinction between production and consumption, where consumers are also producers of their own goods or collaborate in the production process (Dusi, 2017). A recent study has shown potential sustainability advantages of various forms of prosumption, including DIY and makerspaces (Stoltenberg et al, 2024). Further, the concept of sufficiency offers a framing that emphasizes the need for absolute consumption reductions while still aiming for a fulfilling life (Gough, 2023).

The case studies include interviews with leaders and members of makerspaces. Questions to be explored are: What is the main purpose of the makerspaces? How many members/visitors do they have? How are sustainability values reflected in their planning and purchases? And, what role does

the makerspace have in members personal life, in relation to wellbeing, community/social support, hobbies/interests, and overall consumption habits?

The presentation aims to engage discussions around the topics of makerspaces, wellbeing and prospects of reducing consumption, and welcomes insights from researchers and practitioners alike.

Exploring the Agency and Power of Fashion Consumption Through Cartoons: The use of cartoons, as a pedagogical tool for facilitating dialogic reflectivity, to address the social and environmental injustice of the fashion industry.

Helen O'Sullivan

University of Portsmouth, United Kingdom

While sustainability is central to curriculums at Key Stage 4 (KS4-England and Wales), this is seldom considered within KS3 art and design or below, resulting in many young people lacking an understanding of the impact clothing consumption has. This multidisciplinary research is a creative investigation into sustainability education with families, exploring the role early intervention art and design education could play in mainstreaming sustainable consumption. This research involved eight monthly workshops, with children aged between six and nine years of age and their parents/guardians. The workshops unpacked the social and environmental impact of fashion along the global supply chain.

The research is underpinned by the work of Vygotsky's theory of *social constructivism* (Vygotsky, 1978), and Freire's *conscientização* (Freire, 1996). Both of which aim to develop learners critical thinking, to achieve a deeper understanding of the world around them. Vygotsky (1978) suggests engaging in dialogue and experiential group work leads to mediated cognitive growth, while Freire (1996) considers dialogic education as the practice of freedom. Key tools for facilitating reflexive dialogue during this research were using animated cartoons and comic-strip cartoon activity sheets, which are also believed to aid understanding and the retention of knowledge (Kara, et al. 2021). Furthermore, Aktepe (2021) suggests the use of cartoons can play a crucial role in developing children's values and ethical decision making, particularly surrounding multifaceted subjects such as climate, environmental and social education (Gough, et, al. 2023; Yel, et, al. 2022).

The use of comic-strip cartoon activity sheets facilitated the exchange of dialogue allowing participants to explore complex topics and view their own positions within the fashion supply chain. These tools enabled the participants to explore emotional symbols, using either written words or emojis, to express their thoughts and feelings, which in turn led to deep conversations. Participants reflected on their positionality, forming connections to those around the world and began using their positions of power for good. Examples included children's concerns over cotton farmers health and the treatment and safety of garment workers. One child reflected on this injustice, linking to their own consumption by suggesting boycotting the company if garment worker exploitation continues. Another child imagined themselves as the garment worker, expressing they were being *brainwashed* by the fashion boss. The children also engaged in playful discussions about possible *or else* scenarios, in reaction to one telling the boss to *pay the workers more money or else*. The children humorously engaged in conversations to rectify the injustice they discovered, including some provocative suggestions such as flushing the boss into the sewers. These playful acts of resistance revealed the children's desire to shift power and agency imbalances, seeking social justice in the world.

The research is ongoing, nevertheless it is beginning to demonstrate the role creative art, design and fashion education can play in developing critical thinking and consciousness. The creative tools have proved an invaluable method to encourage dialogic reflexivity during complex and emotive topics, allowing the participants to engage in real-world issues, while promoting sustainable consumption within mainstream education.

Envisioning Sustainable Consumption futures through creativity and art

Asa Svenfelt¹, Sara Nilsson²

¹Linköping University; ²Swedish Society for Nature Conservation

Problem Definition

What could sustainable futures look like, and who gets to participate, formulate, and visualize such futures? Previous research has indicated that both research and other activities aimed at enabling sustainable consumption would benefit from including diverse perspectives from people who are usually not present when mainstreaming sustainable consumption is discussed. Adding such perspectives could generate more relevant and inclusive suggestions.

One part of the Mistra Sustainable Consumption programme is to explore how different interpretations, reinterpretations, and new narratives about the future of consumption can contribute to discussions and analyses of sustainable consumption and its future role. One question is whether and how art and science together can inspire questioning of unsustainable consumption and consumption as an economic driver, as well as illustrate alternative ways of being citizens. Other questions to consider include what consumption might look like in a sustainable future and how people's lives could be in a future where consumption does not cause environmental harm or social injustice.

Method

Within futures studies, stories of alternative futures and narratives have proven to be beneficial in evoking imagination, guiding action, and dealing with uncertainty. Therefore, this project has invited artists and local civil society organizations in different countries to interpret and envision sustainable consumption in the future, or futures beyond consumption. The project goes beyond conventional research tools and has collaborated with several actors to portray the futures of consumption through narratives and images. In Sweden, envisioning workshops were held, and three artists were engaged to create artwork based on their perspectives of sustainable consumption and beyond. Furthermore, in collaboration with Swedish Society for Nature Conservation, based on a workshop facilitator's guide developed by the researchers, 19 organizations in 16 different countries held envisioning workshops with local groups during Green Action Week 2023. Local artists were enlisted to illustrate the groups' visions into art.

Results

Together, the project brings diverse voices to envision sustainable futures. The illustrations of the groups' visions were displayed in a digital art gallery (<https://greenactionweek.org/visions/>). Additionally, a digital opening of the gallery was held in 2024, and a video with a gallery walkthrough and presentations from the organizations and artists was also produced. The Swedish artists created three artworks displayed in the Virserum art gallery in southern Sweden, along with conversations between artists and researchers during 2024. The visions, with their illustrations and artworks, presented different and new perspectives on consumption in the future.

Significance to Mainstreaming Sustainable Consumption

Power dynamics and recognition are crucial when discussing and shaping the future of consumption. Visioning can be a valuable tool for moving towards sustainable consumption. However, we must also consider who gets to decide, influence, and shape these futures. By using visioning workshops and art, several voices can be heard and visualized.

1:15pm - 3:00pm

Workshop: Communicating Sustainable Consumption - Matchmaking to transfer knowledge and enable action

Location: **133**

Session Chair: **Georgina Guillen**

Session Chair: **Stephan Wallaschkowski**

Current research on sustainable consumption communication (SCC) indicates the emergence of a field that, while fragmented and complex, encompasses a systemic understanding of tools, contexts, and audiences in order to facilitate dialogic approaches and actions consistent with the purpose of leading more sustainable lifestyles (Fischer et al., 2021). SCC research and practice bring about the relevance of framing strategies and the use of different media channels to facilitate dialogue and action (Kolondai-Matchett, 2009), also highlighting the existence of power dynamics, culture, norms, values, and ethical considerations as factors influencing consumption choices beyond the mere availability of infrastructure, products, and services, a constellation of forces that also impact what and how is sustainable consumption communicated, understood and acted upon (Guillen et al, 2021). Much emphasis has been placed on the roles and responsibilities of the quadruple helix and the relevance of highlighting cases of success, failure, and learning that can help contextualize, adopt, adapt, and scale local and global efforts to live more sustainably. Yet, the transfer of knowledge generated through such efforts is often hampered by the skewed and often lacking translation of information into each stakeholder's language. Against this background, recognizing the roles and responsibilities that each involved party could take, plays a crucial role in establishing the opportunities to facilitate knowledge transfer and empowerment. True to its purpose of serving as a cross-pollinating hub for researchers and practitioners across disciplines that make sustainable consumption communication happen, the Working Group Communicating Sustainable Consumption (WG CoCo) proposes a double-bill session featuring different facets of sustainable consumption communication. The first session, structured in a curated format, features 3 different SCC approaches: theory, practice, and theory into practice, showcased as presentations. The second session is a match-making workshop, during which the participants will engage in a speed-dating-like activity to find commonalities between their activities, facilitate knowledge transfer, and build a roadmap for future partnership development and follow-up.

3:00pm - 3:30pm

Coffee Break

Location: **Stora Sparbanksfoajén**

3:30pm - 5:15pm

EU 1.5° Lifestyles: Strategies and pathways to overcoming barriers to a transformation of lifestyles

Location: **Stora Salen**

Session Chair: **Doris Fuchs**

Session Chair: **Oksana Mont**

Session Chair: **Lena Domröse**

Session Chair: **Edina Vadovics**

EU 1.5° Lifestyles: Impactful Lifestyle Options

Stephanie Cap¹, Arjan de Koning¹, Arnold Tukker^{1,2}, Laura Scherer¹

¹Institute of Environmental Sciences (CML), Leiden University, The Netherlands; ²Netherlands Organisation for Applied Scientific Research (TNO), The Netherlands

Problem definition

Extensive greenhouse gas emission reductions will be required to meet the Paris Agreement's aspirational 1.5°C climate target. Technological change by industry alone will not be sufficient to meet this target and must be complemented by lifestyle changes. Here, we assess the carbon footprint reduction potentials of over 40 lifestyle change options in the years 2015, 2030, and 2050 for five European Union (EU) countries. We also evaluate the extent to which combinations of these lifestyle change options can reduce household footprints in line with the 1.5°C target.

Method

We calculated the carbon footprint reduction potentials of lifestyle change options using EXIOBASE environmentally extended multi-regional input-output (MRIO) tables, projected to the years 2030 and 2050 following a 1.5°C-compatible sustainable development scenario but without lifestyle changes. The lifestyle change options were implemented in the MRIO model, taking into account physical layers where appropriate. We combined different lifestyle change options and adoption rates into lifestyle portfolios and assessed the resulting footprints against 1.5°C-compatible targets. Portfolios incorporating citizen preferences and rebound effects were also evaluated.

Results

Our results show a dynamic relationship between lifestyle changes and broader trends in decarbonization. The impact of some lifestyle change options, such as energy-saving measures, was tempered by increased technology adoption, while others, such as heat pump installation, had a larger relative reduction potential as background systems decarbonized. Several '1.5°C lifestyle' portfolios were possible in 2030 for four of the countries studied. More drastic lifestyle changes and adoption rates would be required to approach the 1.5°C target in 2050, although reaching the target is only possible in one country, with maximum adoption of the most effective lifestyle changes.

Significance to mainstreaming sustainable consumption

Our research highlights the importance of encouraging progressively more sustainable lifestyle changes over time to remain within 1.5°C of warming and the relevance of assessing country and temporal variations in the impact of sustainable consumption changes.

What's Keeping Us? Structural Barriers and Pathways to 1.5° Lifestyles

Halliki Kreinin

Research Institute for Sustainability – Helmholtz Centre Potsdam

Efforts to promote low-carbon lifestyle options have gained traction in scientific and public debates, but their widespread adoption remains elusive. This article identifies and examines key structural barriers - political, economic and societal - that impede transformative change towards sustainable consumption and lifestyles. Through a multi-method approach, including Delphi workshops, expert interviews and stakeholder laboratories conducted across Europe, we analyse how these barriers interact with existing high consumption norms and insufficient differentiation between high and low impact options.

The findings show that these structural barriers not only impede individual and collective action, but also reinforce a 'responsibility ping-pong' in which governments, businesses and citizens shift responsibility without making concrete progress. However, our analysis also reveals opportunities to address these challenges through innovative business models, reformed welfare systems and justice-oriented frameworks for shared responsibility.

By linking the removal of structural barriers with the potential for transformative lifestyle changes, we demonstrate the critical role of systemic reform in achieving the 1.5°C climate goal. Our findings emphasise that mainstreaming sustainable consumption requires a shift from fragmented individual actions to comprehensive, collaborative strategies that adapt societal structures to low-carbon lifestyles.

Structural change for welfare states and business models

Janis Brizga

Green Liberty

Among the necessary structural changes for 1.5° lifestyles, welfare states and business models deserve particular attention. How can an ecological transformation of welfare states be pursued? What instruments and strategies do stakeholders consider desirable and feasible and under what conditions? What changes to business models are necessary and appear possible in pursuit of 1.5° fit economies? This paper presents the results from stakeholder delphis on these questions in five European countries.

EU 1.5° Lifestyles - Assessing and promoting a shift towards lifestyles fitting the Paris climate target

Doris Fuchs

RIFS - Helmholtz Centre Potsdam, Germany

If we want to have any chance to stay as close as possible to the Paris Agreement's 1.5° climate target, we will need a fundamental change in lifestyles, and we need it fast. Against this background, the EU 1.5° Lifestyles project explored opportunities, challenges and pathways towards such lifestyle change in Europe. It did so by analysing both household and structural perspectives, combining quantitative and qualitative data analysis, and integrating methods from literature reviews and expert

interviews to co-creative thinking labs and Delphis carried out in five European countries. On the basis of this broad and systematic analysis, the project co-developed recommendations for policy, stakeholders, and citizens for how to enable a transformation towards 1.5° lifestyles and societies.

Lifestyle Options: Acceptance and Side Effects

Lena Domröse¹, Jessika Luth Richter²

¹Adelphi, Germany; ²IIIEE, Lund University

In addition, the project generated insights into the acceptability of impactful lifestyle options to households, i.e. the likelihood of their voluntary adoption. Together, these results tell us the potential transformation to be achieved by different adoption rates and the gap towards a transformation in line with the 1.5° climate target that remains. Additionally, we can highlight political and societal reforms that would make the most impactful lifestyle options more attractive or accessible, as well as how threats to lasting impact (especially rebound effects) may be reduced. Thereby, we identify additional contributions to a 1.5°-oriented transformation that might be realised.

Core insights on lifestyle change and structural change in its support

Doris Fuchs¹, Edina Vadovics²

¹RIFS - Helmholtz Centre Potsdam, Germany; ²GreenDependent Institute, Hungary

Given the degree of change needed and the depth of the barriers we are facing, strategies in pursuit of 1.5° lifestyles and, indeed, societies, will have to take a broad approach. The project has identified four strategic pathways, in particular, that can mobilise the necessary momentum towards 1.5° lifestyles-enabling structural change: 1) reorganising responsibility and enabling shared responsibility in driving change towards 1.5° lifestyles, 2) creating and strengthening of diverse and inclusive actor alliances are central to promoting the transformation towards 1.5° lifestyles, 3) emphasizing the pursuit of socio-ecological justice, and 4) communicating effectively. In addition, the project has gained important insights into effective participatory research designs and co-creative work with stakeholders.

3:30pm - 5:15pm

Practice Theory & Sociology

Location: **Lilla Salen**

Session Chair: **Bente Halkier**

How can supporting normalisation of less resource-intensive consumption work as a dynamic of change towards mainstreaming sustainable consumption? Examples from across food, mobility and housing in Denmark

Bente Halkier¹, Line Kryger Aagaard²

¹University of Copenhagen, Denmark; ²University of Aalborg, Denmark

Problem definition:

Normalisation is typically used as an example of a societal dynamic, which silently legitimises material over-consumption, and thus works against more sustainable consumption. However, in this paper, we argue that normalisation can also be seen as a dynamic that can work in favour of changes towards less resource-intensive consumption patterns. Here, we understand normalisation as processes whereby consumers get to meet and socially expect less resource intensive consumption with increased frequency and across different social contexts. This in turn has the potential of leading to increased ease of access to perform less resource-intensive consumption and experience this as ordinary and of pushing a de-normalisation of particular types of resource-intensive consumption.

In order for such normalisation processes to happen and sufficiently grow in scope and scale, research shows that support from public interventions and collaborations between organised public and private actors are necessary. In Denmark, such interventions are already initiated in the food consumption area, where a number of public kitchens are being changed towards serving more plant-rich diets.

Methods:

In this paper, we are comparing differences and similarities between three consumption areas – food, mobility and housing – with regards to potentials for using support of normalisation as dynamic of change towards less resource-intensive consumption. We draw upon the Danish research project “Food, mobility and housing in the sustainable transition of everyday life”. We take a starting-point in a practice theoretical perspective on normalisation, and use data-examples from focus groups with representatives from institutions and organisations across the three areas of consumption and across the public-private divide.

Results:

One of the tentative results is that normalisation processes towards less resource-intensive consumption are more likely and easier to support institutionally and organisationally, when the normalisation processes connect several different areas of consumption.

Significance for mainstreaming sustainable consumption:

Using normalisation processes and supporting normalisation as categories is a relatively systematically defined way of categorising one of the pathways towards mainstreaming sustainable consumption. This way, we hope to contribute to the analytical comparison and critical reflections upon different ways of mainstreaming sustainable consumption in societies.

Social practice theory and social change

Marlyne Sahakian

University of Geneva, Switzerland

Problem definition: How people live and work, and what they consume, continues to have significant social and environmental impacts that affect all living beings and Earth systems. Yet many of the solutions proposed to support more sustainable forms of consumption or sustainable lifestyles do not sufficiently grapple with the complexity of social life. Fortunately, we may be at a turning point. In the 6th Assessment report of the Intergovernmental Panel on Climate Change (IPCC), Chapter 5 on Demand, Services and Social Aspects of Mitigation, scientists recognize that “individual behavior change is insufficient for climate change mitigation unless embedded in structural and cultural change,” or that “collective action and social organizing are crucial” (Creutzig 2022, 506). When it comes to understanding why people live the way they do, or how they engage in social life, and how change comes about, a multitude of approaches exist. Yet one approach has gained significant traction, particularly in the sociology of consumption, environmental sociology, and in sustainable consumption studies: social practice theory.

While social practice theory has been widely used in research, it is not always easy to grasp or understand. Conceptual developments are ongoing, with excellent theorists in consumption and environmental studies, such as Warde, Shove, and Welch, among many others. I build in this chapter on Schatzki’s philosophical approach to social practices and social change, mostly from his 2019 book, *Social Change in a Material World*. Theories can help describe and explain complexity, they are useful in and of themselves. But they can also be applied, both to understanding social change and, for some but not all, designing for social change, which is beyond the remit of what Schatzki provides. I thus extend his work and add to it a normative aim: change for more sustainable consumption, however that might be interpreted.

Method: This contribution builds on Vihalemm, Keller and Kiisel’s (2015) book, *From Interventions to Social Change: A Guide to Reshaping Everyday Practices*, as well as the *Change Points* approach (see Hoolohan and Browne 2020), to make practice theory more practicable (Sahakian and Wilhite 2014). Without dealing with the question of *who* the designers of any change initiative would be, this chapter is meant to be relevant to readers interested in teaching and research design, but also people engaged in community work, as well as public and private sector actors working toward “sustainable” outcomes.

Significance to mainstreaming sustainable consumption: For this presentation, I cover what social practices are and how the “practice turn” influenced consumption studies, to then discuss how the theory can be used to understand and support social change aimed at fostering more sustainable lifestyles. To that end, I propose a way of organizing the usefulness of practice theory into three categories: 1) descriptive and explanatory, 2) retrospective and prospective, and 3) purposeful. I spend more time on this last category, providing examples of how practice theory can be used to design for change. In conclusion, I discuss limits and promising ways forward.

Circular consumption behaviour change from a practice theoretical lens: A systematic literature review

Nina Mesiranta¹, Mari Ainasoja¹, Christian Fuentes², Ingrid Haugsrud³, Kirsi Laitala³, Malla Mattila¹, Elina Närvänen¹, Rosalyn Old⁴, Emma Samsioe², Sonja Sulankivi¹, Harald Throne-Holst³, Martta Vänskä¹

¹Tampere University, Finland; ²Lund University, Sweden; ³Oslo Metropolitan University, Norway;

⁴The Collaborating Centre on Sustainable Consumption and Production (CSCP), Germany

Problem definition: Transition to a sustainable Circular Economy requires substantial behaviour changes from consumers. Practice theory has been proposed as a promising and fruitful approach to examine interventions targeting these changes (Strengers & Maller, 2015). However, there is a lack of understanding of how widely practice theoretical interventions or practice theoretical elements (materials, meanings, competences [Shove et al. 2012]) have been applied in previous research. Our research aim is to assess the extent to which interventions with practice theory or practice theory-based elements have been applied in efforts to change consumer behaviour towards more sustainable and circular, specifically in the areas of food waste and clothing consumption.

Method: A systematic literature review (see also Palmatier et al., 2018) started by conducting two separate queries, one focusing on food waste (search terms “food waste” OR “sustainable food”) and one on clothing (“textile*” OR “cloth*” OR “apparel” OR “garment*”) combined with search terms for interventions that relate to circularity or (environmental) sustainability. The initial dataset contained 4.330 articles from Scopus, Web of Science and EBSCO databases. After excluding irrelevant (e.g., not including households or consumers) and other than journal articles, 499 scientific articles were screened for whether they include an intervention or not. An intervention was defined as any kind of

attempt to change consumer behaviour related to food waste or clothing to more circular or sustainable. For the final analysis (currently in progress), we will include only those papers that include interventions (estimated to be around 70-80 papers), and examine, for example, what kind of interventions are included in the papers, and their theoretical background.

Results: This work-in-progress paper investigates the application of practice theory-based interventions in existing research on consumer behaviour change towards more sustainable and circular practices, specifically in the areas of food waste and clothing consumption. Additionally, it evaluates studies using alternative theoretical frameworks, examining how well their interventions align with the material-meanings-competences model of practice theory (Shove et al., 2012).

Significance to mainstreaming sustainable consumption: This study provides a state-of-the-art summary of studies focusing on interventions aimed at reducing food waste and clothing consumption. It identifies underexplored elements of practice theory, individually or in combination, and offers recommendations for future research and practical applications based on these findings.

References:

- Palmatier, R.W., Houston, M.B., & Hulland, J. (2018). Review articles: purpose, process, and structure. *Journal of the Academy of Marketing Science*, 46, 1–5. <https://doi.org/10.1007/s11747-017-0563-4>
- Shove, E., Watson, M., & Pantzar, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. SAGE publications.
- Strengers, Y., & Maller, C. (Eds.). (2015). *Social practices, intervention and sustainability*. Routledge/Taylor & Francis Group.
-

Doing Sustainability. A practice theory perspective on the social construction of sustainability

Felix Fastenrath

University of Wuppertal, Germany

Sustainability is not only a measurable property of objects in terms of CO2 emissions or resource use but also a socially constructed concept. In this paper, I explore the benefits of approaching sustainability as a discourse that is continually—albeit gradually—evolving while being reproduced. To this end, I propose the concept of "Doing Sustainability," informed by practice theory and ethnomethodology, building on related concepts such as "Doing Gender", "Doing Race", and "Doing Inequality".

Although the concept of Doing Sustainability has been introduced in several papers, a systematic literature review reveals that the understanding and application of the term vary significantly across authors and disciplines. Some papers frame the concept as a tool for corporate social responsibility, often to make actions appear more sustainable. Others adopt a more theoretical, descriptive approach, focusing on individual actors in the production of discourse, thereby neglecting the concept's potential to analyse the interplay between discourse and the material environment.

In this paper, I examine the respective strengths and weaknesses of these different conceptions, aiming to consolidate them into a praxeological and ethnomethodological framework. This framework can be used to analyse the interdependencies between discourse, practice, artefacts, and subjects, making it particularly well suited to be used in design theory and design research. It facilitates an understanding of how production and consumption, as well as the products and actors involved, both influence the concept of sustainability and are influenced by it in return.

I argue that the discourse of sustainability is shaped not only by scientific discussions and media productions but also by everyday actions—particularly acts of consumption—shaping individual perceptions of sustainability. In turn, these perceptions influence consumption patterns. However, not everyone holds equal influence over this discourse; factors such as socio-economic status or roles within production and consumption systems mediate one's impact. For instance, product designers occupy a uniquely influential position, as they materialise their perceptions of the discourse of sustainability, multiplying and transmitting these ideas to consumers. More broadly, Doing Sustainability is a matter of power structures. In this paper, I test the analytical strength of this concept by applying it to various products, services, and product-service systems.

In conclusion, Doing Sustainability serves as an analytical lens through which the socio-ecological transition to sustainability can be examined, with a focus on making it more equitable and just. The concept aids in understanding how sustainability discourse is shaped by power structures and how it, in turn, influences production-consumption patterns. These patterns are closely tied to the actual resource use and emissions associated with practices. As such, the concept provides a valuable perspective for design research and practice, helping to align perceived sustainability with actual sustainability in products and practices.

The feminisation of clothing consumption: Exploring drivers behind garment accumulation from a practice-oriented perspective

Vilde Haugrønning

Oslo Metropolitan University, Norway

Problem definition

The environmental impact of clothing consumption is growing rapidly as more garments are produced and discarded. The circular economy (CE) framework, widely adopted in policy and industry, promotes solutions like recycling, reuse, and to reduce environmental impacts. However, these strategies often assume stable consumption volumes and replacement-driven acquisition, which do not reflect the complexities of real consumption patterns.

Clothing consumption is shaped by gender dynamics, with women facing additional pressures due to societal expectations that position them as primary consumers and drivers of fast fashion. These gendered expectations add layers of responsibility and complicate the already oversimplified vision of consumption in CE strategies, which tend to overlook the intricate, everyday practices that drive clothing consumption.

This paper examines clothing acquisition and disposal patterns among men and women from a practice-oriented perspective, highlighting the main drivers for garment accumulation. By drawing attention to the importance of gender dynamics in shaping clothing consumption, it notes how the feminisation of consumption should be better depicted in consumption research.

Method

The paper builds on data from a wardrobe study of 15 households in Norway. Each household consisted of a male and female partner, allowing for a gendered comparison between couples that take part in many of the same practices and share the everyday life. The wardrobe study involved a counting exercise of all the garments the participants owned, in addition to a mapping of all clothing acquired and disposed of for a period of six months.

Results

Findings show that acquisition is driven by everyday occasions, emphasising the habitual nature of clothing consumption. On average, female participants acquired 22 garments and disposed of 12, while men acquired 10 garments and disposed of 11. Women's wardrobes showed higher accumulation, especially among younger participants, highlighting the gendered pressures linked to appearance and dress.

Many participants, especially women, voiced a desire to reduce their clothing consumption and resist overconsumption, but they often faced barriers that limited their agency in doing so. The findings highlight that clothing acquisition is not simply a matter of personal choice or need, but rather a complex process influenced by gendered expectations around appearance, dress, and social practices. This aligns with other studies that show how socio-material arrangements are scripted towards less sustainable options leading to a push for consumption manifested in everyday practices (Vethal et al., 2024). Women, in particular, face a paradox in clothing consumption: they are expected to maintain a diverse wardrobe for different occasions, while simultaneously being criticized for excessive consumption, which can contribute to anxiety-driven consumption (Miller, 2010). These conflicting pressures are further intensified by market mechanisms that encourage continuous consumption through sales, discounts, and fashion cycles, pushing women beyond their intended needs and desires to resist overconsumption.

Significance to mainstreaming sustainable consumption

The paper argues for a more integrated approach to understanding consumption that foregrounds gender as a critical factor in shaping practices, which is a key challenge that must be addressed in efforts of mainstreaming sustainable consumption.

Cultural Conventions and the Contradictions of Sustainable Clothing Consumption

Anna Schytte Sigaard

Consumption Research Norway (SIFO), Norway

Problem definition

Norwegian consumers have expressed increased interest in living and consuming more sustainably, including reducing their clothing consumption. Nevertheless, the volume of textiles discarded by Norwegian households has more than doubled in the past decade and continues to increase. The textile sector faces significant environmental challenges, underscoring the urgent need for transformations to reduce impacts from textile consumption. Studies have indicated that reducing production and consumption has the greatest potential to lower the industry's total environmental impact. Understanding how people navigate and negotiate everyday clothing practices can grant valuable insights into the construction of everyday life and help address unsustainable textile consumption.

In the past decades, consumption researchers have increasingly applied social practice theories to study everyday clothing consumption because of the theories' ability to capture the routinized and ordinary aspects of everyday dressing practices. However, this focus has left little room for the individual consumer's reflections on own experiences and the cultural contexts in which practices occur. This paper explores what consumers' justifications for disposing of textile items reveal about the cultural underpinnings contextualizing textile consumption practices and how this can contribute to explain why sustainable clothing practices seemingly fail to recruit consumers.

Method

The paper is based on 80 in-depth interviews with 28 Norwegian households about textile disposal. The analytical framework combines theories of social practice with Thévenot's convention theory to explore the cultural conventions that underpin practices of textile disposal. Thévenot proposes that people engage reality through four distinct regimes: the familiar, the plan, justification, and exploration. Along with Boltanski, Thévenot developed the model of conflicting "orders of worth" within the regime of justifications to illustrate how people justify their actions by appealing to a common good or shared value. Six orders of worth were identified, each with their own conventions and forms of legitimacy: market, industrial, civic, domestic, inspired, and opinion. A seventh, green order of worth, underpinned by environmental conventions, has also been suggested as emerging.

Results

Preliminary findings suggest that justifications for textile disposal draw on all orders of worth. However, justifications that appear grounded in the green order are not located in nature or ecology but seem instead to be grounded in general understandings about sustainable clothing consumption. Additionally, these general understandings often clash with other orders of worth. While sustainable textile consumption is generally viewed as limiting consumption, other conventions encourage continued and even increased consumption. Thus, the worths attributed to the six initial orders of conventions drive an increased textile acquisition and correlated disposal.

Significance to mainstreaming sustainable consumption

Several studies have highlighted the benefits of combining these theoretical frameworks and recent studies have applied regimes of engagement to shed light on the complexities of social practices. Despite the central role of textiles in everyday life, the topics of dressing practices or clothing consumption are left unexplored in these studies. In addition, the reflexive agency of individuals is still generally lacking in practice-oriented consumption studies. This paper proposes a way to approach both shortcomings.

3:30pm - 5:15pm

Retailers as key agents in Systems of Sustainable Consumption and Production

Location: **Nya Fest**

Session Chair: **Babette Never**

Revaluing clothes: Nudie stores, alternative modes of valuation, and the enabling of circular consumption

Christian Fuentes, Devrim Aslan, Frida Eggert

Lund University, Sweden

Problem definition

As previous research has indicated, the performance of circular consumption requires consumers to rethink their everyday consumption practices and critically examine dominant modes of consumption focused on novelty and ideas of boundless consumption. When repairing, reusing, reselling, and recycling products, consumers are involved in developing new ways of evaluating and valorizing products. How is this shift in ways of valuing made possible? What is involved in the redirection of acquisition, use, and disposal practices?

Aim., theoretical approach and method

In this paper, we draw on the sociology of valuation to examine circular retailing as an example of a circular intervention, and its reception among consumers. Through an ethnographic study of Nudie Jeans—a Swedish clothing retailer that promotes product longevity — we analyse both the valuation work enacted by the retailer and how these products are then re-valued by consumers as they become incorporated into their everyday practices.

Results

Based on observations made in Nudie Jeans' physical stores, as well as monitoring of its website and social media accounts, fan-based Facebook groups, and interviews conducted with their customers, the preliminary analysis suggests that Nudie stores are successful in revaluing clothes at stores. Jeans and other clothing items are at Nudie jeans valued for their longevity (rather than novelty), material durability, and old-school production techniques. Nudie jeans show that the wear and tear of jeans rather than being a reason for the product's devaluation is instead a source of value, making the item more personal and reinforcing its uniqueness.

However, while these alternative modes of valuation resonate with certain Nudie consumers concerned with environmental issues and engaged in forms of circular consumption they are also revalued by other consumers as they are incorporated into global subcultures like raw denim or motorcycle subcultures. In the latter cases, sustainability, circularity or product longevity are not always valued as key qualities of Nudie products.

The analysis thus shows that modes of valuing do not always align in unproblematic ways across contexts. The same product, subjected to the same practices of evaluation and valorizing, can be revalued in very different ways by different groups of consumers across contexts. Consequently, alternative modes of valuing are not only difficult to orchestrate, but they are also not easily transferred across contexts

Significance to mainstreaming sustainable consumption

Based on this analysis we argue that mainstreaming circular consumption requires not only a better understanding of how new modes of valuing can be cultivated but also how these modes of valuing

can be transferred across contexts. This paper is an effort to understand under what conditions this can be made possible.

Circular Fashion in the Digital Era: how data-driven business models shape sustainable fashion consumption

Saskia Manshoven¹, Anse Smeets¹, Lars Fogh Mortensen²

¹VITO, Belgium; ²European Environment Agency (EEA), Denmark

Problem definition

The fashion industry is struggling with many environmental and social challenges. Fast fashion's linear model has led to overproduction, frequent launches of new collections and trends and declining product quality. As a result, fast fashion consumption behaviour leads to shortening of garment lifespans and around 92 million tons of textile waste generated annually, contributing to resource depletion, environmental degradation and climate change. The need for a shift towards circular fashion business models — focusing on resource efficiency, product longevity, reuse and recycling — is urgent. Digital technologies, such as Internet of Things (IoT), artificial intelligence (AI), computer-aided design (CAD), augmented (AR) and virtual reality (VR) environments are often acknowledged to be crucial enablers of this transformation, offering new ways to capture and manage data for sustainable decision making and product life cycle management. However, the adoption of these technologies remains slow, and their potential to shape circular business models that foster sustainable consumption is still underexplored.

Method

This study explores the role of digital technologies in enabling circular business models that promote sustainable and circular fashion consumption. Through a systematic literature review, supplemented by 20 semi-structured interviews with European fashion companies, sector organisations and digitalisation experts, we explore existing and emerging digital tools in the fashion industry. We analyse how these technologies are applied in circular business models, what role they play in the creation, delivery, and capture of value, and what opportunities and barriers companies face when integrating these solutions. We discuss how these technologies can contribute to a sustainable fashion consumption, while highlighting trade-offs and potential perverse effects.

Results

Preliminary findings show that digital technologies are instrumental in shaping more circular business models, providing valuable data on product usage, customer behaviour, and material flows. Digital tools enhance resource efficiency by real-time process monitoring, process optimisation and product quality control. Digital product passports are expected to become a key enabler of value chain transparency, allowing consumers to verify the sustainability credentials of their purchases and waste processors to better sort, reuse and recycle used textiles. Business models like product-as-a-service and second-hand marketplaces are effectively extending the lifespan of fashion items, enabling reuse, reducing waste, and promoting responsible consumption. However, challenges such as limited digital expertise within companies, economic feasibility, and consumer trust barriers remain significant obstacles to widespread adoption.

Significance to mainstreaming sustainable consumption

The integration of digital technologies into circular business models has potential to drive sustainable consumption in fashion. These innovations provide consumers with more accessible and flexible ways to engage with circular fashion practices—such as better maintenance, renting, sharing, and purchasing second-hand. Digital tools like virtual fitting rooms and digital product passports empower consumers to make informed, eco-friendly choices, while AI-driven repair systems encourage longer product lifespans. By making sustainability more convenient and transparent, digital technologies present a crucial lever in shifting consumption towards circularity. However, increased convenience and affordability of fashion products and services, enabled by digitally driven business models, may eventually induce even faster production cycles and increased consumption.

When and why do food retail corporations adopt sustainability innovations?

Tilman Altenburg¹, Tom Reardon², Babette Never¹

¹IDOS German Institute of Development and Sustainability, Germany; ²Michigan State University

Problem definition

Food retailers are in a key position to influence the environmental sustainability of food systems both upstream and downstream as well as within their own corporations. The role of big retail corporations is becoming increasingly relevant as food systems are not in line with planetary boundaries. Food production at industrial scales creates a wide range of environmental challenges (e.g. soil depletion, greenhouse gas, pesticides, water issues). Many of these challenges are amplified by wasteful consumption practices. Industrialized production methods and ever more demanding consumption patterns are fueling each other, as food producers and retailers seek to create additional markets, while also adapting production to changing consumer demands. In this setting, retail corporations are extremely influential change agent driving (or hindering) pro-environmental innovations at the interface

of sustainable production and consumption. Yet, what drives their actions is still a black box. Existing research from management science, global value chain research and the interdisciplinary sustainable production and consumption community is largely unconnected and/or analyses are incomplete.

Method

This paper, first, connects these separate literatures by developing a typology of drivers that can explain retail corporations' sustainability actions. It focuses on capturing combinations of factors that push retailers to invest in particular sustainability innovations. Second, it provided three empirical examples of the effect these factor combinations have on the type of innovation adopted: (1) marine products/sustainable fishery labels, (2) energy efficiency/cooling in buildings and (3) engagement in the global science-based targets initiative.

The examples are selected following an "extreme case" selection logic to show the diversity of factor combinations that drive retailers' sustainability actions. Cases are analyzed by way of qualitative process tracing based on academic and grey literature as well as semi-structured interviews conducted with retail corporations, industry associations, experts and civil society in Germany and the United States in 2024.

Results

The results of this paper shed lights on the combinations of determinants for retail corporations to engage in environmental sustainability, and provides first insights on the effects of these determinants on the specific type of innovation adopted. Additionally, the empirical cases provide examples how to empirically and methodologically apply the typology developed.

Significance to mainstreaming sustainable consumption

Sustainable consumption and the question how to mainstream it are inextricably linked to the production and sales of products – which ones and how products are sold influence consumer choices. Understanding retail corporations' sustainability behavior and what actually drives it is therefore an essential, often overlooked part of understanding the decision context of the individual consumer. Sustainability innovations by retail corporations are likely to go a long way in supporting the mainstreaming of sustainable consumption – if they happen in various dimensions and prove to be environmentally friendly along the product lifecycle.

(Un)Acceptable Protein Shift: Consumer Attitudes Toward Retail-led Interventions Promoting Sustainable Diets

Noah Linder¹, Magnus Bergquist², Pär Bjälkebring², Malin Jonell³

¹Royal Swedish Academy of Sciences, Sweden; ²Department of Psychology, University of Gothenburg, Gothenburg, Sweden; ³Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden.

Transforming global and local food systems is essential for achieving current sustainability goals. A significant lever for the food sector is promoting a dietary shift away from animal-based proteins towards more plant-based options. Food retailers, positioned at the centre of the value chain, hold a uniquely influential role, as they have the capacity to shape the behaviours of both producers and consumers. However, public acceptability is a precondition for implementing behavioural change interventions. Notably, there is a current knowledge gap regarding consumer acceptability of various retail-led interventions. In this study, we advance past research by assessing consumer acceptability of five food retail-led interventions: *information-based*, *norms-based*, *choice architecture*, *price-based*, and *choice restriction*. Recruiting a representative national sample (n = 424), we found price-manipulations and choice restrictions to be less accepted than strategies building on information, norms and choice architecture. Furthermore, a multi-level model showed that perceived effectiveness, fairness, and freedom of choice were significant predictors of acceptance for the interventions, with the exception that freedom of choice did not predict support for the norm-based intervention nor choice architecture. Lastly, we showcase that the acceptance of any intervention was best predicted by having meat buying habits, holding positive meat attitudes, both biospheric and altruistic values, and being female. Two potential courses of retailer action are identified: 1) immediately implement high-support interventions based on information, social norms, and choice architecture and 2) explore how to convey intervention effectiveness to increase consumer acceptability of price-based interventions and choice restrictions.

Busting (Sustainability) Myths: Experimental Evidence on Consumers' Willingness to Reduce Meat Consumption

Hannah Fuhrmann-Riebel, Anna Pegels, Charlotte Reich

IDOS, Germany

Problem definition

Climate change and biodiversity loss are among the most significant global challenges of our time. The food sector plays a key role in this, as it is responsible for a large share of global greenhouse gas emissions and deforestation. Meat consumption, especially beef, is a particularly large contributor to these environmental issues.

Shifting to plant-based diets could substantially reduce these impacts. Beyond the positive impact on emissions and deforestation, reducing meat consumption has additional benefits, such as improved health and better animal welfare (due to less industrial-scale production). Shifting to plant-based diets is thus of key significance to mainstreaming sustainable consumption.

Despite these clear advantages for both individuals and the environment, meat consumption remains high around the world, especially in wealthier countries like Germany and the United States. One major reason for continuously high levels of meat consumption may be widespread misperceptions in society about meat consumption, which we refer to as (sustainability) "myths". In this paper, we test whether correcting these prominent misperceptions, or "busting sustainability myths," can effectively motivate people to reduce their meat consumption.

Method

We do this by conducting a comparative survey experiment in Germany and the United States, with a sample size of 2,000 participants in each country. In this experiment, we ask participants to estimate and then provide information on three common misperceptions: the difference between greenhouse gas emissions of soy compared to beef, the difference between deforestation impacts of soy versus meat production, and sales increases of plant-based meat alternatives in the past 5 years in Germany and the U.S., respectively.

We form three treatment and two control groups, with each myth being busted in one of the treatment groups, one control group which is only asked to estimate the differences without any information on the facts, and one control group which will not be asked to estimate and will not receive any information.

Results

Preliminary results of our survey experiment are forthcoming in December 2024.

Significance to mainstreaming sustainable consumption

They are expected to shed light on the real-world potential of correcting consumer misperceptions and thus influence consumption choices, showing how public and private actors, such as governments, NGOs, or food retailers, can make use of improved sustainability communication for mainstreaming sustainable consumption.

3:30pm - 5:15pm

Individual and Structural Factors defining Sustainable Lifestyles

Location: **Gustafscenen**

Session Chair: **John Thøgersen**

Bridging the Gap Between Individual Actions and Structural Constraints: Exploring Solutions for Sustainable Lifestyles in Germany

Lynn Wagner^{1,2}, Melanie Speck¹

¹Osnabrueck University Of Applied Sciences, Faculty of Agricultural Sciences and Landscape Architecture, Germany; ²Technical University of Berlin, Institute for Vocational Education and Labour Studies, Department of Education for Sustainable Nutrition and Food Science, Germany

Private households are often caught between their own responsibility and powerlessness in the climate crisis. While the IPCC points to private consumption as crucial for the 1.5-degree target (Salo et al. 2021; Skea et al. 2022), the potential of households is often overestimated compared to political or economic levers. Nevertheless, emissions caused from individual lifestyles in the Global North remain high. Achieving the 2030 target of 2.5 tonnes CO₂eq per capita per year (Akenji et al. 2021), will require drastic reductions in all areas of consumption, including housing, mobility, nutrition and leisure.

When examining transformation processes at the individual level, it becomes clear that the implementation of sustainable lifestyles is often constrained by so-called lock-in effects. These effects prevent individuals from adopting sustainable practices due to existing structures that are beyond their direct control. For example, the use of public transport is directly dependent on the services available, and in rented accommodation, switching to sustainable heating systems is only possible with the agreement of the landlord.

In order to widen the scope for individual decision-making and promote sustainable consumption choices in everyday life, it is essential to reduce lock-in effects and create sustainable consumption structures. The municipal space, as the centre of daily life, plays a crucial role in this context. This presentation aims to show, how sustainable lifestyles can be mainstreamed at the local level through structural changes. A case study was carried out in an area in Lower Saxony, Germany. In a first phase, private households (n=34) were encouraged to adopt sustainable strategies using a serious gaming approach. This led to the identification of GHG reduction potentials as well as opportunities and challenges in general and specific to this area. The results show that the implementation of short term measures can lead to an average reduction of 14% in the Lifestyle Carbon Footprint. However, further reduction potential can be realized by overcoming existing challenges. The challenges encountered by the participants during the test phase were subsequently identified through group discussions and interviews with the participants. It became clear that many challenges can only be addressed through structural changes, for example, the availability of adequate public transport or plant-based products in grocery stores and out-of-home dining. These findings form the starting point for the second phase, which takes place at the municipal level.

The second phase involves a stakeholder-driven development process aimed at designing low-threshold and solution-oriented approaches to address these local challenges in implementing sustainable strategies. The methodology is a design thinking process with relevant stakeholders from

the region, including representatives from politics, business, and community-based initiatives. The workshop is planned for November 2024. The aim is to develop prototype solutions for the most important areas related to the household, such as mobility, nutrition, housing, and consumption.

The results of the household study, including the GHG reduction potentials and identified challenges, as well as the results of the stakeholder process will be presented at the SCORAI Europe Conference.

Perceiving Obstacles Differently: How the View of Barriers Shapes Sustainable Behaviour and Consumption Reduction

Stephanie Theresia Welte, Jörg Rössel

University Zurich, Switzerland

Problem Definition: Despite growing awareness of challenges to the global eco-system due to climate change, decreasing biodiversity and resource depletion sustainable consumption is still a niche phenomenon in Western countries. Existing explanations of sustainable consumption focus on motivations, but also on obstacles on the individual level, the infrastructure and opportunities for sustainable consumption on the macro-level. Obstacles and constraints on the individual level are of course determined by the available infrastructure and opportunities on the macro-level. In our research we address the fact that obstacles are not simply objectively given but must be interpreted and framed by individual actors. As previous research has shown objective constraints do not explain sustainable consumption very well. Usually subjectively perceived constraints have a stronger impact on the individual level of sustainable consumption. Therefore, relying on interpretative theories in sociology our research focuses on the impact of attitudinal frames on the perception of constraints to sustainable consumption. We expect that an environmentally conscious attitude will alter the perception of obstacles and constraints. Accordingly, environmentally conscious individuals perceive certain obstacles as less significant compared to those who are not environmentally conscious.

Method: We use data from a self-administered standardized online survey conducted with the general population of the city of Zurich, Switzerland in 2024 relying on a random address sample provided by the city administration. We chose this sample, because sustainable consumption has a higher prevalence in the city of Zurich compared to overall Switzerland. This enables us to study these niche behaviors in a more differentiated way. The survey contains rich information on attitudinal frameworks, ecological behavior and attempts to reduce the overall amount of consumption.

Results: We find that the effects of environmentally friendly attitudinal frames on the perception of constraints, barriers and hurdles for sustainable consumption are clearly evident. However, the effects differ according to the type of constraint in focus, an environmentally friendly attitudinal frame had positive effects on the perception of public infrastructure and a negative effect on the perception of opportunity costs. Accordingly, these obstacles are perceived differently by environmentally conscious individuals. With respect to individual effort, time and ability to consume more ecologically, we did not find strong differences according to the attitudinal framing.

Significance to Mainstreaming Sustainable Consumption: Social scientists, politicians and activists are divided into two camps, when it comes to furthering sustainable consumption: on the one hand there are those, that tackle and try to influence individual decisions to consume more sustainable, on the other hand there are those, that want to change the system and the infrastructure for sustainable consumption. Our research shows that a sole focus on the infrastructure might be misleading, because individuals perceive the objective opportunities in different ways according to their attitudinal frames. Therefore, to further sustainable consumption, we also must address the individual attitudinal frames to make such changes successful.

How can municipalities support citizens in reducing their carbon footprint while promoting a good quality of life and equal living conditions?

Katarina Borg¹, Katarina Axelsson², Karin André², Stefan Molnar¹, Anna Egelbach³, Mirjam Nykvist³

¹RISE Research Institutes of Sweden; ²Stockholm Environment Institute, Sweden; ³Avesta Municipality

Households account for a large share of the climate impact from consumption. Transitioning towards more sustainable consumption patterns can affect households differently. In 2023-2024, researchers from RISE and SEI worked together with Avesta Municipality to conduct a pilot study on how municipalities can work to reduce households' consumption-based emissions and at the same time promote a just climate transition and equal living conditions. The project applied a location-based approach, focusing on three residential areas with different characteristics – a suburb, a rural community and an area with detached houses. Data on households' climate footprint from SEI's tool the Consumption Compass was analysed to support the selection of the three areas.

Focus group discussions were implemented with residents from the three residential areas to capture different perspectives on living conditions, quality of life, consumption and the environment. Additionally, two focus groups were held with local youths. The discussions generated ideas for different measures that could improve quality of life and reduce the climate footprint in each area. The

project also facilitated a workshop with municipal officials and politicians to explore the feasibility of implementing the proposed measures.

The results indicate both differences and similarities in terms of living conditions and consumption patterns between the three residential areas. Common for all was for example that many residents struggle to reconcile everyday life with work, children and leisure and that this affected their choices of for example daily transport modes. Differences were also noted in terms of access to cultural and leisure activities, income and education levels, and the degree cohesion in the local community.

Overall, the project identified several insights into how municipalities can work to support residents to reduce their climate footprint while at the same time promote a good quality of life and equitable living conditions. The insights highlight the municipality's role and the need for innovative and flexible organizational structures, as well as opportunities of having a location-based approach involving residents. Moreover, the study suggests that enhanced knowledge and understanding of the diverse conditions and challenges faced by different groups related to consumption patterns and lifestyles can help identify measures that are better tailored to households' different needs.

The insights and methodologies developed in this pilot project are highly relevant for other municipalities and for continued research. Many Swedish municipalities face similar challenges related to mitigating the climate footprint of their residents, as well as disparities in living conditions across different residential areas. Additionally, municipalities organisational structures and the potential for implementing measures to improve living conditions and encourage residents to adopt more sustainable lifestyles and consumption patterns often show significant similarities.

Two-sided Communication: Does Communicating Gains and Losses Increase Willingness to Reduce Consumption?

Saskia Flachs¹, Oliver Büttner¹, Petra Riefler², Charlotte Baar²

¹University of Duisburg-Essen, Germany; ²University of Natural Resources and Life Sciences Vienna, Austria

Problem definition

While conceptual work on consumer sufficiency as a sustainability-strategy is gaining momentum, empirical research on strategies to motivate consumers to reduce consumption is yet scarce. As consumption has hedonic and social functions (Belk, 1988), reducing individual consumption can be perceived as sacrifice. Calls for individual consumption reduction therefore often evoke negative reactions like counterarguing or reactance, which depicts a barrier for consumption reduction (Lasarov et al., 2017). The aim of this research is to increase willingness to reduce consumption by lowering counterarguing. Based on the inoculation theory (Compton, 2012) and on work in marketing research (Kamins & Assael, 1987), we propose that two-sided communication, i.e. mentioning gains and losses of a product or behavior, can decrease counterarguing.

Method

In an online study ($N=453$), we applied a between-subjects experimental design with two groups (one-sided vs. two-sided communication). Participants were randomly allocated to one of the two experimental groups. We presented all participants a short text about the need for reducing overall consumption levels. In the one-sided condition, participants then read about personal gains that would follow consumption reduction (e.g. 'You could focus on other things in life that are important to you'). In the two-sided condition, participants read about personal gains and losses that would follow consumption reduction (e.g. 'On the one hand: You could focus on other things in life that are important to you. On the other hand: Your everyday life could be less comfortable'). Gains and losses were drawn from the GLORCY taxonomy (Riefler et al., 2024). Subsequently, participants answered questions on counterarguing and willingness to reduce consumption. Environmental values were measured in a pre-screening one week before the study.

Results

In line with the literature, we found that counterarguing negatively affected willingness to reduce consumption. Furthermore, participants with high environmental values were less likely to counterargue and more willing to reduce consumption. The results do not support our main hypothesis: Two-sided communication did not have an effect on willingness to reduce consumption, neither as a direct effect nor via counterarguing. However, we found a significant interaction effect of communication and environmental values on willingness: Participants with low environmental values showed higher willingness to reduce consumption in the two-sided communication group than in the one-sided communication group.

Significance to mainstreaming sustainable consumption

This research showed that using two-sided communication can be an effective tool for reaching a critical target group: Being transparent about gains and losses can be helpful to convince consumers who do not hold environmental values. These findings can inform communication managers on how to improve their campaigns. Future research should examine more effective ways for targeting counterarguing as this might be another promising way to address barriers for promoting consumption reduction.

Household preferences for space sharing in Finland

Enni Ruokamo¹, Eliisa Kylkilahti², Anne Toppinen², Michael Lettenmeier^{2,3}

¹Finnish Environment Institute; ²Helsinki University; ³D-mat Ltd.

From a climate point of view, the reduction of space-related emissions from buildings is of increasing importance because, with the decreasing carbon-intensity of energy production, the role of buildings in the carbon footprint of housing is rising. Shared use of living space can be one option for increasing sustainability in housing because it can decrease the amount of square meters per person required for the same purpose.

The presentation is based on a large-scale random sample citizen survey in Finland related to multiple aspects of low-carbon housing. The results presented here are related to the preferences of the respondents in terms of shared use of spaces. Also an open-ended question to freely write about thoughts on common spaces and areas was included in the survey. 198 out of a total of 1448 respondents provided text in this field.

Both quantitative preference-related results and the qualitatively analyzed open question show that in Finland shared space use seems to be a concept of relatively low popularity. While 75% of the respondents indicated at least some willingness in sharing space for given activities, there are huge differences depending on the space to be shared. Around half of the respondents are willing to use shared space for workout, playing activities of children, and workshop or repairing activities, whereas only a small fraction of the respondents would use it for preparing food, working and studying, or accommodation of guests. There are differences in preferences depending on the respondents' background so that families with bigger household size and people living in urban areas show higher interest in sharing. The insights from the open-ended question on space sharing brought up rather communal than environmental aspects as a reason for sharing space. However, it became evident that in Finland not everyone appreciates an increase in communality but many prefer high-level privacy, and residents with such views might be difficult to persuade as users of shared spaces.

The presentation concludes that shared space use seems yet to be relatively unattractive under present conditions, and the ones who appreciate space sharing do this rather for other than environmental reasons. Therefore, focusing on communality aspects, as well as improving functionality and social trust by, e.g., attractive design and spreading good examples, could be approaches to improve the situation.

Everyday sustainabilities in Global South immigrant households: survey and interview findings

Sherilyn MacGregor¹, Tally Katz-Gerro², Nafhesa Ali³, Saima Ansari¹, Zarina Ahmad¹

¹University of Manchester, United Kingdom; ²University of Haifa, Israel; ³Northumbria University, United Kingdom

We present the main findings of a survey and interviews about everyday sustainability knowledge and practices that we conducted with participants from the Somali and Pakistani communities in Manchester. The data were collected in an interdisciplinary research project that explores the environmental knowledge and practices of people who have migrated from climate challenged countries to resettle in a Global North city (Manchester, UK). This is the first study of its kind that looks at the sustainability-migration nexus from a place-based UK perspective. It argues for a counter-narrative of sustainability that centres the voices of people we are calling 'the South within the North'. After giving an overview of the wider research project, the presentation proceeds as follows.

First, we present and discuss the survey finding that there is no significant difference between GN born and non-UK/GS born survey respondents' engagement in everyday environmental practices. This finding is important in challenging the 'environmental concern gap' (Macias 2016), which is the assumption that GS migrants have a lower level of environmental concern and engagement than people born and living in so-called developed countries of the GN.

Second, we discuss findings from data collected from the non-UK/GS born participants, i.e., participants with - and/or living in households that have – first-hand experience of migration from Somalia and Pakistan to live in the UK. Here we present:

- i) Participants' reported perceptions of quality of life and local environment, including level of knowledge, where they get information about local environment, and what information sources they trust.
- ii) Participants' reported level of engagement in environmental practices including conserving energy and water, minimising food waste, recycling, using lower carbon forms of travel, not buying new things, growing food, and eating a diet low in animal products.
- iii) Participants' reported motivations for engaging in these environmental practices and the reasons they do not or rarely engage. Here there are some important themes that we discuss in depth. One is religious motivations: Islam as a way of life is itself highly concerned with what could be called sustainability, even though that word may not be used (same can be said for other words such as 'environment' which may be expressed as 'dunya' in some Islamic cultures). A second theme is about barriers to engagement: here we discuss material and structural barriers, which include lack of space/amenities and cost of living pressures, as well as cultural practices and traditions, which explain

why some sustainability practices are not a regular part of everyday life in these households, while others are.

3:30pm - 5:15pm

Social influences and young people: who are the best voices of the sufficiency transition?

Location: **Sångsalen**

Session Chair: **Valerie HEMAR-NICOLAS**

Interlinked circular practices and the implications for normalizing circularity

Noora Viholainen¹, Piia Lundberg², Angelina Korsunova²

¹Oulu University of Applied Sciences, Finland; ²University of Helsinki, Finland

Problem definition

The research on circular consumption has been examining practices like recycling, sharing or purchasing second-hand as independent behaviours, without closer attention to how they interact with each other and their embeddedness in everyday life. Also, scant attention has been given to sufficiency-oriented practices, such as refuse and reduce, and their links to other practices. In contrast to circular consumption, scholars that research zero waste phenomena tend to approach it as a lifestyle, encompassing a variety of different behaviors aimed at preventing waste generation through concrete, dedicated actions performed by individuals on a household level. However, existing research on zero-waste lifestyles remains limited, with studies focusing mainly on citizens' intentions to act rather than on how they adopt zero-waste practices in their lives.

Method

Mirroring the holistic orientation of zero waste, we aspire to overcome the silo approach prevalent in the literature on circular consumption. The aim of our study is to explore the multitude of circular practices as a system of interlinked behaviors among pioneering citizens in Finland (eco-activists, eco-influencers, and other active citizens), with special attention to the social aspects of normalizing circularity in society. Our study is based on a set of 20 semi-structured interviews conducted during the year 2021, where interviewees were recruited through local movements relevant to circularity, such as Zero Waste Finland, Home Durables and others.

Results and Significance to mainstreaming sustainable consumption

In our results, we identified different types of interconnections between circular practices. In addition to the preceding, complementary, and competing practices discussed in previous literature, we found facilitative and co-existing practices. *Facilitative* circular practices reflect how a constellation of different practices can work together, reinforcing each other on the path to circular consumption patterns. Understanding facilitative practices can enable more targeted policymaking for mainstreaming sustainable circular consumption. For instance, our data suggests that repairing and upcycling facilitate second-hand purchasing, since the confidence that one can tailor second-hand items to one's own liking, size, or needs makes the search for such items more flexible. This calls for strengthening citizens' repair skills through educational policy. *Co-existing* practices show the importance of providing balanced policy support for alternative practices with similar outcomes. For instance, while it is important to improve the availability and price accessibility of repair services, it is equally important to improve the repair competences of citizens and access to relevant infrastructure for self-repair, such as the shared use of sewing machines.

In addition, our results provide important examples of normalizing circularity. These occurred through informal verbal exchanges regarding new (unusual) ways of consumption, by seeking to borrow items from relatives and neighbors instead of buying, by suggesting bringing second-hand items as gifts to birthday parties, or answering questions regarding the change to minimalistic lifestyles. Such informal education conducted by active citizens, online or offline, helps create a new culture around consuming and taking care of belongings, shifting the societal context in a more circular direction.

'CONSUMING LESS BUT BETTER' WHEN IT COMES TO FOOD: FOOD SUFFICIENCY FROM THE PERSPECTIVE OF DANISH AND FRENCH YOUNG PEOPLE

Valerie HEMAR-NICOLAS¹, Liselotte HEDEGAARD²

¹Paris-Saclay University, France; ²Roskilde University, Denmark

Problem definition

As the largest driver of environmental change, food production must be transformed to maintain its impact within the limits of the planet, while providing sufficient and healthy food for all (Willett et al., 2019). There is an urgent need for a food transition towards sufficiency, particularly in the Global North (Wiedmann et al., 2020). While this transition primarily relies on economic, political and social changes, it must also be understandable and desirable to consumers. Rethinking food practices through the prism of sufficiency requires us to see food sufficiency not as deprivation, but as an ethical quest for pleasure rooted in "consuming less but better" (Hémar-Nicolas and Hedegaard, 2023). This transformation faces barriers, as evidenced by the "green gap" between intentions and actual behaviour (Carrington et al., 2016).

Young people will be most affected by the ecological crisis (Thiery et al., 2021). Most of them are concerned, even worried. However, a large part of the young generation remains attached to consumerism and very few of them are involved in environmental movements (ADEME, 2024). Existing research on young adults' diets has examined sustainable food consumption habits (Ford et al., 2023; Manika et al., 2022). However, little is known about how they understand food sufficiency and how they think about, potentially live their commitment to food sufficiency.

Method

This study is based on semi-structured interviews with 18 French and 10 Danish young people aged between 19 and 25. The integrally transcribed interviews were analysed on the basis of thematic content analysis, using a coding process based on *a priori* and *a posteriori* categories.

Results

The concept of sufficiency itself is often unfamiliar to participants, and the idea of "consuming less but better" is perceived as clearer and more appealing. They associate sufficiency with less meat consumption, less processed food, cooking, organic produce from local producers and less food waste. None of them are involved in a collective movement for ecology. However, their perceived commitment to food sufficiency differs. Some of them privilege foods that they perceive as healthy for them. Others have adopted sufficient food practices through family habits, but do not feel committed. Those who seek to adopt sufficient foodways speak of a kind of 'epiphany' that leads to a reflexivity about their essential needs and their collective responsibility. For them, learning sufficiency is a gradual and arduous process that ultimately increases pleasure and eudemonic well-being.

Significance to mainstreaming sustainable consumption

Despite differences in approach to food sufficiency between Danish and French respondents, this cross-cultural study shows how young people perceive their role in achieving food sufficiency and how they are acting on it. As they are at a transitional stage in their lives, either starting their work-life or engaging in studies, it is likely that they will find it easier to change habits. Therefore, we suggest a targeted approach to support them in their transition.

The Green Gender Gap? Investigating the effects of gender and age on consumption-based emissions

Lena Kilian¹, Mònica Serrano², Francisca Toro²

¹University of Leeds, United Kingdom; ²University of Barcelona

Problem definition:

Recent years have seen an increased interest in demand-side mitigation approaches to reducing global greenhouse gas emissions. Research shows the need for population-targeted policy, to ensure effectiveness and to avoid further increasing social inequalities. Moreover, existing research showcases gender and age differences in environmental impacts and attitudes. Despite such differences, consumption-based emissions have not been studied below the household level. To address this gap in the literature, this study aims to quantify and analyse the impact of individuals household members, by age and gender, on consumption-based greenhouse gas emissions. We aim to assess differences of both total and product-level emissions.

The UK provides a good case study for this research, as data needed to estimate emissions provide details of gender of all household occupants. Moreover, as local governments in the UK increasingly include consumption-based emission inventories in their climate change mitigation strategies, this type of research can be particularly useful for local policy makers in designing effective emission reduction policies.

Method:

To estimate subnational consumption-based greenhouse gas emissions we use data from the UK's multi-regional input-output model, as well as from the Living Costs and Food Survey, an annual household expenditure survey conducted by the UK's Office for National Statistics. The Living Costs and Food Survey surveys 4,000 to 6,000 UK households each year. We use data from the years 2007-2019 for data availability reasons and to analyse if patterns are consistent over time. In addition to full, product-level expenditure profiles, this survey contains information on the age and gender of each household member. National-level consumption-based emissions from households are calculated using the UK's multi-regional input-output model, and then disaggregated using the household expenditure survey data. We use a multi-variable linear regression model to analyse gender and age differences in emission, while controlling for various socio-demographic variables, including age, income, and geography.

Results:

We find significant differences in consumption-based emissions between women and men for some products. For instance, while women have significantly higher emissions from gas and electricity, men have significantly higher emissions from private transport use. We also find significant differences by age, with emissions increasing until 45-59 years old before they decrease. In addition, we find significant interactions between age and gender. For example, younger women have higher total emissions than young men, but older women have lower total emissions than older men.

Significance to mainstreaming sustainable consumption:

Despite previous efforts to estimate effects of gender and age, existing research relies on grouping households by breadwinners, by survey respondents or investigates only single-person households. This research is the first to quantify the marginal effect of gender on emissions in multi-occupant households. With researchers calling for the need of population-targeted policies to reduce emissions effectively and fairly, this research provides important insights into how age and gender affect consumption-based emissions. Understanding these patterns is essential for defining how consumption can become more sustainable and for having population-targeted interventions to mainstream sustainable consumption.

The role of social media and personal triggers in adopting a more plant-based diet

Mária Csutora, Zsófia Vetőné Móznér

Corvinus University of Budapest, Hungary

Problem definition

Food consumptions accounts for one-third of global greenhouse gas emissions and it is responsible for increasing land use (FAO, 2022). Reducing meat consumption may could substantially decrease the environmental impact and could results in a double dividend of health benefits as well (Hallström et al., 2015; Rancilio et al., 2022). **The present research explores factors (motivations, abilities and triggers) that may lead to (or hinder) reducing meat consumption, regarded as a radical behavioral change. Specifically, it investigates the influence of personal experiences, social norms, feedback from the society, and the impact of social media on dietary change.**

Method

The research is based on a survey of 566 participants (from social media groups). **Fogg's behavioral framework is applied as a conceptual model. Open-ended questions were analysed in-depth. Our study is novel due to the scarcity of large-scale qualitative research on sustainable consumption.**

Results

The findings of the study indicate that influencers and content creators in social media have a significant impact on individuals, comparable to that of their personal acquaintances and family members. Influencers and vegan content creators play a significant role in providing useful suggestions for seamless lifestyle transitions. Shocking personal experiences trigger dietary shifts, particularly those with strong and long-lasting emotional impact. Adopting a radical dietary change confronts societal norms and deviates from expected behaviours. Surprisingly, it was parents, rather than children, who criticized and made behaviour change more challenging.

Numerous non-vegans expressed a strong desire to adopt a more stringent diet, these favorable results indicate that these individuals should be identified as users of the meat consumption corridor to mitigate animal-based consumption (**Kanerva, 2022**).

Significance to mainstreaming sustainable consumption

The findings of this study provide valuable insights into the effective implementation of a radical lifestyle change. Reputable and credible influencers may play an increasingly important role in promoting lifestyle changes. Transitioning from knowledge-based education to experiential learning may serve as a crucial catalyst for real transformation.

Our findings highlighted that positive experiences and triggers may encourage behaviour change, in contrast to previous studies, where a shift to a sustainable lifestyle is regarded as a potential sacrifice that undermines one's well-being.

References

- FAO – Food and Agriculture Organization of the United Nations (2022): Greenhouse Gas Emissions from Agrifood Systems – Global, Regional and Country Trends, 2000–2020. (FAOSTAT Analytical Brief No. 50) Rome: FAO <https://www.fao.org/3/cc2672en/cc2672en.pdf>
 - Hallström, E., Carlsson-Kanyama, A., & Börjesson, P. (2015). Environmental impact of dietary change: a systematic review. *Journal of Cleaner Production*, 91, 1-11.
 - Rancilio, G., Gibin, D., Blaco, A., & Casagrandi, R. (2022). Low-GHG culturally acceptable diets to reduce individual carbon footprint by 20%. *Journal of Cleaner Production*, 338, 130623.
 - Kanerva, M. (2022). Consumption corridors and the case of meat. *Journal of Consumer Policy*, 1-35.
-

Holidaying in a time of crisis

Vilde Blix Huseby

University of Oslo, Norway

Problem definition

Understanding how and why high-impact social practices arise and change is of critical relevance for informing sustainability transformations. Vacation practices are of particular significance because of their associated high emissions and the spread of high environmental impact vacation practices throughout the globe. Changes around vacation practices have also been accelerated by the Covid pandemic having forced significant changes to holidaying, leading to predictions that vacation practices will change in the long run, and the fact that many consumers face increased economic strains, which may lead to lower-impact vacations. Finally, vacation practices are increasingly contested in public discourse due to their environmental impact in the context of increasing extreme weather events, leading to new phenomena like "Coolcations". These are all examples of social disruptions that have the potential to change practices, making vacation an interesting case for studying changes in high-impact social practices. This study thus develops the dialogue between climate-oriented practice studies and the sociology of intimacy, family and relations

Method

Data for this study come from qualitative analyses of 20 urban Norwegian families whose members range in age from 9 to 84 years (N=90) and span between two and three generations. Norway offers a strategic case for studying change in vacation practices because it is one of the wealthiest countries in the world, with both generous vacation leave policies and being on "the flight throne" in terms of number of flight journeys per year.

While most studies take individual interviews or quantitative surveys as their main method, this study make use of group interviews and photo elicitation methods with Norwegian families. In combining rich group with picture sorting techniques, this study is particularly suited for analyzing the role of shared norms and relational aspects of practice.

Results:

The results show a surprising stability in Norwegians vacation practices. Knowledge about climate impact of different forms of vacations, experiences with extreme weather, and macro-economic strain have not led to a shift to lower-impact vacations for most families. The paper discusses this lack of change and conceptualizes it in terms of interpersonal and relational factors, especially in terms of social reference groups, norms, and the social dynamics of different variants of denial. Findings show signs of a dawning moralization process in the way families speak of climate and vacation, becoming evident through frequent mentions of "guilt" and "legitimacy" and on contested views on especially cruise and trips to Southern Europe ("Syden-ferie") as vacations.

Significance to mainstreaming sustainable consumption

Overall, this study provides insights into how social disruptions can influence or change high environmental impact social practices, and how these are related to personal and group level factors. This has important implications for policy makers considering different strategies to target emissions derived from vacations, and for families trying to make responsible environmental decisions. In doing so, findings also shed light on how practices are performed with the context of a family, highlighting emotional work and relational aspects of practice.

Citizens' assemblies as a tool for transition?

Pernilla Hagbert, Karin Bradley

KTH Royal Institute of Technology, Sweden

Problem definition

For transitions to a more sustainable future, new ways of thinking about the organization and planning of society are required. Municipal policy and planning for sustainable consumption, and the role of urban experimentation has emerged as a particular area of interest within transition studies. New participatory methods to address environmental issues have gained attention both in practice and in academia. One approach is to work with so-called citizens' assemblies, or councils, tasked with developing proposals for transition. There are assumptions made that these types of processes can mediate policy acceptance, but also contribute to more far-reaching transformations. In this paper we explore how such processes can be leveraged to spur change and strengthen institutional capacities for working with sustainable consumption in municipalities.

Method

The City of Gothenburg has been lauded as a frontrunner in terms of initiatives for sustainable consumption, and is one of the first municipalities in Sweden that has implemented a citizens' assembly (CA) focusing on climate transitions. A case study was conducted during 2024, examining the implementation of this first CA through interviews with public officials, politicians and initiators before, participant observations during two of the assembly sessions, and select follow-up interviews. The interview questions concerned the process, expectations, and the perceived risks surrounding the CA, as well as the potential implications for the municipality's work with sustainability transitions more broadly.

Results

Findings suggest that new ways of approaching sustainability transitions in municipal policy and planning through for example citizens' assemblies, need to be anchored in (changed) processes for decision-making that ad span across the silos of municipal bureaucracy. The particular focus of Gothenburg's first CA – "How can the residents of Gothenburg become more involved in the city's

environmental and climate efforts?" - was seen as a "meta question", rather than tackling potentially more radical issues and proposals that the municipal departments and political committees involved might not be able to handle. Yet many of the proposals raised by the citizens still addressed enabling more sustainable consumption patterns or challenging currently unsustainable practices and systems within the city. The expectations from officials and politicians reflected an urge to involve citizens more directly in shaping politics and engage groups that do not usually express their opinions in public. The ambition was to set grounds for conversations beyond the "political game" in order to find new ideas and approaches that are well-anchored amongst diverse groups of citizens.

Significance to mainstreaming sustainable consumption

Municipalities have an important role in steering towards and enabling sustainable consumption, both directly and indirectly. Working with policy experiments such as citizens' assemblies or other participatory and deliberative methods can challenge preconceived notions of the mandate of municipalities as well as notions of what kind of policy measures that have public support. Often citizen's assemblies have generated policy proposals that go beyond weak forms of transition governance – hence they can be a key in enabling more profound democratic transformations.

Workshop: Why People Adopt Sustainable Living Practices with Reflections from IKEA, IGES, C40 Cities, Hong Kong and African Urban Futures

Location: **Aula**

Session Chair: **Vanessa Timmer**

Session Chair: **Sari Laine**

Session Chair: **Tanja Dolphin**

Session Chair: **Dagmar Timmer**

Speakers:

Dwayne Appleby, IGES

Klaus Bundgaard, C40 Cities

Blake Robinson, Utrecht University

Kira Matus, Hong Kong University of Science and Technology (joining by pre-recorded video)

Join us for an interactive session to explore sustainable living motivations and the impact of cutting edge human insights research in Finland, Canada, and Hong Kong. Hear reflections from the Japanese Institute for Global Environmental Strategies and the African Urban Futures Project about how they are advancing sustainable living and behaviours through behaviour change initiatives and infrastructure changes. Discover more about how IKEA is advancing Healthy and Sustainable Living and C40 Cities is guiding cities toward better urban systems addressing urban consumption and widening inequalities. Why do some people choose to buy second-hand, eat more plant-based diets and actively reduce their home energy use? And what do these diverse motivations mean for all of our efforts to mainstream sustainable living? The good news is that our research shows that many more people take sustainable living actions in their daily lives than those who are 'green' or 'eco-minded.' We can mainstream sustainable living faster and better by tapping into different motivations. Discover how cities, governments, business, funders, and communities are working to accelerate sustainable ways of living by understanding motivations around, for example, wasting less, following social trends, being independent (e.g., through repairing our own things), and following traditions. Learn about what motivates sustainable living practices, and explore city government and business leadership and new innovative approaches through behaviour change initiatives and infrastructure support. Insights into what motivates people to act can support efforts to mainstream sustainable living actions, making these accessible and appealing to a diverse set of residents. Businesses, municipalities and other changemakers can tailor their goods and services, strategies and communications, campaigns and infrastructure to these different segments to enable wider adoption of sustainable living practices. In terms of motivations methodology, this research seeks to understand every decision people make by asking them about a range of their choices and why they make them (or not). This includes where they choose to live, what they choose to eat, how they get around, how they use energy, what they buy and how they invest their money. Cluster analysis reveals a set of segments, based on quantitative surveys as well as in-depth qualitative interviews. By understanding why people make certain choices, we can move past the reality that not everyone is motivated by the environment (though many are concerned by climate change). People make different choices depending on the situations they're in. To fully understand this complexity, we can't simply look at fixed factors of identity, such as demographics and general attitudes but rather at diverse motivations. Based on this understanding, we can seek to encourage more sustainable choices among people with diverse motivations. Let's dive together into the insights from the motivations studies, hear from cross-sectoral leaders in sustainable lifestyles, consumption and behaviours, and explore implications for research and practice. Interact with the workshop hosts: Sitra – the Finnish Innovation Fund – sought to understand what drives decisions people make in order to further their work mainstreaming sustainable living. Their human insights research yielded seven motivation-based segments for Finns. They have been used by sustainable brands and social impact entrepreneurs for business planning, marketing and innovation aimed at mainstreaming sustainable living actions. OneEarth Living, with partners, adapted the research to Canada - both in British Columbia (7 segments) and in Québec (6 segments), as well as in the City of Guelph. The motivation research is now being undertaken in Hong Kong by the Hong Kong University of Science and Technology. Hear reflections from other key actors: IKEA - advancing Healthy and Sustainable Living. In 2024, IKEA had 899 million visits to IKEA stores and 4.6 billion visits to their websites. Interacting with so many people around the world, they have a unique opportunity and responsibility to support making sustainable living the norm. IKEA believes that the home is the most important place in the world – it's where life happens: where people eat, sleep, relax, work, and socialise. They believe that a better life starts at home and they want sustainable living to be affordable and accessible to everyone, especially those with thin wallets. Learn more about how IKEA initiatives drive innovation and deliver impactful solutions that are affordable and accessible for the many, including science-based behaviour change initiatives in the areas of dietary change, wasted food, and circular behaviours. Institute for Global Environmental Strategies (IGES) - Over the past three years, in partnership with the Economic Research Institute for ASEAN and East Asia (ERIA) and Rare's Center for Behavior & the Environment, IGES has been piloting efforts to understand and shift the motivations behind plastic consumption behaviour among consumers and producers in six ASEAN member states. Now implementing Phase II of the Breaking the Plastic Habit project, IGES is scaling up impact to begin generating policy support and practical tools to support behaviour-centred programming across the ASEAN region. C40 Cities is a global network of nearly 100 mayors of the world's leading cities that are united in action to confront the climate crisis. Mayors of C40 cities are committed to using an inclusive, science-based and collaborative approach to cut their fair share of emissions in half by 2030, help the world limit global heating to 1.5°C, and build healthy, equitable and resilient communities. C40 Cities together with partners (including OneEarth Living, Hot or Cool Institute and BCIT Centre for EcoCities) has provided guidance on

3:30pm - 5:15pm

practical steps that all cities can take to improve city services and living standards while reducing emissions from urban consumption. This guidance addresses the urban demand for fossil fuels as well as the widening inequalities between and within cities. Cities can use the full range of their powers and to work with other key actors, such as residents and businesses, that are keen to create positive change in their cities. The African Urban Futures project is a collaboration between the Urban Futures Studio (Utrecht University), African Centre for Cities (University of Cape Town) and Centre for Sustainability Transitions (Stellenbosch University), aimed at challenging unsustainable and unjust models of urban development that have become the default imaginary on the continent. With the fastest growing urban populations in the world, the way African cities develop will be a crucial determinant of whether the SDGs and other global sustainability targets are reached. The project focuses on expanding future possibilities for African cities in more just and sustainable directions by gathering and sharing inspiring examples from the continent of infrastructure initiatives that meet the needs of the poor in low carbon ways on the infrahub.africa website, and piloting participatory visioning processes with communities in Nigeria, Kenya and South Africa whose voices are typically excluded.

Workshop: Mindful Consumption means Sustainable Consumption

Location: **201**

Session Chair: **Yvona Nov**

Session Chair: **Kira Lobaza**

3:30pm - 5:15pm

This workshop empowers participants to move from feeling overwhelmed by global challenges to taking tangible, positive action. We believe sustainable living is not just about reducing harm, but actively creating positive change through mindful awareness and collective action. Through a blend of self-reflection, group discussion, and practical tools, we will explore how to cultivate a mindset that drives meaningful impact. Participants will: - Acknowledge anxieties about global issues and reflect on consumer behavior. - Understand psychological barriers to change and learn to overcome them. - Cultivate self-awareness and conscious decision-making through mindfulness tools. - Explore the "footprint" and "handprint" concepts to define and amplify positive contributions.

Workshop: Reflecting Sustainable Social Practices within Real-World Lab Research and its Experiments

Location: **133**

Session Chair: **Markus Szaguhn**

Session Chair: **Pia Laborgne**

Session Chair: **Annika Fricke**

3:30pm - 5:15pm

Climate crisis and its negative effects on nature and human health demand a profound transformation towards sustainability in all areas of society – including consumption patterns (WBGU 2011; Schneidewind 2018; IPCC 2022). Therefore, this session reflects upon current harmful consumption patterns and initiates an open discussion on the question of how to mainstream sustainable consumption through a social practice lens and experimental approaches. To create a basis for a fruitful discussion, three compact presentations will be held, that highlight different aspects of the practice-oriented research at the Karlsruhe Transformation Center for Sustainability and Cultural Change (KAT 2024). All presentations use Social Practice Theory (Shove, Pantzar, and Watson 2012; Shove and Spurling 2013) as an analytical framework, which is presented at the beginning. * The first presentation introduces the transformative and transdisciplinary real-world lab research and points out, how real-world labs (RWLs) can become an infrastructure of cultural change towards sustainability (Parodi, Steglich, and Bylund 2023). In a RWL, scientific and non-scientific / practice actors jointly co-create knowledge to find robust solutions to relevant problems. In the presentation we will discuss potentials to transform consumption patterns and provide relevant examples of successful projects within the RWL "District Future - Urban Lab" (in german: Quartier Zukunft) (QZ 2024). * The second presentation examines, how real-world experiments (RWE, (Trenks et al. 2018; Parodi, Ober and Lang 2024)) contribute to strengthening social practices of sustainable consumption by giving insights into successfully completed and ongoing projects at KAT: the Self-Experiment Generator, in which participants can explore their personal approaches to sustainable consumption. * The third presentation takes a more theoretical approach and introduces definitions of social practices, drawing on the concepts of the socio-ecological footprint (reduction of carbon emissions by individuals through behavioral change, with a focus on sustainable consumption) and the socio-ecological handprint (collective reduction of carbon emissions in society through public engagement and structural change). Also, it is pointed out, how these practices are interconnected and what it means for sustainable consumption (Szaguhn 2024, in print). After each presentation there is time for a short discussion of their contents before the final discussion begins. The final discussion will be structured by guiding questions based on the presentations and relating to the overarching conference theme of 'mainstreaming sustainable consumption'. The session will give its participants an insight into the work of a real-world lab, the KAT, and enable reflection and discussion informed by the perspective of the social practice theory. The results of the discussion can be published after the conference in the form of a blog article by all participants of the session.

Poster Session

5:30pm - 6:30pm

Location: **Stora Sparbanksfoajén**

Leverage points for increased grain legume consumption: a Swedish case study

Mary Scheuermann¹, Amanda Wood¹, Line Gordon¹, Elin Rööös², Lisen Schultz¹

¹Stockholm Resilience Centre, Stockholm University, Sweden; ²Institute for Energy and Technology, Swedish University of Agricultural Sciences

Problem definition

Food production and consumption need to substantially change to meet global environmental and public health goals (IPCC, 2022). Increasing grain legume consumption in most countries is key to providing nourishing food for all while contributing to cropping system sustainability with relatively low environmental impact (Willett et al., 2019). But what actions have the potential to increase such consumption? While individual behavior change is often emphasized, system-level changes can make individual choices easier and more feasible. The wide knowledge of how to cultivate grain legumes among Swedish farmers, low current consumption in most of the population, and prior shifts in dietary patterns make Sweden an interesting context for studying the potential increase of grain legumes as part of healthy and sustainable diets.

Method

First, system level actions are identified through a review of peer-reviewed and grey literature with the potential to increase grain legume consumption. Next, the leverage points framework is applied to evaluate the transformative potential of these actions for the food system in Sweden (Meadows, 1999;

Abson et al., 2017). Lastly, we qualitatively analyze the actions and develop a chain of leverage (Fischer & Riechers, 2019) illustrating how several actions together could be combined to support change at the deepest leverage point, creating social norms for the consumption of healthy foods.

Results

Our findings show that most actions suggested in the literature so far focus on increased production, while fewer suggestions integrate production and consumption. Few actions address the deeper leverage points with most transformative potential compared with those with less transformative potential. The chain includes: developing new tools, facilities, and products; changing standards; building feedback loops; changing the food environment; building new information flows between actors; and reforming the value chain. To implement the actions identified in this analysis, a range of value chain actors and supportive policies at the national and European Union levels will be needed.

Significance to mainstreaming sustainable consumption

Changes to norms, values, and beliefs are an integral part of sustainable consumption practices. This study suggests that using the leverage points framework with attention to the “three realms of deep leverage for sustainability transformation” (re-structure institutions, re-connect with nature, and re-think knowledge production) put forth by Abson et al. (2017) can help identify actions to support norm changes aligned with sustainable consumption practices.

Scaling Food Sharing Initiatives: Investigating the Potential of Grassroots Food Sharing to Mainstream Sustainable Consumption

Przemysław Plucinski, Mariusz Baranowski

Adam Mickiewicz University, Poland

Problem definition

In 2021, the EU produced a total of 58.4 million tons of food waste, equivalent to approximately 131 kg of food wasted per capita. Among all economic actors, household waste accounted for the majority—54% of the total food waste (Eurostat, 2022). As food waste remains a systemic problem, partly related to the supply side, the cited numbers support the thesis that food waste is a significant aspect of contemporary consumer culture.

The paper draws on findings from the TransScale (‘Scale-Up and Scale-Out Sharing Capacity for Sustainable Urban Transformation’) international research project, funded under the ‘Driving Urban Transitions’ scheme by the European Commission and realized in Latvia, Denmark, Norway and Poland. The project investigates the conditions for scaling both the capacity (scaling up) and reach (scaling out) of various sharing and circular economy initiatives to support the development of social innovation across different goods and material streams, such as food, repair, and others (Falcone et al., 2017; Vilariño et al. 2017). Following the recent literatures on the subject (Berns et al., 2023), we will present some of the preliminary results on the functioning, including the drivers and barriers, of grassroots food-sharing initiatives in Poland.

Methods

In the project we use triangulated qualitative methods, including future literacy laboratories (FLL), in-depth interviews (IDI), participatory workshops and case studies as well as policy workshops. In the paper we will use data from IDIs and FLLs to be conducted in Poland late 2024 and early 2025.

Expected

Results

In line with TransScale objectives, the paper will present and discuss the following expected results:

- Structural conditions that may foster and/or obstruct food waste reduction through food sharing practices.
- The role of culture and social values in influencing food waste behaviors and food sharing practices.
- The potential for bottom-up food sharing initiatives to scale out and raise awareness of sustainable and ethical consumption.
- Visions of future consumer behaviors that aim to rethink current practices.

Significance to Mainstreaming Sustainable Consumption

The paper will address the issue of household food waste, challenged by bottom-up activists mobilized around the food sharing movement. We will investigate the concept and practices of food sharing in terms of their potential for scaling up and scaling out, with a focus on mainstreaming—that is, transcending the activist sphere to establish lower-waste or zero-waste consumer patterns.

References:

- Vilariño, M. V., Franco, C., & Quarrington, C. (2017). Food loss and waste reduction as an integral part of a circular economy. *Frontiers in environmental science*, 5, 21
- Falcone, P. M., & Imbert, E. (2017). Bringing a sharing economy approach into the food sector: The potential of food sharing for reducing food waste. *Food waste reduction and valorisation: Sustainability assessment and policy analysis*, 197-214.
- Berns, K., Rossitto, C., & Tholander, J. (2023). Learning from Other Communities: Organising Collective Action in a Grassroots Food-sharing Initiative. *Computer Supported Cooperative Work (CSCW)*, 32(4), 951-999.

When practice is a system. Combining social practice theory and systems theory to examine changes in mobility.

Filip Schmidt

Adam Mickiewicz University Poznan, Poland

Social practice theories (SPTs) have played an important role in analyses of consumption and sustainability, providing a counterweight to the dominance of rational choice theory and neoclassical economics. They have also provided a relatively accessible version of theoretical sociological syntheses, breaking down the opposition between agency and structure. At the same time, popular readings and applications of the theory do not always capture:

- (1) the agency of individuals and the trajectories of their intersecting biographies;
- (2) the infrastructures, discourses, rules and specifications that filter, stabilise and lock in particular versions of practices, and the power relations that hold them in place.

The central tenet of SPT is usually a flat ontology and a programmatic opposition to the use of psychological categories on the one hand, and systemic and multi-level categories on the other. This approach is based on the assumption that there are two basic ways of doing social theory and defining the role of politics, referred to as behavioural and practice theories. In behavioural theory, external factors influence the attitudes, knowledge and norms of individuals, which in turn influence behaviour. In SPT, instead of behaviour, there are practices, which consist of links between elements and form links with other practices. In such an arrangement change is emergent in nature and results from the interactions between its elements. There is, however, a third approach in which the assumption of relationality and emergence is not incompatible with the possibility of analysing the relationship between practices, individuals and what other theories call systems, regimes or cultures. This is systems theory.

Combining the systemic approach of Niklas Luhmann with the theory of social practice, I will present a theoretical model in which we are confronted with three levels of analysis: practices, individuals and generalised resources and rules. A practice is a system that forms, reproduces itself or dissolves in the process of processing impulses from the environment (other practices, the individual, generalised resources and rules) in terms of its current logic, which is the ability of this system to function. The individual is a network of accumulated meanings, skills and tools that seeks to give meaning and coherence to its actions and biography. The shared resources and rules are material-procedural-discursive systems that seek to maintain and extend their reach and power. Each of these systems is thus a 'practical achievement' that must effectively deal with the flux of everyday events and adapt to changing conditions based on its specific logic if it is not to disintegrate.

In my presentation I will show how this scheme can explain the pattern of emergence, change and disappearance of practices, and the lower and higher susceptibility of certain types of practices to change, taking into account the importance of individual biographical paths and power relations. To this end, I will refer to empirical examples from a mixed-methods study of mobility practices and their climate impacts, conducted in 2023-24 in two Polish metropolitan areas (Poznań and Tricity), including a survey based on a geo-questionnaire and individual in-depth interviews.

Civil food resilience in a turbulent world: perspectives of British supply chain actors

Steffen Hirth

University of Leeds, United Kingdom

Problem definition

Socio-environmental crises increasingly affect the long-term resilience of the food system. However, academic and public debates on resilience are biased towards short-term shocks, the resilience of individual firms or sectors, and the restoration of a largely unchanged supply chain. Temporary supply shortages seem to draw more attention than long-term stressors and threats such as climate change, biodiversity decline, and the impacts of capitalism in crisis. Resilience is also framed as an issue to be solved within the supply chain, centred on availability and lowest possible prices of products, rather than a question of sustainable production, reliable long-term provision, and universal accessibility of healthy foods – civil food resilience.

Method

As part of the Transforming the UK Food Systems (TUKFS) programme, this research draws on (1) a systematic literature review on leverage points for food systems transformation towards a resilient supply chain and (2) qualitative semi-structured interviews with British supply chain actors. The literature review focused on supply chains of countries with so-called "developed" markets and involved full-text review of 122 articles. An explicit focus was on COVID-19, climate change, biodiversity decline, or economic crises as the causes for disturbances of food supply and the need for adaptations. The 22 interviews were conducted to understand the perspectives of British supply chain actors on resilience, including farmers, manufacturers, retailers, and food-related associations and experts; the interviews were complemented by oral and written evidence submitted to the UK

parliament by representatives of British supermarkets to address questions of fairness in the supply chain.

Results

The study highlights the importance to tackle interrelated socio-environmental crises that threaten the resilience of the food system on the long run. It is vital to understand resilience not just as a functional supply chain that provides a sufficient offer of products, but as *civil* food resilience. The latter requires a holistic framing of the matter which includes the continued accessibility of foods for the public and requires a systemic approach to tackle long-term stressors such as

- (1) the environmental crises that threaten the natural preconditions for producing food as well as
- (2) the social crises of poverty and malnutrition that affect the civil right to food and entail avoidable costs for healthcare.

While debates in the literature are dominated by “shallow” responses to COVID-19 aimed at system recovery, stakeholder interviews tend to show a widespread desire to address deeper systemic causes of, and solutions to, food insecurity – among them poverty reduction and regulatory interventions to rein in the anarchy of the “free” market.

Significance to mainstreaming sustainable consumption

Previous research highlighted the importance to address “deep”, systemic levers for effective sustainability transformations (Abson et al. 2017; Hirth et al. 2023). This draws attention to links between the food system and the wider economic and societal system dominated by a capitalist political economy. This study deepens our understandings of “system change” by focusing on the materialities of ecological and social crises that get lost in shallow attempts at fixing the supply chain.

Letting art be art: radical resistance to consumerist capitalism.

Anastasia Loukianov

University of Surrey, United Kingdom

Recent years have seen a surge of interest in the use of art and creative methods to imagine, represent, and advocate for sustainable futures. In these contexts, art and creative methods have been approached as neutral devices which can communicate pre-existing meanings and open-up cultural and individual imagination. Broadly speaking, art and creativity have been conceptualised as useful tools to the ends of cultural transformation, in environmental research and beyond.

This paper critically examines their potential in supporting this goal by drawing on empirical material from diverse studies carried out by the author over 8 years using arts-based methods such as filmmaking and interviewing activists and members of the creative industries. It examines the possibility that instrumental approaches to art may be part of the same system academics and activists seek to escape in their appeal to arts-based and creative methods and proposed that radical resistance to consumer capitalism may be found in letting art be an unproductive and non-goal oriented practice.

The paper begins by an examination of the epistemic status of art in contemporary consumerist societies and highlights the assumptions underlying the recent rush to the arts in environmental scholarship and activism. Using empirical examples it then highlights how a) artistic norms do not escape power relationships and emerge from the same social systems arts-based and creative methods seek to escape and b) instrumentalising art and creativity may defeat their potential to be practices of resistance.

Far from denying the importance of art for sustainable futures, it suggests that mainstreaming sustainable consumption through art may require rethinking the epistemic status of art and its relationships to imagination and creativity. While history has shown that art clearly can be an instrumental part of social movements through representation of alternatives, the paper deliberately takes a challenging line of argument to explore whether it can also be an intrinsic site of resistance against mainstream consumerist practices.

Residents in sustainable housing in Finland: Case wooden construction and nature-based solutions

Julia Fanny Johansson, Eliisa Kylkilahti, Anne Toppinen, Ritva Toivonen

University of Helsinki, Finland

Problem definition

The Finnish municipalities have set ambitious climate mitigation strategies, many targeted at the housing sector. In designing new residential buildings, more attention needs to be paid to sustainability issues. Meanwhile, a large body of Finnish building stock from the 1960s and 1970s requires renovation and retrofits. Designed to retain heat, older buildings must adapt to increasingly warm and rainy weather conditions and improve energy efficiency. New ways to promote sustainable building practices, improve energy efficiency, and promote sustainability at a household level are needed.

The sustainability of housing is driven by initiatives covering a range of projects, from energy repairs and using sustainable materials, such as wood, to urban farming and shared bikes. This study

emphasizes wooden construction and nature-based solutions (NBS) as complementary approaches that are increasingly acknowledged as sustainable options for housing and urban development, thanks to social and environmental benefits and positive impact on building quality.

However, there is a lack of evidence regarding residents' engagement and experiences with wooden buildings and NBS. This study aims to build on existing research by exploring how wooden buildings can better support sustainable lifestyles and meet residents' needs while enhancing their well-being throughout various stages of life. It seeks to understand residents' lived experiences, community acceptance, and the role residents can play in adopting these solutions.

Method

The empirical data consists of semi-structured interviews with housing experts and homeowners across the capital region. The data was thematically analyzed, and wood and nature-based solutions among sustainability initiatives were explored through resident experiences and engagement.

Results

Homeowners are increasingly factoring sustainability into their decision-making and expecting solutions to address practical housing-related concerns. Their engagement in pro-sustainable behaviour is identified, especially when they feel a sense of control over their actions and when these actions align with prevailing social norms. A concrete and practical approach to sustainability is preferred, focusing on immediate everyday housing concerns, e.g. utility fees and indoor comfort, rather than delving into broader solutions. For instance, improving energy efficiency in housing tends to be prioritized over reducing direct CO₂ emissions. All the initiatives acknowledged in this study contributed to either lowering the housing costs and increasing the value of the housing company, while also improving resident well-being and living conditions or enhancing local biodiversity. Homeowners preferred wood as a building material in their ideal housing scenarios. The responses revealed a growing desire to find innovative ways to lower living costs while adopting attributes of ecological living, such as self-sufficiency. The results suggest that the driving force for sustainability initiatives often stems from a proactive resident or property manager capable of assimilating new information and evaluating choices. Active interaction encourages residents to express their ideas, needs or problems, thus engaging them in sustainability initiatives.

Significance to mainstreaming sustainable consumption

Housing is a crucial sector that contributes to sustainability and is closely tied to consumer well-being. Understanding residents' experiences links urban development with sustainable consumption and influences broader societal practices beyond individual households.

ENSURING EQUITABLE CONSUMPTION OPPORTUNITIES FOR ALL: INSIGHTS FROM THE EUROPEAN ACCESSIBILITY ACT

Alina Dorota Szypulewska-Porczynska, Edyta Zdunska-Leseux

SGH Warsaw School of Economics, Poland

Problem definition

The European Accessibility Act (EAA), enacted in 2025, aims to address inequalities in consumption opportunities for vulnerable groups by enhancing accessibility (European Union, 2019). The study critically examines the EAA through Okun's equality-efficiency trade-off framework (Okun, 1975). It focuses on how equality and efficiency are positioned as policy goals and explores the interactions between these objectives within the EAA.

Method

The study employs a qualitative analysis method involving a detailed literature review and categorising main concepts using thematic content analysis. It explores code co-occurrence to identify relationships between concepts and performs a comparative analysis to assess variations across different themes. Additionally, the findings are contextualised within the consumption corridor framework, which addresses the need to establish boundaries that support equitable access to goods and services while adhering to sustainability imperatives.

Results

The findings suggest that the EAA prioritises equality by improving accessibility for vulnerable groups, particularly individuals with disabilities, in alignment with broader social justice goals. However, the EAA also incorporates measures to address economic efficiency, mainly through provisions for regulatory flexibility and the harmonisation of standards to reduce the financial and operational burden on businesses, especially small and medium-sized enterprises. The EAA attempts to balance these objectives, though it primarily frames efficiency as a supporting mechanism to facilitate compliance with accessibility standards rather than as an equally central policy goal.

Significance to mainstreaming sustainable consumption

Our research contributes to the broader discourse on sustainable consumption by examining the integration of inclusivity within economic systems. The EAA offers a case study of how social sustainability, through inclusivity and accessibility, can coexist with economic viability via regulatory frameworks. The EAA principally enhances social sustainability by addressing inequalities and fostering the participation of vulnerable groups, particularly individuals with disabilities, in consuming goods and services. By mandating accessibility requirements for businesses and service providers, the EAA facilitates equitable consumption opportunities, a core element of sustainable consumption.

By harmonising standards across the EU, reducing market barriers, and promoting a consistent approach to accessibility, the EAA contributes indirectly to broader sustainability objectives. However, the EAA does not explicitly engage with environmental sustainability or resource consumption, and its effects on ecological outcomes are limited to secondary impacts.

Mobile Micro-Factory: Exploring Post-Growth Design Practices through Design Fiction

Simon Nieuweboer, Lenneke Kuijer

Eindhoven University of Technology, Netherlands, The

Industrial designers play an important role in fuelling unsustainable consumption by continuously developing new (versions of) technologies that are presented as necessary for a good life. One way of addressing this issue lies in reshaping how designers work. This research explored alternative design practices through a Design Fiction grounded in Post-Growth ideas. Post-Growth groups together research that explores alternatives to the dominant economic growth paradigm by centralizing a pursuit for collective wellbeing within ecological limits. Design Fiction (Bleeker 2009) is a design research approach that uses design propositions combined with fictional narrative to stimulate reflection on possible futures. Rather than presenting solutions, design fictions explore alternative design spaces by posing questions.

The Design Fiction central to this study was a Mobile Micro-Factory that explored what roles designers might have in a post-growth society. Current industrial design processes rely on globalized processes involving mass manufacturing. While able to achieve high efficiencies through economies of scale, this arrangement has several risks such as exploitation of distant workers and ecosystems, and incentives for overproduction that fuel overconsumption (Dubuisson-Quellier 2022). Inspired by Illich's concept of conviviality and trends towards local repair communities, the Mobile Micro-Factory fiction envisions mainstream production to become ultra-local by offering design and production services at people's doorstep. The fiction includes a designer on a cargo bike equipped with tools such as a 3D printer, or sewing machine. Users of the service can call upon the Micro-Factory for their immediate needs, such as a broken part or device or an upcoming birthday, and, if available, provide waste materials, such as plastic bottles or pieces of fabric that can be used to produce the design.

Besides reflections on the process of making a Mobile Micro-Factory by the first author – an Industrial Design master student – the Mobile Micro-Factory was exhibited to a general audience in the city centre of Eindhoven, and to Industrial Design students during a student event, each time collecting responses through semi-structured conversations. Moreover, the prototype formed the foundation of a role-play study (Kuijer 2023) in which an alternative design practice was explored through acting out and reflecting on possible scenarios with four Industrial Design master students. In each exploration, inquiries were structured around the roles of designers, users, products, and production in the alternative scenario.

Insights emerging from the study show that this post-growth inspired form of *production* reshapes *users* into co-developers, enabling ultimate personalisation. The direct material engagement improves *user's* understanding of their *products* and how they are made, which places the *designer* and their tools into the role of educator. Direct material engagement, moreover, turns the (abundant) stuff *users* own into a resource of materials, and the *designer* into a connector between these resources and local needs. This requires the *designer* to adopt a different aesthetic in which imperfection and improvisation are integral elements of *products*. The next step in this research is to envision how these insights could be translated to the training of a next generation of Industrial Designers.

Navigating sufficiency landscape: Policy gaps and best practices in the EU

Mahsa Bagheri, Iska Brunzema, Barbara Schlomann

Fraunhofer Institute for Systems and Innovation Research ISI, Germany

The pivotal role of behavioural changes in reducing consumption and achieving climate targets has been highlighted by numerous scholars in recent years. However, the impact of policies in shaping user behaviour and triggering changes towards lower consumption is equally significant. Specifically, sufficiency-oriented policies are vital for informing and incentivising users to adopt more sustainable consumption practices. Although the topic of sufficiency has gained traction within the EU, there is considerable variation among member states regarding its prioritisation. Some countries, like France, have emerged as a frontrunner in integrating sufficiency into their political agenda, successfully implementing several sufficiency policies. In contrast, countries like Hungary still require increased awareness among policymakers regarding this issue.

In line with ongoing EU discussions, the MURE database has expanded its focus to encompass energy sufficiency policies alongside its original emphasis on energy efficiency. However, compared to energy efficiency policies, energy sufficiency policies remain complicated to grasp, and their impact is difficult to quantify. Additionally, these policies can be challenging to identify. To facilitate the identification of sufficiency measures, the MURE database has recently refined its categorisation for sufficiency policies by distinguishing between types of action (including avoid, substitute, adjust) and types of impact (including direct and indirect).

This paper reports on the necessity for this improvement in the MURE database, highlighting the associated challenges and processes. It also provides an analytical overview of the energy sufficiency landscape across EU member states. The analysis will involve extracting relevant policies from the MURE database, followed by a comparative analysis of sufficiency-oriented policies in different member states. Policy mapping is employed to identify gaps and highlight best practices across the EU. Such an overview helps pinpoint areas needing enhancement, including promoting academic research to explore the potentials of sufficiency and advocating for workshops and training for stakeholders to design and adopt more effective sufficiency policies. It is, therefore, an important contribution towards sustainable consumption by paving the way for promoting sufficiency policies in the EU.

Strong sustainability in business: What can companies do?

Laura Niessen^{1,2}, Nancy Bocken^{1,3}

¹Maastricht Sustainability Institute, School of Business and Economics, Maastricht University, The Netherlands; ²Institute of Vocational Education and Work Studies, Economic Education and Sustainable Consumption, Technical University Berlin, Germany; ³International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Problem definition

Strong sustainability stems from ecological economics and recognises the limits of Earth's resources. It accepts that natural capital cannot be replaced by social or economic capital (Daly, 1991). Faced with diverse sustainability crises brought on by existing production and consumption patterns, calls to bring strong sustainability thinking into business have increased. Upward and Jones (2016) suggest a move towards strongly sustainable business, which "creates positive environmental, social and economic value throughout its value network, thereby sustaining the possibility that human and other life can flourish on this planet forever" (p. 104). Landrum (2017) suggests that business should integrate strong sustainability and presents a scale of business action from very weak to very strong sustainability. She concludes that most companies operate in the very weak, weak or intermediate stages of sustainability action. For businesses, adopting a strongly sustainable approach means recognizing that they are limited by and affect nature, so their value flows need to be based within the limits of natural resources (Brozovic, 2019). Such shifts in business paradigms often go hand in hand with changes on the business model level. While a strong sustainability orientation is increasingly demanded of businesses, the suggested solutions in the form of business model changes differ. For instance, strong sustainability and flourishing have been connected with business models that promote circular economy (Roman et al., 2023), sufficiency (Bocken et al., 2022), regeneration (Das et al., 2024), and degrowth (Nesterova, 2020). To better understand the transformation required for strongly sustainable business and the options to move forward, this research asks: *What is strongly sustainable business and which business models can companies implement to get there?*

Method

Through a semi-systematic literature review, existing research on the topic will be assessed to understand what strong sustainability means for businesses and which business models can support it. A literature review of peer-reviewed papers, book chapters and conference papers will be conducted in the Scopus database and Google Scholar and guided by the PRISMA literature review steps (Page et al., 2021). It will be supplemented by snowballing and expert recommendations. Keywords for the search include "strong sustainability"/"strong(ly) sustainable" and "flourish", as well as different synonyms for business (e.g., firm, corporation, company, SME, multinational) as well as different organisational forms (e.g., social enterprise, benefit corporation).

Results

As a result of the research, a typology of strongly sustainable business model archetypes is envisaged to display the diverse options available to companies. Significance to mainstreaming sustainable consumption

Businesses drive innovation and can influence demand for certain products and services among consumers. As such, they can be highly influential in steering consumption into sustainable avenues (Heikkurinen et al., 2019). Understanding how strong sustainability can be integrated in businesses therefore supports the transition of consumption and production patterns towards the shift required for a sustainable future.

Assessing the sustainability of the biggest German supermarkets

Laura Spengler¹, Hyewon Seo¹, Christian Schader², Marlene Sander²

¹German Environment Agency (UBA), Germany; ²Research Institute of Organic Agriculture (FiBL) Switzerland

Problem definition: The global food system is responsible for 26-34% of global greenhouse gas emissions. Furthermore, it has substantial negative impacts on biodiversity, soil erosion, water consumption and water pollution. Food retailing plays a central role in the food system, as it can significantly influence both food production and consumption. The aim of the two consecutive research projects presented here is to assess the extent to which Germany's eight main food retailers, defined

as those with the highest turnover, are using their range of influence to instigate action targeted at making the food system more environmentally friendly. Method: We evaluated these companies according to an evaluation grid with, by now, 23 areas of activity, 90 indicators and 104 sub-indicators. The available action points with regard to the food retailers' contribution to sustainable development are divided into the three areas: supply chain, own locations, and consumption. The focus of the research is on each company's own-brand food product range. Unlike the first study, the second one also includes the aspects of social sustainability and animal welfare. The assessment used data from 2020 and 2023. The data collection phase utilized publicly available information and internal company information obtained by means of a questionnaire. Results: The study with data from 2020 showed that all eight food retailers examined make insufficient use of their scope for action in the areas of supply chain, own locations and consumption. Although individual companies demonstrate notable performances in various areas of activity, these are not sufficient to make an overall significant contribution to the necessary transformation of the food system. Therefore, we recommended in 2022, when the first study was published, that the companies implement their sustainability management in a considerably more systematic, and consequently, more effective way. This includes setting consistently verifiable targets for environmental sustainability, investing in better data capabilities, and linking sustainability management more closely with the business, purchasing and category management. The data from 2023 is currently being evaluated and results will be available by January 2025. Given the overall mediocre performance of the companies so far, we conclude that the current policy framework needs to be changed to enable food retailers to improve their environmental performance without suffering significant competitive disadvantages. Further, the research was observed by and discussed intensely with the assessed retail companies, which means that the approach is taken seriously and has an impact on these important market players.

Significance to mainstreaming sustainable consumption: The food retail sector plays a key role in the food system. On the one hand, it influences what consumers can buy in supermarkets through its range of products. On the other hand, it determines the production methods of raw materials and products on the production and manufacturing side with its purchasing decisions. This study shows that the food retail sector in Germany can be considered a gatekeeper. Hence, the food retail sector has an elevated responsibility to actively shape the transformation of food systems in close cooperation with the other actors within the system.

Consumers' perspectives on food fraud – a cross-country comparison of contextual and institutional factors influences on consumer trust

Cristina Laurenti, Lucija Lapuh, Hanna Stolz

Research Institute of Organic Agriculture FiBL, Switzerland

Food fraud may occur at any point in the supply chain. This study investigates the consumers' perspective on food traceability and fraud in Italy, Slovenia, Germany and Portugal. The main objective of the paper is to assess consumers' awareness of food fraud and their perceptions of various traceability/authentication approaches, such as relationship-oriented, control-oriented, and technology-oriented methods that are in place to increase supply chain transparency and consumer trust. This assessment considers the risk perception of food fraud in dependence of supply chain characteristics (long/short, globalized/regional) and product types. In addition, the study aims to understand how contextual and institutional factors influence consumer trust. Purchasing behaviour and preferences as well as experiences, reactions to food fraud and trust were investigated. Responses from 500 participants per study country were collected via an online survey. Data analysis was conducted in R and included cross tables, mean comparisons and non-parametric tests to identify differences between the case study countries. The next step is to identify different consumer segments and their specific perceptions and requirements regarding traceability information. According to our study, consumers expect that the likelihood of encountering fraudulent products is highest in online shops, followed by supermarkets, and lowest in local shops. Germans exceptionally trust more to local markets than to local shops. Furthermore, two thirds of all respondents believe that product information displayed on food packages/labels is not sufficient to verify the authenticity of the products, with Italians being the most satisfied with the information on the labels and the Portuguese the least. 13.8% of respondents have personally encountered a fraudulent product at some point in their lives. The most important information on the labels for consumers is the place where the animals are reared or farm crops are grown, while the place of birth of the animals or the place of breeding the seeds of farm crops is the least relevant. The pattern is the same in all countries and for both animal and plant products. Olive oil is perceived as the most fraudulent product and wine as the least vulnerable. Consumer opinion on the vulnerability to food fraud differs from country to country: in Slovenia, fish and seafood are considered most at risk, in Germany meat; in contrast, expectations of food fraud are lowest for honey in Portugal and Italy. This survey contributes to the development of strategies and interventions for food fraud prevention and thus to reduce the risk of economic losses and negative impacts on human health and environment.

Who can afford the effort? Exploring the impact of everyday life circumstances on meat reduction

Alicia Dunker

University of Hamburg, Germany

In meat-normative societies, reducing meat consumption requires conscious effort, even when individuals are aware of sustainability concerns. This study aims to examine the everyday life circumstances that either facilitate or hinder this effort. Two key factors are central to this analysis: time constraints that may obstruct meat reduction, and other resources that may help mitigate these potential constraints. Time pressures in daily life primarily stem from work obligations and caregiving responsibilities, especially for young children.

The first objective of this study is to assess how these everyday life circumstances impact meat reduction by applying logistic regression models with interactions to data from a cross-sectional survey conducted in Hamburg, Germany. The second objective is to explore whether these effects differ by socio-economic status, hypothesizing that greater access to resources may offset negative effects of time constraints.

Preliminary findings suggest that having children under 12 in the household generally has a negative effect on the probability of being a meat reducer. However, having children amplify the effect of high awareness of the unsustainability of meat consumption, eventually offsetting or even overcompensating initial differences in the likelihood of meat reduction between parents and non-parents. For working people with high socio-economic status, these effects attenuate. No reliable findings have emerged regarding the effects of work obligations.

By examining the interplay between awareness, caregiving responsibilities, work obligations, and socio-economic status, the findings aim to contribute to broader discussions on sustainable food practices and the allocation of the different necessary resources to effectively support meat reduction on the individual level.

Raising the diversity in living labs: Inclusive interventions for mainstreaming reusable takeaway packaging

Elisabeth Süßbauer, Camilo Almendrales Ahumada, Lara-Philine Kowalski

Technische Universität Berlin, Germany

Problem definition: Living labs are a promising research method for experimenting with sustainable and circular consumption practices in a domestic setting, e.g. in relation to food waste (Devaney & Davies, 2016), energy (Matschoss et al., 2021), packaging (Süßbauer et al., 2023) or single-use plastics (Rabiu & Jaeger-Erben, 2024). However, participatory and transdisciplinary research has been criticized because participants come often from socio-economically similar milieus (middle-class, local, female) (Gebhardt & König, 2021). To avoid this phenomenon of social selectivity, there is a need to increase the diversity of living labs and integrate underrepresented and structurally disadvantaged groups. In the field of takeaway consumption, many food caterers, especially smaller ones, are immigrants and their (direct) descendants which is one of these underrepresented groups.

Method: To address this research gap, we present findings from two 'inclusive living labs' on reusable packaging in Neukölln, a diverse district in Berlin/ Germany. In the first living lab, 18 private households documented their takeaway consumption practices in an app for five weeks; in the second living lab, three catering businesses (re)introduced reusable packaging for eight weeks. To examine possible changes in their practices, we conducted on-site interviews, self-made videos and group discussions before and after the interventions.

Results: Our preliminary results show that, first, to investigate circular practices such as the use of reusable takeaway packaging, it is important to consider the wider 'food environment' (Lopez Cifuentes & Sonnino, 2024) beyond people's homes. Second, for culturally sensitive communication with living lab participants (both consumers and caterers), it is crucial to work together with local mediators that understand the languages, logics and practices of the underrepresented group.

Significance to mainstreaming sustainable consumption: Based on these findings, we provide recommendations for the development of inclusive interventions targeted at households to change their practices toward circular consumption. Through increasing the diversity of living labs, we contribute to exploring (barriers to) circular consumption practices in diverse contexts which is crucial for anchoring them in society as a whole.

Exploring the Optimal Promotional Model for Reusable Cup Rental System: A Questionnaire Survey Experiment by Using Randomized Controlled Trial in Taiwan

Hsin-Tien Lin¹, Jia-Chun Qiu², Greg Chih-Hsin Sheen³

¹National Taiwan University, Taiwan; ²National Cheng Kung University, Taiwan; ³Academia Sinica, Taiwan

Problem definition

In Taiwan, the overuse of single-use plastic cups has become a pressing environmental concern. In response, the Taiwan Environmental Protection Administration introduced a policy in 2022 to encourage the use of reusable cups. Despite this, public participation in reusable cup rental services remains low. This study aims to identify the most effective promotional strategies to increase consumer

willingness to adopt reusable cup rentals, thereby supporting the government's policy initiative to reduce plastic waste.

Method

A randomized controlled trial was conducted using a questionnaire that divided participants into one control group and six experimental groups. Each group was exposed to different promotional strategies, including discounts, convenience of rental, sanitation and hygiene, environmental benefits, expert endorsements, and NGO endorsements. Participants rated their willingness to use reusable cup rental services on a 5-point Likert-type scale, where 1 indicated "very unwilling" and 5 indicated "very willing." A linear regression analysis was performed to assess the impact of each promotional strategy compared to the control group.

Results

The results indicated that all experimental groups scored above three on average, suggesting a generally positive reception to the promotions. The "Discount Promotion" group achieved the highest willingness score, with a coefficient of 0.58 ($p < 0.001$), showing a significant increase compared to the control group. This was followed by the "NGO Endorsement" and "Expert Endorsement" groups, with coefficients of 0.56 and 0.48, respectively. In contrast, the "Sanitation and Hygiene" group had the lowest score and showed no significant difference from the control group, indicating consumer indifference towards this promotional strategy.

Significance to mainstreaming sustainable consumption

The study highlights that monetary incentives, such as discounts, are the most effective strategy to promote the use of reusable cup rental services. Endorsements from credible sources like NGOs and experts also positively influence consumer behavior. These findings suggest that tailored promotional strategies, which cater to consumer motivations, can significantly enhance the adoption of sustainable consumption practices. For policy-makers, incorporating economic incentives and credible endorsements into their campaigns could effectively increase public participation in reusable cup rentals, reducing plastic waste and fostering a more sustainable society.

What have we changed, what kept? Investigating Sustainable Food Cultures across 23 nations

Silke Bartsch¹, Christine Brombach², Heike Müller¹

¹TU Berlin, Germany; ²ZHAW, Switzerland

Problem definition: Globalization has significantly impacted food cultures worldwide, bringing both opportunities and challenges to the sustainability of food systems. While traditional food practices often emphasize sustainability, modern transformations —driven by economic growth, urbanization, and technological advancements— have introduced unsustainable consumption patterns, such as increased confidence on highly processed food, plastic packaging, or globalization of Western food items. This study explores how food cultures across 23 nations have evolved, examining the tensions between preservation and transformation, sustainability and modernity. It asks: What elements of food culture have persisted, and what has changed in the context of sustainable consumption within the context of three generations?

Method: The research employs a workshop approach, in which participants from 23 countries meet online and for one week in 2024 in-person in Berlin, Germany, to conduct and present their case studies and make observation across 23 countries. These case studies document local food practices, their transformation over time, and the extent to which sustainable practices have been maintained, adapted, or discarded. Cross-cultural comparisons were made on-site and discussed to identify both commonalities and differences in these transformations. The study also allows to discuss and observe the phenomenon of cultural "crossover" or "spill-over," where practices from one region are adopted and adapted in others, such as e.g. the integration of the French baguette into Vietnamese cuisine. Additionally, the research explores "trade-offs" in sustainability, such as in another example the replacement of biodegradable packaging materials with plastic due to modernization pressures.

Results: Preliminary findings reveal a complex interplay between globalized influences and local traditions. In several countries, traditional practices, once marginalized, are being rediscovered and revalued, not as acts of resistance but as expressions of newfound cultural empowerment. For example, there has been a revival of traditional packaging materials in some regions, motivated by an increased awareness of environmental impacts. However, this transformation is not uniform; the speed and nature of change vary greatly across nations. In some cases, globalized food practices have led to unsustainable shifts, with local traditions being overshadowed by convenience-driven consumption patterns. At the same time, the study highlights how cultural spillovers have fostered new hybrid food identities, where sustainable practices are selectively adopted within a new, global framework.

Significance to mainstreaming sustainable consumption: This research contributes to the mainstreaming of sustainable consumption by illustrating how food culture is both a driver and a reflection of broader sustainability transformations. By documenting the nuanced and multifaceted nature of these changes, the discussion among participants offers valuable insights into how cultural appreciation and self-empowerment can support sustainable consumption practices. It suggests that while globalization can introduce unsustainable practices, it also evokes opportunities for revitalizing traditional and mainstreaming sustainable foodways. This highlights the importance of understanding cultural dynamics when developing global sustainability strategies. The study underscores the need

for culturally sensitive approaches that balance tradition with innovation in food systems and sheds light on conceptual advances around edibility and dietary change in culturally diverse contexts.

(Re-)defining demand: The role of consumption cultures and everyday practices

Henrike Rau¹, Sara Karimzadeh²

¹LMU Munich, Germany; ²Örebro University, Sweden

Effective climate change mitigation needs to incorporate efforts to reduce demand for energy and materials by affluent nations, thereby drawing attention to variations in consumption over time and across different societies. Social-scientific consumption research offers a host of relevant perspectives on how to redefine and shift demand including consumption corridors, circularity, sufficiency and degrowth approaches and efforts to reconceptualise the relationship between consumption and care. Importantly, the role of routine everyday practices has been recognised as a key influence on creating new forms of consumption, leading to proposals rooted in practice theory such as flexible work arrangements, or energy-efficient home design. However, the attractiveness of such proposals varies considerably within and across countries, reflecting local and national consumption cultures that shape demand by encouraging or discouraging the adoption of resource-intensive practices. These variations require urgent conceptual and empirical social research that incorporates efforts to compare consumption cultures across different geographical scales, with a view to identifying commonalities and differences. Drawing on qualitative and quantitative data from Iran and Germany, this study examines the crucial role of cultural conventions and prescriptions in shaping the adoption and performance of everyday practices and, by extension, the consumption of key resources such as energy, water, raw materials and (urban) space. The goal is to demonstrate how different cultures of consumption can help to place demand within sustainable boundaries that promote social justice while safeguarding the planet. It also offers some recommendations for culturally sensitive sustainable consumption policies that recognise the cultural significance of particular resource-intensive practices and that work with (rather than against) people's engagement in these practices.

Invasive products - The Case of Disposable Gloves in Norwegian Everyday life

Atle Wehn Hegnes, Kirsi Laitala, Nina Heidenstrøm

Oslo Metropolitan University, Norway

Problem definition: An important lesson from the COVID19-pandemic relates to the increased use of disposable products, such as face masks (FMs) and disposable gloves (DGs). On one hand, FMs and DGs physically and symbolically represents protection against health and social risk. On the other hand, FMs and DGs represents a risk to the environment as resource-intensive production and as waste. Social innovation for sustainable and alternative hand hygiene practices is dependent on knowledge on how DGs are used and understood.

We aim to answer the following research questions: What characterized the travel of DGs from the health sector to consumers everyday life? Why and how do Norwegian and urban men use disposable gloves in practices related to of hygiene, leisure, and childhoods? How can our results contribute to social innovation for sustainable consumption of DGs and lifestyle changes?

We relate our substantial research questions to practice theory (PT) and the recent development on how to conceptualise and delimiting interconnected practices. The practice of hand hygiene and use of DGs is entangled in various everyday life practices relating to hygiene, leisure, and childhoods, such as personal hygiene, cooking and eating and childcare. According to Shove, Pantzar and Watson (2012:33), we may claim that the elements of these practices change over time, and that the introduction of DGs represents a new materiality in the evolution of these practices. Understanding the implications of DGs being part of loose-knit *bundles* and more integrated *complexes* of practices (Shove, Pantzar and Watson, 2012) or *compound practice* comprising of several adjacent and relatively autonomous integrative practices (Warde, 2016), we aim to show that the integration of DGs in practices are also strongly affected on how practices themselves are integrated. When practices and materialities are deeply entangled it makes it even more difficult to change.

Method: Our preliminary and explorative data combines document studies and historical material on the general use and understanding of disposable gloves with interviews with 10 Norwegian men from the capital Oslo.

Results: Our results show that DGs have become part of different practices of hygiene, leisure, and childhoods and that the rationale for using them differ between various practices. Based on the data and the analytical framework of PT we show that how DGs are integrated in specific integrative practices depends on how these practices are related to other practices and the orchestration of elements in practices.

Significance to mainstreaming sustainable consumption: Reduction in the use of DGs implies a change in hand hygiene practices across different and integrated practices of hygiene, leisure, and childhoods. Such a change in practice is dependent on knowledge of the travel, rationale, and legitimization of use of DGs. Practical implications of our results relates to its impact on constructive social innovation for sustainable consumption of DGs and its related practices. The scientific

implications are that DGs represents an object that is useful to further develop the theory of PT and how social change can be understood from a PT perspective.

More sustainable food systems by food (re-)distribution?

Murielle Frerk^{1,2}, Melanie Speck^{1,3}

¹Osnabrück University of Applied Sciences, Faculty of Agricultural Sciences and Landscape Architecture, Osnabrück, Germany; ²Technical University of Berlin, Institute for Vocational Education and Labour Studies, Department of Education for Sustainable Nutrition and Food Science, Berlin, Germany; ³Wuppertal Institute for Climate, Environment, Energy, Sustainable Production and Consumption Research Unit, Wuppertal, Germany

Problem definition

Globally, around one third of food produced for human consumption is wasted (Gustavsson et al. 2011). The production, processing and transport of food is accompanied by the use of numerous resources, such as water, and impacts like greenhouse gas emissions (Benton et al. 2021, UNEP 2016). These impacts on the environment must be reduced due to their impact on the climate. At the same time, 2.3 billion people in the world do not have access to adequate and sufficient food. Around 923.7 million people are affected by severe food insecurity (FAO, IFAD, UNICEF, WFP and WHO 2022). A sustainable food system is linked with a fair consumption space that enables social welfare as well as environmental welfare (Allen and Prosperi 2016).

Both food waste and food insecurity are addressed within the Sustainable Development Goals (SDG). Numerous interventions aim to either alleviate food insecurity or reduce food waste. Despite these efforts, current data show that both the number of people affected by food insecurity and the amount of food waste remain high (FAO, IFAD, UNICEF, WFP and WHO 2022, UNEP 2024). Food aid primarily focuses on combating hunger and its associated negative effects. Initiatives like Foodsharing or the app Too Good To Go focus on reducing food waste. Food banks play a particularly important role in this context, as they are designed to address both food poverty and the reduction of food waste.

Method

The underlying research question is whether the redistribution of food can support a more sustainable food system. In this context, a literature review and 5-10 expert interviews are planned to gain a broader understanding of the different systems for distributing and redistributing food. Experts in this field are e.g. people who work within food aid programmes or initiatives that redistribute food. The question arises as to which criteria can be used to differentiate between the various systems or whether there are significant overlaps among them, e.g., food banks redistribute food and help people in need.

Results

The presentation aims to show the results gained from the comparison of different systems that (re-)distribute food to people by highlighting differences, similarities as well as strengths and weaknesses. The focus of this analysis also includes the target groups, the environmental impacts and the identification of potential resource savings.

Significance to mainstreaming sustainable consumption

Emissions from the food system account for around 20-40% of total anthropogenic emissions (Tubiello et al. 2021). Therefore, reducing food waste, e.g. by redistributing food to people, is a key issue in the context of sustainable and fair consumption.

Piercing through the gridlocks: public participation in building a Net Zero City in Reykjavik, Iceland

Johanna Raudsepp¹, Jukka Heinonen¹, Hrönn Hrafnisdóttir², Ásdís Karen Waltersdóttir²

¹Faculty of Civil and Environmental Engineering, University of Iceland, Iceland; ²Department of Environment and Planning, City of Reykjavik, Iceland

Problem:

Globally, cities are home to over half of the world's population. They are also hubs of consumption and emissions. Thus, cities have a responsibility to mitigate climate change in a substantial way. Developments in recent years in the City of Reykjavik, Iceland, have been delivering change in transportation and waste management. The transportation fleet is gradually transitioning to electricity and effective public transport plans are being implemented. Household waste management systems have been refigured. The circular economy is promoted to encourage climate-friendly and zero-emission practices. Nevertheless, GHG emissions have been increasing overall. The number of residents continues to grow, as well as the number of vehicles serving an exploding tourist industry. Attitudes, behaviours and habits are not well understood in the planning processes. The City of Reykjavik faces multiple challenges in the upcoming years to tackle the issues at hand. The Net Zero Cities pilot project aims to tackle these challenges through a multi-dimensional approach and collaboration between the City and the University of Iceland.

Method/results:

The pilot project aims to better understand people's current behaviours and attitudes related to transport and waste management, as well as understanding the barriers to change among the residents of the City of Reykjavik. Part of the project involves civil engagement in planning processes by way of an online public participation GIS survey which will be conducted at the beginning of 2025. The presentation will provide an overview of the ongoing project, the climate challenges of the City of Reykjavik, learnings from the project so far, and the opportunities of using public participation in strategic planning for climate change mitigation.

Significance to mainstreaming sustainable consumption:

The relevance of the project in mainstreaming sustainable consumption lies in the engagement of the local community in urban planning. Urban planning should aim to tackle the barriers to behavioural changes while meeting the day-to-day needs of its residents. A challenging endeavour like that requires the invaluable input from the public.

Storytelling in the marketing of biodiversity-friendly food

Sanja Osieja^{1,2}, Carsten Herbes¹

¹University of Nürtingen-Geislingen, Germany; ²University of Hohenheim, Germany

Agriculture, related land use changes and fragmentation of ecosystems threaten global biodiversity. To counteract this loss of biodiversity, it is essential to change the agricultural system along the entire value chain towards greater sustainability including biodiversity. Companies and consumers can play a crucial role here. Consumers, in particular, can increase demand for biodiversity-friendly products through their purchasing decisions and dietary changes. At the same time, companies can help transform the agricultural sector by offering biodiversity-friendly products and using marketing strategies to reach new consumer groups. However, biodiversity-based food marketing is still nascent. New communication strategies can support this development towards more biodiversity in marketing and consumption. Storytelling offers a particularly promising opportunity to do this, as storytelling can convey information, arouse emotions and trigger identification processes. Storytelling therefore taps into existing discourses and narratives and addresses both cognitive as well as emotional processes in consumers. In this way, storytelling can appeal to consumers from a wide variety of social, economic, and cultural backgrounds, and can be used as an inclusive approach to communicate biodiversity-friendly consumption.

In order to investigate the potential of storytelling in the communication of biodiversity, a case study was conducted on the marketing of biodiversity-promoting foods in German-speaking countries (Germany, Austria, Switzerland). The public discourse on biodiversity and the discourse on the websites of companies in the food industry were analyzed. First, we performed a lexicometric discourse analysis on the German reference corpus from COSMAS and Websites. Subsequently, stories found on food company websites were examined using a video analysis and a storytelling analysis. In a third step, the results of the first two steps were compared.

The lexicometric discourse analysis shows that biodiversity is mentioned almost exclusively in connection with species diversity, ecosystems and conservation. Furthermore, biodiversity is predominantly discussed in connection with climate protection and climate change. The analysis of the websites shows that biodiversity is addressed by many companies. However, like in the public discourse biodiversity is not often presented as a standalone subject on websites and in stories but almost always in connection with other more prominent issues such as climate protection, fair trade, animal welfare, regionality or tradition. Previous studies show that this is due to the fact that biodiversity is both difficult to measure and difficult to imagine for consumers. Consumers also lack knowledge about biodiversity. Although storytelling has the potential to make biodiversity more understandable to consumers, only a few companies use it in their marketing. Companies that use biodiversity stories in their marketing strategy also draw on prominent discourses by using them in stylistic elements such as images, like bees that are typical for the German-speaking context, or identifiable characters (e.g. farmers).

These stories and their elements can offer fruitful approaches for different actors like companies, governments or NGOs to communicate biodiversity as part of sustainable consumption. Through the combination of public discourse, information and emotional stories, storytelling can support existing marketing and communication strategies such as labels, projects and products in different countries and cultural contexts.

From Linear to Circular: Factors that Drive Value Retention of Consumer Goods

Carina Hermandi¹, Wolfgang Irrek¹, Oliver Büttner²

¹Hochschule Ruhr West, Germany; ²Universität Duisburg Essen, Germany

Problem definition

Germany produces an average of 380 million tonnes of waste (BMU 2023). At the moment, the linear economic system still dominates: take, produce, throw away. Not only do companies need to adapt their business models, but consumer behaviour also needs to be rethought.

In a circular economy, we think and act in closed material cycles to ensure the long-term economic and social benefits of products, components and materials. One goal of the circular economy is to keep products in their lifecycle as long as possible, for example by repairing broken products rather than throwing them away, or by product care, for a longer lifetime. These behaviours can drive the transition to a circular economy.

This study examines which factors or characteristics of consumers lead them to retain the value of products by maintaining or repairing them, based on the Comprehensive Action Determination Model. Materialism, norms, empathy, product intention tendency, awareness and sociability could also be important factors influencing these behaviours (Klößner and Blöbaum (2010); Małecka et al. (2022); Ackermann et al. (2021); Richins (2004); Haus et al. (2010)).

Method

We are currently conducting a survey aiming at 1,000 respondents by 5 October 2024. The questionnaire contains questions on repair and product care in relation to household appliances as well as on the influencing factors mentioned above and demographic characteristics. The items on repair and product care were developed based on Ackermann et al. (2021) and Scott and Weaver (2014). The items were then tested using EFA and CFA. The influencing factors were then analysed using a SEM model.

Results

As the study has not yet been finalised, we currently assume that, in addition to socio-demographic factors, we will also gain interesting insights into the relationship between value retention and social and personal norms, product retention tendencies, empathy and environmental awareness. The tendency to treat products with care indicates an inherent tendency of consumers to extend the life of products, which is closely linked to a heightened awareness of the far-reaching consequences of consumption decisions. Empathy in this context reflects consumers' ability to consider the environmental and social impacts of their actions and to promote more responsible consumption. Taken together, these factors highlight the complexity of motivations that lead to circular consumption behaviour and the crucial role of psychological and cognitive processes in the decision to repair and maintain products rather than dispose of them.

Significance to mainstreaming sustainable consumption

The results will help to further promote the topic of value retention of consumer goods. Consumer NGO's such as Verbraucherzentrale NRW in Germany can apply the results to improve information materials or to organise training measures and consumer counselling in a more targeted manner.

Navigating Consumer Perspectives on Biobased Products: Barriers, Enablers, and the Role of Digital Solutions in Supporting Sustainable Consumption

Virpi Oksman¹, Hannamaija Tuovila¹, Marjoriikka Ylisiurua¹, Maarit Halttunen¹, Magdalena Marczevska², Agnieszka Wiśniewska², Magdalena Klimczuk-Kochańska²

¹VTT Technology Centre of Finland, Finland; ²University of Warsaw

Problem definition: The increasing urgency of addressing environmental challenges has increased interest in biobased products as sustainable alternatives to traditional materials. Bio-based products are derived from renewable resources, such as plants, animals, and micro-organisms, and offer a greener alternative to conventional products. However, despite positive consumer attitudes, the adoption of biobased products is progressing slowly. This paper approaches the topic from a Diffusion of Innovation theory framework, suggesting that the characteristics of both innovation and potential adopters are crucial for promoting sustainable choices in the mainstream. The study explores consumer perspectives on biobased products, identifying the barriers and enablers of their adoption among some environmentally conscious consumers, i.e., potential early adopters in Europe.

Method: A qualitative focus group methodology was used to explore attitudes toward biobased products in Finland and Poland. Mural boards facilitated the collaboration online via Zoom, and Teams held sessions. Sessions lasted approximately one and a half hours, and 43 guiding questions ensured comprehensive discussion and analysis of consumer perceptions. Similar studies were conducted in other two European nations. In addition, an online co-creation platform was employed in discussions and the collaborative development of future smart mobile solutions prototypes. Participants, aged 18-55, were selected based on their interest in environmentally friendly consumption and in utilizing mobile applications to support buying decisions. The discussions focused on the participants' experience with biobased products, as well as the potential of smart solutions and AI to support purchasing of bio-based products. This allowed a qualitative examination of perceptions, misconceptions, and the role of information and smart solutions in shaping consumer choices. The discussions were transcribed, and materials were subjected to narrative analysis and coded using NVivo software.

Results: The study reveals that while there is an increasing awareness of biobased products among environmentally conscious consumers, the narratives highlight the barriers to finding and accessing bio-based products in shops, the importance of clear and reliable information, and the potential of digital solutions to support consumers in their shopping decisions. Participants in both countries expressed confusion about the terms related to biobased options and concerns about pricing, authenticity, and environmental impact. Moreover, concerns were raised about greenwashing as companies may falsely market products as eco-friendly without substantial evidence. The findings

point to the crucial role of information transparency and effective product labelling in influencing consumer perceptions and decision-making. Integrating AI and smart solutions can act as potential enablers in enhancing consumer trust in biobased products. In addition, digital solutions can engage participants through user reviews, and gamification elements to foster a sense of community around responsible consumption. This narrative highlights the interplay between technology and consumer behaviors in promoting sustainable practices.

Significance to mainstreaming sustainable consumption: This paper contributes to the growing discourse on sustainable consumption by emphasizing the importance of supporting consumer behavior change in the adoption of biobased products. The proposed integration of smart solutions can engage consumers, improve communication, and build trust towards biobased products, thus helping bridge the gap between intention and action, ultimately supporting the mainstreaming of sustainable consumption.

On the fringes of consumer society: struggling to live sustainably in a non-sustainable world

Mikael Linnell

Lund University, Sweden

Problem definition: The notion of crisis opens up a stage of suspension; a liminal stage, in which experimentation with new personal and collective experiences and self-alterations can occur. New social imaginaries (of sustainable living, circularity, and downshifting) can replace older ones (of eternal growth and linear consumption) or coexist with them in a contradictory relation (Varvarousis 2019, 505). At the same time, people may experience opposition, suspicion and other social difficulties when enacting change in their everyday lives.

The recent polycrisis of war, increased costs for housing, energy and food, along with the urgent need to reduce emissions of greenhouse gases, stop unsustainable extractivism and mitigate the loss of biodiversity, has clearly increased interest in altering lifestyles towards sustainability and sustainable consumption. This preliminary paper, based on ongoing research within the project *Preparing for degrowth: social resilience, transformation and self-limitation*, directs attention to the difficulties and challenges for individuals and households to engage in current sustainability transitions, considering the pressures of consumer society (Boström 2021). However, instead of starting from already committed, highly motivated and knowledgeable actors, this paper focuses on the less obvious candidates of self-limitation and sustainability transition (Demaria et al. 2019, 444), like ordinary people with no particular affiliation in transition networks or communities, but who experience that they have entered a liminal phase in which some type of change must be initiated to maintain well-being.

Method: The study draws on in-depth interviews with five self-recruited individuals, all of whom perceive themselves as being, at somewhat various stages, in a process of change towards a more sustainable lifestyle. Their narratives circle around common themes such as: what initiated their transformations; how is this transformation enacted in their everyday lives; what social and practical consequences has the change generated; how has this affected the persons' or households' self-image; and what challenges or difficulties has the change given rise to?

Results: Ongoing research.

Significance to mainstreaming sustainable consumption: In order to relate the participants' micro-level experiences and practices to macro-level phenomena, with a focus on their struggle to pursue sustainability in an unsustainable society, I employ a novel approach in which I extend practice-theory to include theories of social resilience and recent poverty research (Dagdeviren et al. 2020; Koch 2020; Revilla et al. 2018). Thereby, the study picks up the thread from Buch-Hansen et al. (2024), who "invite investigations of problematic and uncomfortable areas where the somewhat idealistic vision of degrowth meets the existing structures of the real world" (p. 134; see also Linnell 2023). A unique feature of the study is its focus on the *transformative* aspect of social resilience (as emphasis has most often been on the aspects of *coping* with and *adapting* to crisis), hence the study makes an argument for sustainable consumption and sustainable living - not as individual ways to cope with or adapt to the current polycrisis, but as a collective way to actually move us out of the present dire situation and towards a post-consumption society.

Techno-optimism & green consumption: dispelling a myth

Marianne Ekdahl, Oksana Mont

IIIEE, Lund University

Problem definition

Over-consumption and over-production are the fundamental drivers of the converging planetary crises, encompassing climate change, biodiversity loss, pollution, and waste. Green consumption is commonly viewed as the key pathway to sustainable consumption, and is the dominant paradigm in demand-side climate strategies. It relies on consumption of low-carbon, eco-efficient, recycled, eco-design, or organic products, mainly achieved via production-side efficiency measures and technological innovations. However, this approach overlooks the critical need to shift and reduce overall consumption.

While cleaner production technologies and greening of consumer preferences have contributed to production-related emission reductions and remain essential mitigation strategies, they are insufficient to counter rising consumption levels and cannot serve as the sole demand-side solution. Thus, the belief that technology alone can solve all environmental problems caused by consumption is a myth, as confirmed in earlier research (i.e. Mont et al., 2013). This unwarranted optimism, often referred to as "techno-fix" or "techno-optimism," has largely gone unchallenged in mainstream discourse.

Since the 2015 Paris Agreement, however, the climate transition has accelerated, gaining broader citizen support, widening sectoral and institutional engagement, and expanding the range of mitigation methods being implemented or considered. This constantly evolving climate agenda opens up opportunities to challenge even deeply rooted myths. On the other hand, the rapid growth of digital technologies for sustainability-motivated solutions – such as AI – presents both opportunities and threats. This contribution revisits the techno-optimism myth in the context of the ongoing climate transition, explores its contemporary manifestations and consequences, and identifies the primary arguments for dispelling it.

Method

This mixed-method study builds on previous research while integrating new insights. Key literature within sustainable consumption is reviewed alongside policy and media documents. Semi-structured interviews with 5-7 experts in sustainable consumption, and a survey on SC myths with 50 experts offer further perspectives. Additionally, we draw on insights from 20+ Swedish citizens from citizen thinking labs conducted within the EU 1.5° Lifestyles project.

Results

Preliminary findings suggest that the myth of techno-optimism and green consumption remains widespread. It is sustained by a technocratic worldview, unsustainable business models, consumer convenience, and policymakers who fear losing voter support if they promote alternative consumption patterns. Under the banner of climate transition, the myth is being reinforced, while negatively impacting consumers, policy-making and the environment, while diverting attention from the need to address other challenging issues. We identify a number of key arguments to dispel this myth and propose a framework to challenge both this and other persisting myths.

Significance to mainstreaming sustainable consumption

As the climate transition progresses, many societies are reaching a point where impacts on individuals become tangible, with clear distributional, social, and economic consequences. In this context, the myth of green consumption remains convenient for consumers, policymakers, and businesses alike, exacerbating the failure to address the need for transformative changes in consumption patterns through strategies of shifting and sufficiency. To mainstream strong, sustainable consumption effectively, it is crucial to dispel this pervasive myth.

The Practice of Sustainable Food Shopping in Bristol, U.K.

Beth Benker

University of the West of England, United Kingdom

Supermarkets in the UK contribute to food unsustainability through practices that prioritize profit over environmental and social responsibility. They drive demand for mass production, encouraging intensive farming that depletes natural resources and harms biodiversity. Supermarkets also favour standardized, aesthetically "perfect" produce, leading to significant food waste as edible but imperfect food is removed from the supermarket system. Additionally, supermarket reliance on long global supply chains requires long transportation chains, requiring substantial fossil fuel input. Pricing strategies undervalue local seasonal food, which presents further strain. These unsustainable practices undermine food security and environmental sustainability. In this context, this research project set out to understand how individuals and households navigate the food procurement landscape and what role supermarkets play in sustainable, or unsustainable, household consumption patterns.

The data consists of go-alongs (accompanying participants while food shopping) recorded interviews with the same 30 participants conducted in the UK city of Bristol in 2024. Participants were invited to participate through leaflets disseminated directly to households by the researcher. A total of 1,163 leaflets were posted through doors in relevant postcodes. Inclusion criteria, including geographic locations, were decided according to Bristol City Council's data on income, health and wellbeing. Participants who were least likely to experience systemic barriers were chosen in order to understand food procurement decisions with as few limitations as possible. Participants were overwhelmingly white, wealthy and U.K. citizens, which is unsurprising given the stratification of UK society. The homogeneity of the sample limits the generalisability of the findings, but maximises validity and applicability. Interviews were designed to find out what barriers existed to procurement of sustainable foods, both practical barriers but also attitudinal barriers: e.g., participants' suspicion of sustainability claims on supermarket products.

Data was analysed using practice theory, so participants are understood as informants on practices surrounding food purchases. Participant testimony is taken alongside observations during the go-alongs in order to understand how the supermarket minimises or creates barriers to sustainable food procurement. For example, travel to the supermarket aligned closely with the individuals' environmental concern, in that those who cycled tended to be more concerned about environmental decline and those who drove were less concerned. The level of environmental concern was not causal;

so cyclists did not cycle purely to avoid using their car, other factors informed this choice. Drivers often visited less sustainable supermarkets or retail outlets than alternatives on offer. Those who cycled visited more varied food retail sites, including more local independent shops, markets, and were more likely to have vegetable box deliveries, etc. Therefore, driving acts as a behavioural linchpin for less sustainable food consumption. One of the recommendations in this project for increasing sustainable food consumption choices include improving access to cycling.

Introducing practice theory to sustainable food consumption introduces some surprising connections, as highlighted above, and enables progress without requiring changes in opinion or attitude from individuals. In turn this means that locally- and culturally-specific barriers to sustainable food consumption can be identified and recommendations can be introduced to minimise existing barriers.

Weathering the storm: Coping strategies of post-growth businesses

Lotte Levelt

Nyenrode Business University, Netherlands, The

Increasingly, the role of profit (as means or end, limited or not) is discussed as key aspect of a sufficiency economy, (see e.g. Villalba-Eguiluz et al., 2023). However, assumptions about profit are far from clearcut in sustainable business scholarship, ranging from denouncing of profit maximization altogether (Nesterova, 2020), using profit for cross-subsidization (Beyeler & Jaeger-Erben, 2022), distribution of multi-component profits (Chevrollier, Levelt, Argyrou & Meijer, forthcoming) to taking profit as given (Khmara & Kronenberg, 2018) and making a case for profitability (Sarokin & Bocken, 2024). The present abstract concerns a planned study which aims to contribute theoretically to discussions about the role of profit in sufficiency and post-growth scholarship, as well as empirically by studying not-for-profit businesses. This study, which departs from a post-growth perspective (i.e. an ecological economics lens that denounces the possibility of timely absolute decoupling (Parrique, 2019)), conceptualizes a post-growth business as one that is both *not-for-profit* (Hinton, 2021) and *sufficiency-oriented* (Niessen & Bocken, 2021), thereby combining financially non-extractive legal forms with social-ecological business practices.

Evidently, such post-growth businesses in the Global North are situated in hostile, capitalist economies. Their focus on particular R-ladder strategies, Rethinking, Refusing and Reducing (Niessen & Bocken, 2021) as well as need for slower paces and demarketization are at odds with capitalist societies in which more (stuff, speed, distance and commodification) reigns (Schneidewind & Palzkill-Vorbeck, 2011). Though they may be instrumental to realizing strongly sustainable consumption patterns, there have been few empirical explorations of these businesses to date, and particularly their ecological performance remains underresearched (Hinton & Cornell, 2022; Persson & Hinton, 2023). Post-growth businesses must 'weather the storm' and develop coping strategies to do so, e.g. by cooperating in networks with fellow businesses (forming 'ecosystems') to enable scaling (Colombo et al., 2023; Enarsson et al., 2024; Persson & Klintman, 2022), thereby sharing knowledge and risks (Froese et al., 2023). In response to a recent call by post-growth scholars to engage in organizational research that treats businesses in conjunction with systemic drivers, rather than as isolated entities (Robra & Hinton, 2024) this study aims to answer the following research questions:

How is profit conceptualized in the post-growth business literature? (Literature review)

What coping strategies do for-profit and not-for-profit sufficiency businesses employ to overcome incentives of the growth-based system? (Empirical investigation)

The study is exploratory in nature and employs a qualitative research methodology[1]. Using a comparative case study approach, several for-profit and not-for-profit sufficiency businesses will be researched to collect insights into differing or similar coping strategies in relation to systemic incentives they face. In doing so, this study aims to deliver insights into dynamics of for-profit and not-for-profit business and their potential for sufficiency, thereby contributing to academic discussion about profit and sustainability, as well as insights into coping strategies for sufficiency business practitioners on their way to mainstreaming sustainable consumption.

Tensions and narratives of the energy transition: Navigating sustainable consumption in urban India

Sharayu Shejale

University of Geneva, Switzerland

In this presentation, I examine the processes of low-carbon energy transition in urban India. Specifically, I look at the institutional actions and policy implementation, as well as the responses, challenges, and alternative pathways emerging from communities and citizens. Focusing on four cities in western India, each with a different environmental and political climate, context and policy framework, I explore how and if these translate to a common national decarbonisation vision. In-depth interviews (n=29) with government officials, resident collectives, NGOs, activists and policy consultants reveal the tensions between policies and their implementation, competing interests and narratives. These interviews, coupled with a document analysis of gray literature, policy documents, reports, and action plans, also help to situate and map the mechanisms of the urban energy transitions along these lines.

Here, sustainable consumption emerges in the everyday acts and practices of urban citizens as they locate themselves in the energy transition. While the mainstream narrative is dominated by the need for growth, increasing climate risk, rising temperatures, and socioeconomic inequity bring questions of sustainable consumption to the fore. The politics of energy poverty and energy security become especially relevant in this context, and offer a useful lens when looking at the above processes and tensions within and beyond the urban energy transition. Cooling and heat mitigation practices become useful entry points to engage with energy consumption here as well.

The Impact of Shopping Practices on Reusable Bag Consumption: A Nationally Representative Study from Norway

Hanna Seglem Tangen, Live Bøyum

Oslo Metropolitan University, Norway

Problem definition

Plastic waste is widely recognized as one of the main sources of environmental pollution, and each year, between 19 and 23 million tons of plastic enter the environment. One key area of concern is the use of single-use plastic bags for shopping, especially within the retail grocery store because of the widespread use of plastic bags in this sector.

In 2022, the EU Commission presented a proposal for a new packaging regulation. This regulation requires member countries to limit the number of plastic bags sold per inhabitant to a maximum of 40 bags per year by the end of 2025. The reusable shopping bag is seen to be a good alternative to the single-use plastic bag as it is designed to be reused several times. This study aims to analyze the drivers and barriers for using reusable shopping bags for grocery shopping. We use Norway as a case to analyze this. Even though there has been implemented both economic taxes and information campaigns to reduce the consumption of single-use plastic bags, Norway is still among the top countries in Europe when it comes to consumption of single-use plastic bags. We argue that the policy measures for reducing the use of single-use plastic bags in Norway might have been too much focused on individuals' attitudes and preferences towards shopping bags, and to a lesser extent focused on how the use of carrying alternatives are linked to consumers' shopping practices.

Method and Results

We analyze a representative survey of the Norwegian population to investigate how shopping practices are linked to the use of carrying alternatives when grocery shopping. We find that shopping practices such as the amount of groceries bought, how the consumers travel to the grocery store, if the grocery trip was planned, the experienced access of single-use plastic bags in the store, and how consumers handle their residual waste, significantly impact their use of carrying alternatives for grocery shopping. Moreover, we find that almost all Norwegian households own at least one reusable shopping bag, indicating that most households have an opportunity to use reusable shopping bags.

Significance to mainstreaming sustainable consumption

Globally, we use 5 trillion single-use plastic bags each year. The majority of these single-use plastic bags are only used once, and the high consumption presents several challenges, particularly for the environment and climate. Policy measures for reducing the use of single-use plastic bags has largely focused on changing consumers' attitudes and preferences. However, this study shows that barriers for using reusable shopping bags are largely related to consumers' shopping practices. This implies that there is a need for policy measures aimed at shopping practices to increase the use of reusable shopping bags. We argue that both political measures and measures from grocery stores can increase the use of reusable shopping bags. For instance, a deposit system for shopping bags could make it easier for consumers to use a reusable shopping bag if they forgot to bring one to the store.

Would consumers want to drink animal - free milk? The influence of arguments and diet on the acceptance of precision – fermented dairy

KATARZYNA STASIUK¹, DOMINIKA ADAMCZYK², DOMINIKA MAISON²

¹Jagiellonian University, Poland; ²University of Warsaw

The present study focused on consumer attitudes towards precision – fermentation derived dairy (PFDD) – the animal free alternative for dairy. While technological progress is viewed positively in many areas, this is not the case for food production. New food technologies, particularly genetic modification, raise significant consumer concerns. This is mostly due to the belief that genetic manipulation causes food to lose one of its most important positive attributes— naturalness. Previous research has found that one way to overcome these negative associations is to inform consumers that PF is similar to the traditional fermentation process used by the food industry. However, this way of communicating PF to consumers may alleviate their concerns about the lack of naturalness of these products, but it does not highlight their benefits. A lack of perceived benefits leads people to question the need for novel food technologies, and may even accentuate perceived risks.

The main objective of the presented study was to determine which potential benefits would be effective in creating favourable attitudes towards PFDD. The primary arguments that persuade people to turn to meat substitutes are health, animal welfare, and environmental sustainability. While these arguments are quite persuasive in meat reduction, the willingness to substitute dairy with alternatives

is much lower. Many consumers declare that they like dairy products and cannot imagine replacing them with plant-based alternatives. However, dairy products made using the PF process do not differ in taste from traditional dairy products, which should remove a major barrier that could discourage consumers, leaving room to persuade them of the benefits of this technology. Following this, in our study we aimed to determine whether, given information about the similar taste of precision fermentation dairy, consumers could be persuaded by health, environmental, and animal welfare arguments. We also wanted to test whether the information that these products are produced by GMOs could influence consumer attitudes. Finally, we also included information about the respondent's diet in the study design. A representative sample of the Polish general population (N = 1016) took part in the online experiment. We used the experimental design, with different types of arguments, information about the GMO and participants' diet (meat – eaters, reducetarian, veg*ans). The results of our study showed that attitudes towards PFDD were rather negative (regardless of the arguments), with the most often justification that it is not natural. Moreover, arguments concerning the positive consequences of the production and consumption of PFDD for ecology and animal welfare did not significantly influence participants' attitudes. Arguments related to the health benefits associated with the consumption of PFDD appeared to be the most convincing for consumers. Participants' diets differentiated attitudes more strongly. Reducetarians and veg*ans were much more supportive of PFDD than meat-eaters. Information that PFDD is produced by GMO (but does not contain its DNA) did not differentiate the evaluations of these products.

Decarbonized happiness? - The potential decoupling between subjective well-being and carbon footprint at the individual level

Maria Csutora¹, Gabor Harangozo², Zsófia Mózner Vetőné³

¹Corvinus University of Budapest, Hungary; ²Corvinus University of Budapest, Hungary; ³Corvinus University of Budapest, Hungary

Problem definition

In our current society, a desirable goal is to increase subjective well-being. This cannot be measured solely in terms of income and material consumption, subjective well-being includes life satisfaction, meaning of life (a sense of meaning and purpose) and feeling of happiness. An increase in material consumption is, to some degree, essential for enhancing subjective well-being, which consequently results in a larger carbon footprint (Csutora and Zsóka, 2014). The carbon footprint can be considered as a measure of material consumption. From this perspective, it is crucial to examine how environmental behavior might directly influence subjective well-being, as well as its impact on subjective well-being via the carbon footprint. Environmental protection is essential for the well-being of individuals, according to the Eurobarometer survey (2020), though most of them only engage in marginal activities. Thus their actual carbon footprint is higher, despite considerable environmentally conscious activities, since they fail to effectively reduce their carbon footprint (Huddart et al, 2015; Anttonen et al, 2023).

Method

To evaluate the relationships between subjective well-being, carbon footprint and environmental behaviour, a PLS-SEM research framework was applied. The Eurobarometer 501 survey scale was used to measure ecological behavior (Eurobarometer, 2020), where both incremental and radical lifestyle-change-related variables were measured. Hypotheses were tested on a representative survey of 1000 participants in Hungary.

Results

The findings of the study indicate that environmental behaviour does not directly influence all components of the carbon footprint. Environmental behavior positively impacts the carbon footprint of food consumption and the carbon footprint of housing; however it does not directly impacts the footprint of travelling. Environmental behaviour has a positive impact on subjective wellbeing. Furthermore we present findings on the relationship between several components of the carbon footprint and subjective well-being.

Significance to mainstreaming sustainable consumption

Currently, environmental awareness-raising concentrates solely on specific aspects of environmental behavior. The results of this research highlight which elements should be more focused on in order to significantly reduce the carbon footprint and increase subjective well-being.

- References Csutora, M., & Zsóka, Á. (2014). May spirituality lead to reduced ecological footprint? Conceptual framework and empirical analysis. *World Review of Entrepreneurship, Management and Sustainable Development*, 10(1), 88-105.
- Eurobarometer (2020). Special Eurobarometer 501: Attitudes of European Citizens towards the Environment. https://data.europa.eu/data/datasets/s2257_92_4_501_eng?locale=en
- Huddart Kennedy, E., Krah, H., & Krogman, N. T. (2015). Are we counting what counts? A closer look at environmental concern, pro-environmental behaviour, and carbon footprint. *Local Environment*, 20(2), 220-236.
- Anttonen, H., Kinnunen, A., Heinonen, J., Ottelin, J., & Junnila, S. (2023). The spatial distribution of carbon footprints and engagement in pro-climate behaviors–

The culture of sustainability in organizations and its contribution to the socio-ecological transformation at universities

Inga Stademann¹, Julia Wiethüchter², Pia Mamut², Hannes Wender³, Thomas Kopp¹

¹University Siegen, Germany; ²University of Munster, Germany; ³University of Osnabruck, Germany

A substantial corpus of higher education research is dedicated to the topic of sustainable development. However, empirical evidence suggests that universities as organizational entities are experiencing difficulties in transforming themselves in accordance with the principles of sustainability.

This conference presentation offers a cultural perspective on the changes required to transform universities into post-growth academic institutions and enable university staff to become responsible for change. Our research aims to propose elements of a sustainability culture at universities and indicators to measure them, serving as a tool to assess the current state of sustainability culture. This research can be used by individuals responsible for or interested in implementing sustainability at universities. It also contributes to the theoretical exploration of organizational cultures in higher education institutions and the cultural dimension of sustainability.

In a first step, visions of sustainable universities were identified in the current literature and connected to literature on organizational culture, to gauge a first impression of what constitutes a sustainability culture at a university. Based on these preliminary defining aspects of an academic sustainability culture, the study then analyzed interviews with all status groups from three German universities using both qualitative and quantitative methods in an iterative process. This allowed us to define the categories of the culture of sustainability and to test the developed indicators.

The results indicate that, among others, important indicators of a culture of sustainability at universities are practices of collaboration, creativity, and curiosity, common goals, and a wide scope of action. On the other hand, the results suggest that a university that positions itself as a market participant and competes with other universities, that reinforces a competitive mindset among employees, relies on hierarchy and authority, and hinders innovation and change, is characterized by a culture of unsustainability. For measurability we developed two ideal-typical prototypes of a culture of sustainability and unsustainability. Each prototype includes 16 categories that can be rated on a 5-point Likert scale. The extremes of the scale are represented by the prototypes, creating a tool for assessing the current state of a university's sustainability culture. Considering that cultures are only observable via symbols and artefacts, it is necessarily an assessment that relies on interpretation to a certain degree.

All in all, our research shows that cultural changes need to complement structural changes, and that it is possible to measure cultural aspects similarly to structural elements.

The topic of our research is highly pertinent to the conference, as culture exerts a far-reaching influence on all stakeholders within a university. On the one hand, culture shapes the consumption patterns of individual actors in both their professional and private lives. On the other hand, the organizational culture of an institution affects its overall consumption patterns, including those related to travel expenses, office materials, and the selection of dishes offered in the canteen. A reinforced sustainability culture consequently results in a more compelling and intrinsic motivation to integrate sustainability into the organization and to align all operational areas with it.

The influence of perceived food values on food waste handling behaviour: An experiment from Vietnam and Switzerland

Minh Hai Ngo², Thanh Mai Ha¹, Mathilde Delley³, Franziska Götze³, Lam Thi Bui², Nhu Thinh Le⁴, Evelyn Markoni³, Anh Duc Nguyen², Bárbara Franco Lucas³, Bao Duong Pham⁵, Thomas A. Brunner³

¹The Swedish University of Agricultural Sciences, Sweden; ²Vietnam National University Of Agriculture; ³Berner Fachhochschule, Hochschule für Agrar-, Forst- und Lebensmittelwissenschaften HAFL, Switzerland; ⁴Fruit and Vegetable Research Institute, Vietnam; ⁵Bac Giang Agriculture and Forestry University, Vietnam

The way consumers perceive food values might influence their food waste management. Though insight into this potential link can inform communication programs to reduce food waste, research that explores it is scant. Moreover, the lack of comparative analysis of food waste management behaviour between developing and developed countries means we know little about food waste reduction measures tailored to each country. This study investigates the impact of food value on individuals' food waste management behaviour in Vietnam and Switzerland. 643 usable responses from Switzerland and 616 from Vietnam were obtained via an online consumer survey. A four-scenario experiment was designed to elicit food values and consumer behaviour (discard or use food). Four scenarios include reference scenario (food bought from supermarkets), responsibility (leftover food received from a party host), traceability (food bought from a known farmer), and traceability combined with responsibility. Examined food products were vegetables and pork, framed as still-edible-food which degraded due to negligence.

There were remarkable differences in consumer behaviour between the two countries. 70% of Vietnamese respondents binned forgotten meat, compared to only 8% of Swiss respondents. 92% of Swiss consumers opted to save the meat by different methods in comparison to 30% of Vietnamese who did the same. Similar patterns were observed in vegetable handling though to a lesser extent (37% of Vietnamese discarded vegetables compared to 2% of Swiss). It is suggested that Swiss consumers, in general, are more responsible in food waste management. This might be due to their higher interest in sustainability. It is also possible that the abundance and affordability of fresh foods in Vietnam, a tropical and developing country, might shape the perception of the low opportunity cost of wasting, resulting in the prevalence of wasting food.

The impact of traceability, responsibility, and their combination on food waste management behaviour was more pronounced in Vietnam than in Switzerland. In Vietnam, for forgotten vegetables, "responsibility" scenario is the most effective in reducing food waste, with only 27% of respondents choosing to bin. Compared to reference scenario, the percentage of respondents opting to discard in the remaining scenarios was significantly lower. Regarding forgotten meat, the effect of "traceability" was the most effective while "responsibility" was the least effective in stimulating good practices in Vietnam. Perhaps, the sense of social responsibility from utilizing neglected leftover meat among Vietnamese is not strong enough to cancel out their negative perceived food values such as food safety risks and disgust. In Switzerland, there were no differences in the proportion of consumers choosing to discard across scenarios for meat. For vegetables, the only observed difference is the higher percentage of subjects choosing to make salad in both traceability and responsibility scenarios compared to the reference scenario. This study suggests that depending on food types, either perceived traceability or responsibility values of food can drive food waste management behaviour in Vietnam. Consumers' low awareness of sustainability in Vietnam brings a chance to reduce food waste via communication of food values to Vietnamese consumers.

Towards climate neutrality in the Spanish N-fertilizer sector: A study based on radiative forcing

Joan Hereu-Morales

UPC, Spain

Agricultural systems in the 21st Century face the double challenge of achieving climate neutrality while maintaining food security. Synthetic fertilizers rich in nitrogen (N-fertilizers) boost agricultural production at the expense of increasing climate impact. Public policies, such as the Farm-to-Fork (F2F) Strategy, aim to reduce the extensive use of N-fertilizers with the ultimate goal of achieving a climate neutral European Union (EU). However, the strong link between N-fertilizers and GHG emissions (i.e., CO₂, CH₄ and, especially, N₂O) highlights the need to better understand the climate impact of this sector. The present study conducts a climate impact analysis of Spanish N-fertilizer sector for two periods: (i) from 1960 to 2020 using real data and (ii) from 2021 to 2100 considering five forecasted scenarios. The scenarios range from business-as-usual practices to a full accomplishment of the goals pursued by the EU's F2F strategy. The system's climate stability and neutrality are analysed for the different scenarios based on radiative forcing (RF) metrics. Additionally, the study evaluates the short-term impact of the EU decarbonization goals on the climate impact of the Spanish N-fertilizer sector. The results of the study illustrate that the long-lasting climate impact of N₂O and CO₂ emissions compromise the capacity of N-fertilizer sector to achieve climate stability and approach climate neutrality. However, the decarbonisation of transport and N-fertilizer production activities is an important driver to substantially reduce the life cycle CH₄ and CO₂ emissions in the Spanish N-fertilizer sector. The results also highlight that more severe reductions on N-cycles than those suggested by the EU's F2F are required, especially to reduce the long-lasting N₂O emissions in the N-fertilizer sector. Overall, the study concludes that using RF-based metrics increases robustness and transparency of climate assessments, which is necessary for a higher integration of climate science within public policymaking. Additionally, the study provides for solid arguments on the need to change consumer habits in order to reduce the climate impact of agricultural production systems such as livestock, due to the dependance of these sectors on the use of N-fertilizers.

Standing at the intersection between neighbourhood greenness, travel emissions and wellbeing

Johanna Raudsepp¹, Antti Kinnunen², Jukka Heinonen¹

¹University of Iceland, Iceland; ²Aalto University, Finland

Problem: Mobility/travel is one of the biggest contributors to personal consumption footprints. Travel footprints in the Nordics exceed threshold levels for meeting 2030 climate mitigation goals, largely because of leisure travel. Furthermore, people in urban areas are likely to compensate for a lack of urban greenness and high levels of urban mobility by taking more leisure trips for the benefit of their wellbeing.

Method: The study examines the connections between travel footprints, wellbeing and neighbourhood greenness within a sample of about 7500 respondents across five Nordic countries. Differences between urban (and semi-urban) and rural residents are analysed. Footprints and wellbeing were calculated based on input from survey respondents, neighbourhood greenness was estimated within

1km of the home location of respondents using GIS techniques. Non-parametric tests are conducted to analyse differences between the urban-rural groups. Regression analyses are used to understand the relationships between the variables.

Results: The results highlight the context dependence of mitigating the climate impact of travel, as the results vary between the five Nordic countries. The differences between rural and urban dwellers were not significant in Finland and Norway. In Iceland, Sweden and Denmark, rural dwellers have higher local travel footprints compared to urban dwellers, stemming largely from car use. Urban dwellers tend to take more leisure trips but are also more climate concerned than rural dwellers. Perceived wellbeing is similar among both groups in all countries, with average values being higher than global averages across the countries. There are indications of a negative relationship between neighbourhood greenness and local travel footprints among urban dwellers. There are also indications of a positive relationship between greenness and perceived wellbeing. However, income is still an important background factor in wellbeing.

Significance to mainstreaming sustainable consumption: The results of the study contribute to mainstreaming sustainable consumption by raising awareness of the climate issues related to travel, as lack of climate concern is one of the factors behind high travel footprints. The results show the importance of urban planning at the intersection between sustainable travel and wellbeing. Moreover, leisure time is important for wellbeing. In addition to generally greener urban areas and providing more free public spaces for leisure, working time reduction policies have also shown positive results on wellbeing.

A Win-Win Partnership? A case study of the Tunisia-EU energy cooperation

Nora Eliassen

Lund University, Sweden

The EU has committed to ambitious goals for renewable energy transition, aiming to significantly reduce greenhouse gas emissions and enhance the sustainability of its energy consumption. However, achieving these targets within its borders has proven challenging, necessitating the import of renewable energy from neighbouring regions. Its geographic proximity and its abundance in renewable natural resources make the Middle East and North Africa crucial partners in the EU's renewable energy strategy, especially as advancements in renewable hydrogen production enhance the feasibility of large-scale energy export. With abundant solar and wind resources, Tunisia has become a key partner in the EU's renewable energy strategy. In the last decade the EU has enhanced its cooperation in the renewable energy sector with Tunisia, with large-scale investments and agreements. However, concerns about power imbalances and the social sustainability of the partnership arise. Addressing these issues is critical for understanding how renewable energy transitions can be mainstreamed in a fair and equitable manner.

This paper investigates the power dynamics and ideological underpinnings within the energy cooperation between the EU and Tunisia from 2016 to 2023, providing a deeper analysis of the challenges and opportunities in mainstreaming sustainable energy consumption. The study employs a qualitative approach, using the analytical lense of Foucauldian Discourse Analysis (FDA) to examine key policy documents and agreements between the EU and Tunisia regarding energy transition.

The analysis reveals two main narratives. On the one hand, the EU-Tunisia energy cooperation is framed as a mutually beneficial partnership that promotes interdependence, with both regions committed to reducing carbon emissions and advancing renewable energy. On the other hand, the documents reveal subtle but potentially impactful power imbalances, with the EU holding more decision-making power and setting the agenda for cooperation. The rhetoric of partnership often masks the underlying economic and political asymmetries, where Tunisia's role is largely framed as a supplier of renewable energy to meet EU demand. There remain concerns about social sustainability, particularly the impacts on local communities in Tunisia, are not addressed sufficiently in the official documents, suggesting a one-dimensional approach to renewable energy transition.

The study's findings have significant implications for mainstreaming sustainable consumption in global energy transitions. First, they highlight the importance of addressing power asymmetries in international energy cooperation. Secondly, the research underscores the need for truly inclusive approaches that effectively take into account the social and environmental impacts. The focus on economic growth as a driver of climate change mitigation may limit the transformative potential of renewable energy transitions. Finally, the high consumption in wealthier regions can exacerbate global inequalities, as energy-producing countries like Tunisia may bear the environmental burden without fully benefiting from the energy trade. This case raises critical issues, highlighting that even if renewable energy production increases, current consumption levels may still be unsustainable globally. Mainstreaming sustainable consumption requires not just technological innovations but also rethinking excessive energy use and ensuring more equitable energy partnerships that benefit all parties involved. Without addressing these structural concerns, renewable energy imports alone cannot guarantee a truly sustainable future.

Eating together: interactions between vegetarians and meat eaters

Esther Veen, Sara Smaal

Aeres University of Applied Sciences, The Netherlands

Problem definition

In the Netherlands a vegetarian diet is normalizing: it is increasingly facilitated and explicit negative reactions are less common than they used to be, especially within the household or around close friends. However, vegetarians still experience resistance - questions, (funny) comments or criticism. There thus seem to be two contradictory trends. This leads to the following question: what strategies do vegetarians use to deal with resistance in a society where vegetarianism is becoming more accepted?

Method

We performed fifteen semi-structured interviews with vegetarians and vegans, most of whom live with non-vegetarians.

Results

Our findings corroborate the statement that meat-eating households have little trouble facilitating their vegetarian household members, even though that may take a little time. Interviewees also feel that society is more accepting of their dietary choice. Nevertheless, outside of their direct personal environment they still face questions or critiques. We found four strategies that vegetarians use to deal with these questions and potential resistance: avoidance of the topic, taking the lead (e.g. by choosing the restaurant or cooking vegetarian dinners), getting into the discussion and starting an in-depth conversation. Our interviews highlight that the context in which vegetarians are questioned determines which strategy is used. In addition, the vegetarian's state of mind influences which strategy is chosen, because interactions with meat eaters can be energy-consuming, which vegetarians are not always up for.

We compare our findings with those from other scholars who have defined strategies that vegetarians use, but bring these further by linking the chosen strategy with the context and the vegetarian's state of mind, so as to better understand how interactions between vegetarians and meat eaters come about.

Significance to mainstreaming sustainable consumption

In our work we confirm earlier findings that within the household, vegetarians and non-vegetarians manage to find ways to eat together. In that sense, the vegetarian's diet becomes normalized – it is no longer questioned but accepted and facilitated. This may help mainstreaming this way of eating. However, we also conclude that discussions are mostly avoided, and that vegetarians are still coming up with strategies to help them defend their diet. This implies that a vegetarian diet continues to be a personal endeavor that is not being discussed, as a result of which meat-eaters are less often confronted with their own eating choices. This may hinder a normalization of vegetarian diets.

Reimagining Water Consumption Norms: Lessons from Off-Grid Houseboat Dwellers for Mainstreaming Sustainable Practices

Louise Turner¹, Claire Hoolohan², Sarah Mander³

¹University of Manchester; ²University of Manchester; ³University of Manchester

Escalating household water consumption patterns are a key concern for UK climate policy as demand-supply balance risks exceed existing rates of change towards lowered per capita use. As a result, the urgency to mainstream sustainable water use practice has never been greater. This study explores how the novel water consumption practices of off-grid houseboat dwellers in the UK can inform broader strategies for normalising reduced water usage in households. Through ethnographic interviews and home tours with 15 off-grid houseboat dwellers, and Roysen and Mertens' conceptualisation of 'new normalities' we investigate how houseboaters' alternative practices demonstrate the potential for reimagining water consumption norms on a larger scale. Key findings show that houseboat dwellers develop highly adaptable water use routines, reduced expectations for cleanliness, bathing, and laundering frequency and an intuitive sense of home activities' water usage. Participants' material encounters with domestic tanks, hose pipes, and containers make water visible in conscious daily decision-making. Absent drastic infrastructural changes and decentralised water system experimentation, the research asks how similar normalities of more sustainable water consumption could be mainstreamed and incentivised. The challenge of a plumbed home is the invisibility of the systems of provision that make inconspicuous and high levels of water consumption the norm. Mainstreaming sustainable water consumption practices is a complex challenge, but in cases that show us what is possible, we can identify practices and adaptive social capacities that can be applied to a wider range of settings, especially in times of crisis or uncertainty in climate-affected futures.

From Vision to Action: A Roadmap for Enhancing Sustainability in Germany's Community Catering Sector

Julia Heinz¹, Katharina Eck¹, Melanie Speck^{1,2}

¹Hochschule Osnabrück, University of Applied Sciences, Germany; ²Wuppertal Institute for Climate, Environment and Energy, Germany

Problem definition

The global food system has a major influence on ecosystems and planetary boundaries, making it crucial for achieving climate targets (Rockström et al., 2009, Clark et al. 2020). Dietary changes can significantly help meet these goals (Rütt et al. 2022, Poore and Nemecek 2018). In Germany, the community catering sector serves around 16 million people daily, playing a vital role in linking food production and consumption (Pfefferle et al., 2021). This sector is important for sustainability research, particularly within real-world lab studies (Speck et al., 2020). Research often focuses on lunch catering, cold and full-day catering remains understudied (Lassen, A. D. et al., 2021; Aytekin-Sahin, G. et al., 2023; Benvenuti, L. and De Santis, A., 2020). Closing this research gap is crucial for gaining a complete understanding of sustainability in catering.

Method

A living lab approach was adopted with the aim of empowering the community kitchen operators (n = 3) to implement sustainable production patterns. First, the current state was assessed. Each company was subject of a two-day site visit for data collection and a comprehensive understanding of the company. Environmental impact assessment of full-day catering using LCA (LCI: Cradle to Gate, LCIA: ReCiPe 2016 Midpoint (H), databases: Agribalyse, Ecoinvent 3.6). Both warm meals (lunch) and cold meals (breakfast, dinner, snacks) and the order numbers were analyzed, with the goal of quantifying total emissions and identifying potential reduction measures. More than 200 lunch menus and the cold catering selection of more than 400 items were evaluated.

In addition, a comparison was made of the catering services on offer with national (FBDGs) and international consumption standards (Planetary health diet (PHD)). A desk research approach was then used to identify measures for reducing environmental impacts, these were integrated into workshops with the CCs. Each CC set in co-creation environmentally friendly target states with a defined timeline (roadmap). After the roadmapping phase, the target state was modeled and in comparison, additional goal states were developed.

Results

The analyses of GHGE show that hot meals are subject to greater fluctuations than cold meals within the full catering service. The GHGE of the CCs is 2.8 kg CO₂e (Partner A), 3.9 kg CO₂e (Partner B) and 2.8 kg CO₂e (Partner C) per catered person/day. No significant differences were observed between the companies in the environmental impact results for hot catering in the current state. No distinctions were found in the analysis of cold catering options available for consumption. All CCs consume excessive amounts of animal-based foods and non-wholemeal cereals, while offering insufficient quantities of fruits, vegetables, wholemeal cereals, legumes, and nuts compared to the FBDGs and PHD recommendations. To meet the guidelines of the FBDGs and the PHD, a diversification of food offerings is necessary. The results of the roadmap and the best-case scenario modelling will be available at the time of the conference.

Significance to mainstreaming sustainable consumption

The results of the case studies can be applied particular to the care-segment and individual findings can be transferred to the entire community catering sector.

Too Good To Ignore? The role of routine in using food waste smartphone apps.

Brendan Lawson¹, Marianna Coulestantos¹, Emilie Vrain², Val Mitchell¹

¹Loughborough University, United Kingdom; ²Oxford University, United Kingdom

The Too Good To Go (TGTG) app allows restaurants, cafes and supermarkets to advertise food to users that would have gone to waste. Their app has proven popular – with 200 million “surprise bags” sold on their platform since 2016.

TGTG provides a successful example of mainstreaming sustainable food and drink consumption. But what about the users of the app? How do they engage with TGTG? We explored these questions through a behaviour change intervention with 10 households in England. The research comprised of a four-week trial of the TGTG app, three household interviews, and five self-report surveys – conducted over a five-month period. The self-report survey data evidenced how all users’ surprise bag purchases dropped over time. Two groups emerged from the data. Group A had relatively low engagement initially and transitioned to a complete non-use of the app. Participants in Group B used the app a lot during the initial trial period and then dropped to a much lower usage towards the end of the research.

We used the interview data to understand why usage of the TGTG app reduced over time. Routine emerged as a key explanatory factor. Those in Group A never established a routine for using the app and collecting surprise bags. Whereas people in Group B did establish a routine of using the app and collecting surprise bags, but this routine ended during the post-trial period.

In this paper we unpack the experiences of participants in both groups by focusing on three domains of routine: media routine – needing to check the app at specific times to secure a surprise bag, often in the face of high competition from other users; food routine – fitting unknown items into a daily or weekly food plan; general routine – adjusting a daily routine to collect a surprise bag at an inconvenient time from an inconvenient location. Specifically focusing on Group B, we examine why their TGTG use behaviour changed - accounting for changes in their routine, as well as other factors related to the experience of using the app (e.g. the quality of surprise bag bought).

In taking this approach, we strongly argue against an attitudinal approach to understanding why and how people use (or don't use) food waste apps. These approaches – encapsulated by the work in technology adoption studies that utilise surveys – excessively amplify the role of intentions, values and attitudes in the adoption of this technology. We need to take a practice-based (Fuentes et al., 2021) approach that accounts for different domains of routine to properly understand how sustainable food apps can be designed to mainstream sustainable consumption.

References

Fuentes, C., Cegrell, O. & Vesterinen, J. 2021. Digitally enabling sustainable food shopping: app glitches, practice conflicts and digital failure. *Journal of Retailing and Consumer Services*. 61. DOI: doi.org/10.1016/j.jretconser.2021.102546.

Urban Social Sustainability: Exploring Well-being and Landscape Inequality in a Mid-sized Swedish City

Tarina Levin¹, Karl Samuelsson^{1,2}, Matteo Giusti³

¹University of Gävle, Sweden; ²IS Global, Barcelona, Spain; ³University of Surrey, United Kingdom

Cities are often promoted as key to achieving sustainable energy and resource consumption by fostering sustainable transportation, shared services and infrastructure, and land preservation outside the cities. However, knowledge of best urban planning and design practices is limited and risks backfiring if misguided. For instance, social sustainability, including issues of well-being and equity, is often overlooked, which may induce urban flight and counteract the intended resource efficiency. Some prior studies have investigated links between urban landscapes and the subjective place experiences occurring in them that impact well-being. To the best of our knowledge, these studies are limited to large cities, large-scale perspectives of the urban landscape, and quantitative approaches. Moreover, potential differences in how different socio-economic groups experience the urban landscape and their levels of access to places impacting well-being are limited.

This article aims to fill these research gaps using a mixed-method approach to contribute knowledge on how urban landscapes in mid-sized Swedish cities can promote urban social sustainability, focusing on well-being and equity. The social sustainability of the urban landscape in a mid-sized Swedish city is assessed through the experiences and perspectives of the urban dwellers by (1) exploring urban dwellers' subjective place experiences, (2) identifying key landscape characteristics (e.g., types of green space, roads, shopping, and services) perceived to impact subjective well-being, and (3) analysing the spatial access to such landscape characteristics depending on socio-economic status. Findings will be discussed in relation to a novel social sustainability framework, the SoSu compass, and inform policy-relevant strategies to enhance the social sustainability of the urban landscape in mid-sized Swedish cities.

The study uses data on urban dwellers' self-reported positive and negative experiences in Gävle municipality. 257 participants registered 5115 spatially explicit place experiences using a smartphone application. This data will be visualised as heat maps showing where and to which extent positive and negative experiences were registered and serve as the basis for in-depth interviews with a subsample of the 257 participants representing different income groups. The respondents will discuss why some places are experienced as particularly positive and negative, their common landscape characteristics, and their perception of how accessible key landscape characteristics are. After that, a street network analysis will objectively compare the accessibility to key landscape characteristics for different socio-economic groups in the city.

The findings can provide insight into how the urban landscape is experienced and potential asymmetries in the distribution of landscape characteristics impacting well-being. This can assist urban planners and designers in providing healthy, equitable, and attractive cities in favour of sustainable consumption of limited resources.

Failing to circulate: understanding why garments remain dormant in consumers' homes

Reka Tölg¹, Olga Cieslak²

¹Lund University, Sweden; ²University of Glasgow, UK

Problem definition

Large numbers of clothing become dormant in consumers' wardrobes (Assima et al., 2023; Woodward, 2015), while being under-used (Klepp et al., 2020). Dormant things are the items that are not momentarily out of use, but "the deliberately hidden away and concealed, the things which end up accidentally situated at the back of a drawer..." (Woodward, 2015: 223). This is against circularity principles (Dissanayake and Weerasinghe, 2022), which requires the circulation of materials and the lengthening product lifetimes through reuse (Løvbak Berg and Hebrok, 2024). However, this can only be achieved with better understanding of why dormant garments stay within homes without being used and why they avoid using different resale, donation and recycling options.

Previous research has explored how things get returned, re-sold or donated through a focus on situations and motivations when consumers do decide to sell or dispose of their clothing items (Bianchi

and Birtwistle, 2010; Ertz et al., 2018; Laitala, 2014; Mellander and Petersson McIntyre, 2021; Yrjölä et al., 2017). However, we know relatively little of why the garments that remain in some form of storage within homes without being used and reused. Against this background, we aim to answer the following research question: How and why garments remain dormant instead of being resold or returned through second-hand retailing?

Method

To answer the research question, we draw on a material collected as part of a wider ethnographic field trial, where 32 households in Sweden were asked about their clothing consumption practices alongside observations in the home. We asked participants in the study to look for and find the most and least worn garments in their wardrobes, inspired by wardrobe studies approach (Klepp and Bjerck, 2014). As part of the present study, we focus on the garments that participants presented as unworn and stored away within their homes. Thus, through this material we can place the dormant garments at the centre of the analysis (Laitala, 2014). Furthermore, throughout these interviews we also discussed how the participants used different second-hand retail options, which enables an analysis on why these dormant garments do not get resold or returned through these available options.

Results

Through a preliminary engagement with the material, we can see that there are different reasons for how and why garments remain dormant in wardrobes, for instance saving for later, sustainability issues, emotional attachment or the work involved with reselling. We plan to continue with a more systematic analysis focused on: How and why these garments became forgotten and stored away in the first place? What resale, recycling, donation options the households have access to? Why are these dormant garments not circulated through this infrastructure?

Significance to mainstreaming sustainable consumption

This study moves on from the successful or niche examples of people successfully ensuring reuse of their clothes, and zooms in on the struggles of ensuring circulation of clothing as part of everyday life.

Assessment Methods for Quantifying Environmental Impacts of Food Waste

Gudrun Obersteiner, Nadine Brunnhuber

BOKU University of Natural Resources and Life Sciences, Vienna, Austria

Problem definition

Food waste is commonly defined as food which is fit for human consumption, but is discarded instead. If food is wasted, all the energy and resources needed to grow, harvest and transport it are wasted as well. According to FAO (2014) globally, food waste is responsible for 4.4 Gt CO₂ eq per year, which equals 8% of total anthropogenic GHG emissions. In order to reduce these environmental impacts, the SDG subgoal 12.3 calls for to halve per capita food waste from retailers and consumers, as well as food losses along production and supply chains by 2030.

Quantifying environmental impacts is important to determine whether measures taken to achieve the SDGs are effective. There are many different impact assessment methods to choose from, but a common distinction is whether they are based on life cycle thinking principals or not. To provide an overview of common environmental impact assessment methods, this article aims to answer the following research questions:

- What methods are used for quantifying food waste?
- What methods are used in research to assess the environmental impact of food waste?
- Which indicators are assessed by the identified impact assessment methods?

Method

For this study, a systematic literature review of methods used to assess food waste-related environmental impacts in was performed. First, the scientific databases Web of Science (WoS) and Scopus were searched for relevant publications. The following keywords were used for the search:

- “food waste” and
- “household” or “consumer” or “domestic and
- “life-cycle” or “environmental impact” or “environment” or “sustainable” or “PEF” or “footprint” or “emission” and
- “assessment” or “quantification” or “evaluation” or “analysis” and
- “minimize” or “prevent” or “reduce” and
- NOT “behaviour”

Results

The systematic literature review resulted in a sample of 350 publications from which 50 publications on environmental assessment of food waste and 23 publications on food waste quantification could be extracted. Twelve different methods which were used in the context of environmental impact assessment of food waste could be identified. These methods were grouped into life cycle-based methods, economic methods, statistical methods, mathematical methods and hybrid methods. The vast majority of the selected publications used life cycle-based assessment methods, such as LCA. A

cradle-to-grave system boundary was most frequently used. Functional units based on the amount of food waste (e.g., total amount of food waste per household or per person) were the most popular in the literature sample. The most frequently used impact categories were global warming potential, followed by water use, land use, eutrophication and acidification.

Concerning quantification it turned out that most of the reviewed publications did not collect any primary data and only used secondary data instead. The most common sources for secondary data in the sample were Food waste statistics, national databases and literature.

Significance to mainstreaming sustainable consumption

Quantifying environmental impacts is important to determine whether measures taken to achieve sustainable consumption are effective. It also serves as a tool for environmental management, aimed at identifying actions to prevent or reduce such impacts.

Examining Household Recycling Practices: Institutional Barriers and Pathways Toward Sustainable Waste Sorting

Benedicte Forsland

Nord Universitet, Norway

The global environmental crisis presents humanity with unprecedented challenges that require profound social transformation (Boström & Lidskog, 2024). Issues like climate change, biodiversity loss, and pollution are deeply intertwined with modern society. As industrial growth harms ecosystems and deepens inequalities, small changes are not enough. Addressing the crisis requires rethinking societal norms, practices, and the institutions that shape them (Lidskog & Sundqvist, 2022). A promising approach is the circular economy, which reduces waste by reusing resources and reintegrating materials into production (Geissdoerfer et al., 2017).

This paper examines how Norwegian households navigate waste sorting and recycling within the framework of institutional support. Through qualitative interviews, the study explores the barriers preventing certain waste fractions from becoming routine and how institutions either help or hinder sustainable practices. The findings contribute to understanding the intersection between household practices and institutional frameworks in achieving sustainable waste management.

Households play a key role in sustainable waste management. While institutions provide the framework, households perform daily practices like waste sorting and recycling. However, these practices are shaped by the interaction between social norms, infrastructures, and institutional arrangements (Shove et al., 2012). Challenges such as lack of access to convenient recycling facilities or unclear sorting guidelines can hinder participation, despite willingness. Understanding these barriers is crucial for making recycling a routine part of daily life and for engaging households as active participants in the circular economy.

Although many households are willing to participate, practical barriers often limit engagement. For some fractions, like paper and plastics, sorting has become routine. However, other fractions—particularly complex or less frequent waste like electronics and hazardous materials—are not fully integrated into household practices. This makes it difficult for households to adopt comprehensive sorting habits, especially when institutional support, such as infrastructure and guidance, is lacking (Shove et al., 2012). This includes urban mining, where valuable materials are recovered from electronic waste, which remains largely outside household routines (Chancerel et al., 2013). To embed recycling into routines, institutions must provide clear, ongoing communication and adequate infrastructure for all waste types.

For households to become active participants in the circular economy, institutional frameworks must adapt to everyday complexities. This involves not only infrastructure but also fostering long-term behavioural changes through education, incentives, and communication. Aligning institutional efforts with household routines can make recycling a habitual practice rather than an occasional task. The success of sustainable waste management depends on this synergy between institutional support and household engagement.

Poster: Sufficiency as relations of enoughness

Eric Hartmann

Leuphana University Lüneburg, Germany

Problem Definition:

Sufficiency is gaining attention as a fundamental sustainability strategy, yet its conceptual vagueness limits its practical application. Existing literature discusses diverse uses and understandings of sufficiency, often centered on the notion of "enough", but this notion remains underexplored (Jungell-Michelsson & Heikkurinen, 2022). Without a clear framework, the operationalization of sufficiency for sustainable development—particularly in consumption practices—remains elusive.

Methods:

Based on a discussion of sufficiency literature, Hartmann (2024) introduces a conceptual framework that systematically organizes diverse uses and understandings under a unified structure, based on the

formula: "too little/too much/enough of X regarding Y." The concept of "relations of enoughness" allows researchers to analyze and apply sufficiency across different contexts. The concept is further expanded into "chains of enoughness," which link individual consumption to broader sustainability targets, such as carbon budgets, planetary boundaries, human needs, and the inter- and intragenerational dimension of sustainability.

Results:

The analysis reveals that diverse uses and understandings of sufficiency—whether in terms of individual consumption, production, ecological limits, or human needs—can all be systematically structured within the "relations of enoughness" approach. Exemplarily, a common use of sufficiency states that currently for many persons in the Global North, there is too much individual consumption regarding limited carbon budgets (e.g. Sandberg, 2021). Measures such as absolute reduction of individual air travel then can be interpreted as attempts to leave the area of "too much" and yet again reach "enough" consumption. The concept of "chains of enoughness" further shows how multiple relations can form a pathway to sustainability, linking individual consumption to broader environmental and social outcomes. The poster suggested for the poster session will summarize and illustrate main ideas regarding the use of relations of enoughness in the context of sufficiency and sustainable consumption, based on Hartmann (2024).

Significance to Mainstreaming Sustainable Consumption:

The approach presented in the poster offers researchers and practitioners a clear and actionable tool to mainstream sufficiency as a sustainability strategy to diverse contexts. By constructing and applying relations and chains of enoughness in various fields—such as climate action, resource management, and policy development—sufficiency can be effectively operationalized. This approach not only clarifies the meaning of sufficiency but also provides a practical means for aligning consumption behaviors with global sustainability targets, thus contributing to the broader goal of sustainable development.

Literature

Hartmann, E. (2024). Sufficiency as relations of enoughness. *Sustainable Development*, Article sd.3090. <https://doi.org/10.1002/sd.3090>

Jungell-Michelsson, J., & Heikkurinen, P. (2022). Sufficiency: A systematic literature review. *Ecological Economics*, 195, Article 107380. <https://doi.org/10.1016/j.ecolecon.2022.107380>

Sandberg, M. (2021). Sufficiency transitions: A review of consumption changes for environmental sustainability. *Journal of Cleaner Production*, 293, Article 126097. <https://doi.org/10.1016/j.jclepro.2021.126097>

Sustainability Literacy through Arts- and Science Collaborations: Unfolding transformative knowledge of arts and design to promote sustainable lifestyles and production-consumption in line with SDG12

Christa Liedtke^{1,2}, Carolin Baedeker¹, Martina Fineder², Kim Huber¹, Anica Luggen-Hölscher¹, Eva Eiling¹, Katja Kremser², Felix Fastenrath²

¹Wuppertal Institute for Climate, Environment, Energy, Germany; ²University of Wuppertal, Germany

The transgression of planetary boundaries and the resulting social and ecological consequences necessitate new inter- and transdisciplinary approaches to shaping patterns of production and consumption (SDG12), conserving natural resources while fostering broad-based prosperity.

In this context, artistic designerly approaches have considerable potential for making the interconnected socio-environmental effects of current production and consumption habits visible and tangible, and thus more negotiable and shapeable. Arts and design enable engagement with sustainability by allowing complex issues related to consumption and production to be experienced, explored, and co-created in a way that can positively contribute to transdisciplinary sustainability literacy. The latter describes the knowledge, skills, and attitudes required to engage in reflective inquiry and experiential learning to address real-world sustainability challenges. Developing this literacy requires creating (analog and digital) spaces, formats, and methods that allow for mutual exchange and collaboration between arts, sciences, and society.

The project transform.NRW provides a framework for exchange and collaboration by developing a platform where diverse actors from arts, culture, design, and sustainability sciences work together to develop and share sustainability and transformation knowledge with industries, politics and society. A key feature of this platform is a curated collection of 100 good practice examples from the state of North-Rhine Westphalia, Germany, which demonstrate successful collaborations between artistic and scientific disciplines in promoting sustainability. These examples encompass a wide range of creative approaches, such as interventions in public space, experimental design methods, and artistic and activist engagement. Within transform.NRW, potential impacts of these good practices are made comprehensible and negotiable through interdisciplinary working groups, fostering a shared understanding of how to achieve sustainable development.

This paper builds on the work of transform.NRW by conducting a comprehensive analysis of selected projects from this collection, examining their contribution to specific subgoals of SDG12 "Ensure sustainable consumption and production patterns", such as reducing waste, encouraging responsible consumption, and promoting sustainable resource use. The analysis aims to explore how these projects create, e.g., spaces for reflection, dialogue, and creative exploration of sustainable living

environments and consumption behaviour by using and enabling experimental, and collaborative problem-solving approaches. The paper considers broader implications of these projects, particularly their potentials to drive long-term systemic change.

In conclusion, this paper emphasises the vital role of inter- and transdisciplinary collaboration in advancing sustainable production and consumption systems in an integrative view between arts and science. SDG12's focus on combining production and consumption is innovative, promoting the development of sustainable "prosumption" models such as product sharing or avoiding unnecessary products and services. Through the integration of artistic, cultural, design, and scientific knowledge, more inclusive and participatory ways to address the complexities of sustainability challenges can emerge. The creative processes fostered by such collaborations inspire new ways of thinking and acting but also contribute to a more holistic and just transformation of consumption and production practices, aligning with the broader goals of SDG12. The paper aims to illustrate how artists, designers, and sustainability scientists can work together to shape equitable, inclusive, and transformative sustainable futures.

From consumer acceptance to consumability: a literature-based study

Annabell Merkel, Maria Fuentes

Lund University, Sweden

To address the increasing demand for a sustainability transition in the food sector, numerous initiatives are currently focused on understanding and promoting the consumption and acceptance of "novel (sustainable) food." The scholarly research field on novel food consumption has expanded significantly, exploring the potential for various novel food ingredients and products to become integrated into mainstream diets. Research on novel food consumption predominantly adopts a consumer psychological perspective, and previous studies have shown that both consumer characteristics and product qualities are crucial for understanding the potential consumption of different novel food types. Within these studies, the concepts of "consumer" and "consumption" are essential, yet they remain relatively unexplored. Alternatively, studies taking a social and cultural approach to novel food consumption are marginal but highlight the importance of conceptualizing consumption as embedded in social, material, and cultural dimensions for a successful long-term integration of novel foods into specific contexts.

This study offers a literature-based mapping of novel food consumption research, showing different ways the consumer and consumption are conceptualized. This is important as different assumptions underly the theoretical conceptualizations, influencing how we understand conditions for the consumption of novel foods and therefore design interventions and future products. To engage with the literature on consumer acceptance of novel food and to explore the concepts "consumer" and "consumption" within the field, we base our argument on previous critique of consumer psychology research. For this literature study peer reviewed articles in English have been included in our sample, which is based on a systematic literature search, followed by a qualitative reading of the articles with a focus on the theoretical concepts and methods used to study the consumption of novel food.

Based on consumer psychology approaches as well as social and cultural approaches towards novel food consumption, we compose the framework "consumability". The consumability framework offers a way to systematically investigate six different dimensions of novel food consumption, and to reflect on barriers or drivers for the integration of novel foods into consumers' diets. The results of the study are first theoretical, as a more differentiated understanding of consumption is suggested, and second, methodological, as empirical field studies are suggested as a way forward to better understand novel food consumption and dietary shifts. Explicitly articulating conceptualizations and implicit assumptions can advance the research field by identifying new intervention opportunities and integrating novel, sustainable food products and ingredients into broader markets and consumers' daily lives, thereby mainstreaming sustainable food consumption.

Being green and growing together: Sustainable community development in rural regions of Costa Rica

Lena Schmeiduch¹, Shirin Betzler¹, Daniel Avendaño Leadem², Orlando Bruno Nuñez³, Lea Schlotterbeck¹, Karsten Müller¹

¹Universität Osnabrück, Germany; ²Universidad Nacional de Costa Rica; ³Turri - Creadores de Origen

Problem definition: A global perspective, particularly from non-Western countries, is crucial for sustainable development. At the same time, sustainable development requires a greater focus on local perspectives to better understand how economic growth, environmental protection, and social responsibility can intertwine. Rural areas hold significant potential for driving local and national development, fostering innovation, reducing unemployment and poverty, and promoting sustainable growth. Communities play a crucial role in driving rural sustainable development, as they possess in-depth local knowledge of resources and needs as well as shared institutions and structural agility, allowing them to implement tailored and goal-oriented actions. Building local capacity is key to empowering communities to manage their own development, with a focus on fostering leadership, strengthening organizations, and supporting local entrepreneurship. Against this backdrop, this study

explores sustainable development in two rural Costa Rican communities, highlighting both unique and shared characteristics between the two communities, and contributing to a broader understanding of sustainable community development.

Method: Through a qualitative case study, this research aims to build knowledge on sustainable development from a local, community-based perspective. Data were collected via semi-structured interviews with 12 members of the two rural communities Dota and Turrialba in Costa Rica. A qualitative content analysis was applied to develop a categorization of the data. This categorization was based on seven types of community resources (social capital, human capital, cultural capital, political capital, natural capital, financial capital, built capital) according to the Community Capitals Framework. Moreover, an analysis of the perception of personal agency in community development as well as the vision for sustainable development of the regions in the future were conducted.

Results: The findings highlight high levels of social capital in terms of familiar social relationships in both regions. Moreover, interviewees reported strong cultural capital, expertise and specialization in terms of human capital and a strong environmental awareness in terms of natural capital. In addition, most participants showed a rather strong personal agency and directed many efforts towards community strengthening and cooperation. While many interviewees stressed the existence of high-quality products and local entrepreneurship, they also noted a need for stronger support in professionalization, infrastructure, and funding opportunities. Less resources were also reported for political capital.

Significance to mainstreaming sustainable consumption: Effective sustainable community development builds on existing resources and strengths rather than focusing only on deficiencies, strategically linking different capitals. It further draws on close social networks and collaboration, is oriented towards self-development, and ensures feasibility by considering the personal agency of community members. A crucial role in sustainable community development can be assigned to strengthening local entrepreneurs through targeted support, such as improving infrastructure and offering professional guidance, to foster sustainable growth, create local job opportunities, and counteract urban migration. By promoting local practices, sustainable community development integrates sustainable consumption into everyday life, creates models that can influence broader societal behavior, and contributes to long-term systemic change in consumption patterns. The present study provides a local perspective on sustainable community development, while aligning with global efforts to empower rural communities.

Knowing a place: The importance of in-place data for vulnerable neighbourhoods

Natasha Webster¹, Esther Veen², Sofi Johansson³

¹Örebro University, Sweden; ²Aeres University of Applied Sciences, The Netherlands; ³Stockholm University, Sweden

Problem statement

Quantitative and big data are increasingly being used to understand complex social and economic challenges. While there is much to be learned from such approaches, community and in-place data remain necessary for understanding communities, and consequently for creating fitting sustainable policies. Rather than reinforcing quantitative and qualitative divides, the problem we explore in this paper is how multiple forms of inquiry can be used to understand the complexities at hand.

Methods

We explore the use and value of in-place data as a way of knowing for policymakers, by presenting two examples in Sweden and The Netherlands. We use the insights and lessons learned from these cases, rather than the empirical material as such or the cases' specific findings to build our argument.

Results

Our qualitative interviews facilitated opportunities for respondents to share their perspectives, including "alternative" or "counter-narratives", or (to us) unknown sociospatial imaginaries, lifting positive aspects of their neighbourhoods as they matter to them. Our findings illustrate that qualitative, in-place and experiential research is valuable for vulnerable neighbourhoods or communities, not only to counter the creation of "top-down" narratives that may not reflect experienced reality, but also because it makes the people in these neighbourhoods and communities feel heard.

It may be useful then to shift a traditional focus of data for policy makers to one that prioritizes listening to respondents and letting policy makers, and others who may hold more power, sit with the discomfort of messy, contradictory and nuanced data, rather than suppressing voices to prioritize the comfort of systems of structure.

Significance to mainstreaming sustainable consumption

Our work demonstrates the importance of widening the scope of knowledge, and a willingness to decentre singularity and homogenous definitions of community and place. We argue that prioritizing place-centred data is increasingly necessary to understand daily life in neighbourhoods, particularly vulnerable ones, to develop sustainable and socially just policy. Knowing a place will help really understanding people's take on sustainable consumption, and what may help or hinder it. In other words, in order to mainstream sustainable consumption, it is needed to know what matters to people, what drives them, and what their daily reality looks like. This will help us avoid stereotyping, and connecting with life as it is experienced.

Path dependency for wastewater management in a growing Swedish municipality and what it means for the prospects for sustainability initiatives

Ylva Christina Gullberg

University of Gävle, Sweden

With persisting societal problems, it may seem like all this talk about sustainability is essentially empty words. Alternatively, this could indicate the type of challenge that realizing initiatives for sustainability is. Although some issues have already been acknowledged in research, such as that inertia of sociotechnical regimes blocks diffusion of innovations and system transitions, more knowledge is needed about the system dynamics, particularly on the local level, to understand how to implement and mainstream new ideas about sustainable practices.

This paper aims to contribute with insights about the challenge for sustainability initiatives to bring on a meaningful change, specifically looking at the municipal level. We focused on urban wastewater management as an example of consumption in terms of an urban service that municipalities are responsible for and thus have much influence over. Using Knivsta municipality as a case study, we looked at the development of ideas about an alternative approach to wastewater management, interpreted as a local sustainability initiative, and examined the sociotechnical structures in the current regime forming lock-ins and thus barriers to innovative solutions. Although there is still no actual implementation of these technologies, the innovation has formed a kind of political-ideological niche which may still be possible to scale up if the right opportunity comes along. With considerable techno-economic, institutional, and psycho-social lock-ins, prospects are however not promising.

Furthermore, the analysis indicated that these more 'superficial' lock-ins were rooted in underlying, broader societal structures, highlighting that realizing such innovations run deeper than just restructuring the current regime; it may require changes in views and assumptions. Seemingly, the current sociotechnical landscape itself is inhibiting any radical sustainability-related innovation or transition, thereby also conditions for sustainability initiatives to make a meaningful impact. As this could be described as a wicked problem, there is no simple solution to address this, but a first step may be to even acknowledge the complexity as well as the normativity and ethics in these issues.

Comparing behavior science and service design as a change promotor for sustainable consumption – processes and tools for a comprehensive toolbox

Mirja Helena Kälviäinen

LAB UAS, Finland

Problem definition

Through years of practical research and piloting, behavior science and service design have created development processes to support behavior change toward sustainable consumption. The behavior science and service design processes, which support behavior change toward sustainable consumption activities, are valuable, but they might not be good enough alone.

Method

The method analyzes and compares the processes and tools these approaches use to promote behavior change for sustainable consumption. The comparison provides an account of practices both approaches agree are valuable for promoting behavior change. The differences in the approaches suggest the situations where each approach is most beneficial.

Results

The comparison reveals similarities in tackling the nature of behavior change as a process. Both approaches' research and development processes include exploration, problem-seeking, and solution-design operations. They use systems mapping to grasp the development situation comprehensively, and user research is used to understand and overcome the barriers and appropriate the drivers as scaffolds for sustainable consumption. The behavior science origin COM-B model points out the simultaneous need for capabilities, opportunities, and motivation for behavior change that exist in design requirements of ease-of-use, suitability to the users and context, and desirability and positive customer experience. The differences between these approaches include the behavior science research emphasis on extensive literature review and benchmark for intervention possibilities and decisions compared to the service design emphasis on multidimensional, practical contexts understanding and the human-driven, creative ideation of a new service journey. Behavior science calculates the impact and priorities of intervention possibilities as the basis of decisions. This includes measuring the chosen intervention's impact on the hoped-for behavior change. Service design aims for a customer-driven, detailed customer journey with service moments and touchpoints in the real-life context. The central aim of a service design is a desirable and smooth customer experience. Behavior science seeks a specified intervention with measurable behavior outcomes. In service design, the customer journey is a comprehensive intervention that supports a multistep interaction for necessary service behaviors, making it hard to measure the features that produce the hoped-for behavior change. The customer journey can include several behaviors to change, increasing the challenge of accurate impact measurements.

Significance to mainstreaming sustainable consumption

The behavioral science creates evidence-based, as impact measurable interventions for a specific behavior change, tackling with the intervention the change within the process prioritized consumer segments. Service design creates user-driven, detailed customer journey interactions in a specified context for the customers in that context. A behavior science-based intervention approach can be more appropriate for an upper-level, evidence-based requirement type of political decision demanding well-defined intervention and impact-proofed scaling operations. Service design can cover and make desirable the detailed steps of new customer actions in a specific business-based service or a public one, decreasing the environmental impact of the user's activities during the whole service. Combining the strengths of both approaches would improve the required behavior change results with justified guiding public decisions and infra and as a supporting service that blends into the consumers' everyday lives.

Deliberation and co-creation for sustainable need satisfaction

Sop Satchwell, Milena Büchs, Lucie Middlemiss

University of Leeds

Problem definition

The field of Ecological Economics recognises the interconnected nature of ecological crises and economic inequality. Topics such as sustainable welfare, eco-social policy, universal basic services and doughnut economics conceptualise ways that people can live a good life within planetary boundaries. This often includes assertions about how these approaches can have positive impacts on the lives of people currently struggling to meet their needs. However, to date there has been limited qualitative research exploring wider perspectives on how transformative proposals such as universal basic services relate to people's everyday challenges. This research seeks to move from theoretical assertions to evidence by amplifying a community's views on sustainable need satisfaction.

Method

Through a series of participatory workshops in a neighbourhood in Leeds UK, this study examines the ways people are meeting their needs in the present and the alternative proposals that arise through deliberation on how needs could be met more easily and more sustainably. The workshops provide new insight by holding space for conversations about sustainable need satisfaction in a new context, directly in touch with everyday life. The sessions culminate in a creative process to collaboratively articulate a sustainable vision through zine-making.

The workshops are supplemented with individual interviews to reflect on topics covered and the process of deliberation itself. Through these interviews, this work provides relevant lessons on the role of participation and deliberation in transformative sustainable futures.

Results

We will present initial findings from the sessions, describing an alternative sustainable vision and grounding this in local lived experiences as well as the relevant theoretical discourse.

From interview data and observations, we will also reflect on the value of this methodology, considering what lessons can be taken from these experiences amidst calls for greater participation and deliberation in the governance of sustainability transitions.

Significance to mainstreaming sustainable consumption

This research in the broadest sense seeks to understand how the movement for sustainable consumption can meaningfully engage with the experiences of a wider range of people. Oppositional to neo-liberal individualised narratives around sustainable consumption, this research prompts reflection on our collective needs and the ways we can meet them more sustainably. Starting from what isn't working in the present grounds these discussions in reality, in order to enrich the discourse around theoretical proposals for sustainable futures.

Breaking through soft denial: How engaging with the meat crisis could help collective acceptance of limits

Minna Kanerva

University of Bremen, Germany

Problem definition: Why is it so difficult for most people, or Westernized societies more generally, to accept an upper limit to harmful overconsumption, even when knowledge of the planetary crisis, its causes and impacts is becoming increasingly undeniable? Linked to cultural influences, such as consumerism, neoliberalism, extractivism, and the culture of uncare, powerful psychological processes are often at play. These phenomena are involved in soft denial — simultaneous knowing and not knowing — exhibited by many regarding the planetary crisis. Difficult emotions are pushed to a *climate shadow* so that full awareness of the severity and urgency of the crisis remains unacknowledged. The significant emotional distress caused by dissonance underlying soft denial often leads to general apathy, disempowerment, and inaction. This mechanism also exposes people to disinformation and populism and may therefore contribute to the current crisis of politics.

Similar psychological phenomena related to consuming animals produced in industrial production systems greatly inhibit the ability to see humans as part of nature, and the prioritization of relational values towards nature. Consequently, this works against the adoption of a relational worldview, otherwise seen by many as crucial to moving away from the extractivism that has led to the current planetary crisis. These developments work at an individual level, but are most significant at the collective level.

Method: Based on interdisciplinary literature review, this presentation sketches a conceptual outline.

Results: The presentation will discuss the above challenges and whether an undoing of extractive industrial animal agriculture could hold keys to a transformation towards ecological sustainability more generally. Further, the presentation asks whether experimenting with meat consumption corridors could be one avenue towards positive change, in particular through their framing in terms of values of fairness and justice, as well as responsibility towards current and future human and non-human animals and the rest of the living world.

Significance to mainstreaming sustainable consumption: The presented conceptual outline has relevance for sustainable consumption and sufficiency literatures, and for research on, and experimentation with strong sustainability policy beyond the meat system context.

Economic incentives to increase consumer repairs in Sweden: perspectives from the repair sector

Emil Anton Andersson, Carl Dalhammar

IIIEE - The International Institute for Industrial Environmental Economics

To enable the transition to a circular economy, one key strategy is to prolong the lifespan of products and components by supporting repair.

However, repairing consumer products has become increasingly rare in recent decades, and previous research has established that it is unlikely that consumer repairs will increase significantly without policy interventions.

One key barrier to repair is high costs (Sonogo et al., 2022). The European Union Member States have pursued different approaches to *make repair more economically attractive to consumers*. These interventions include repair funds, direct repair subsidies, and tax deductions (Reimann, 2024).

Sweden has implemented tax deductions to support repairs, but there is limited evidence that this has increased repairs, or consumer awareness about the tax deductions (Almén et al., 2021). There is however limited research on the topic. Alternative policies Sweden could pursue include a proposed general right to a tax deduction for repairs ("hyber deduction").

To address research gaps, we designed an interview study and interviewed Swedish repairers in three sectors: bicycles, smartphones, and white goods. The study aimed to examine if the number of consumer repairs is increasing or decreasing; if the current tax deduction has any effects, and; what kind of economic policy interventions repairers prefer as means of support. Further, policies that support repairs will lead to growth in the repair sector, but we know from previous discussions with repairers that this may not be the case. Therefore, repairers were also asked if they were interested in growing their business, and how the repair sector can attract more people in the future.

36 semi-structured interviews with repairers in three cities were conducted. It was found that there are fewer repairs of mobile phones today than five years ago, but that repairs for white goods and bicycles are increasing. There are several potential explanations for this.

The hyber deduction was the preferred policy intervention in all sectors. Repairers of white goods and phones are more interested in growing their business than bike repairers, and there are several reasons for this situation. There were widespread concerns that it's hard to attract talent to the repair sector, now and in the future. The key enablers to changing this is: increase in the status of the profession, higher profit margins in the repair sector, more attractive repair facilities, and better educational programs.

While many policymakers expect policies to increase repairs and lead to growth of the repair sector, our conclusions show that it's not that straightforward. Consumers need economic incentives that are easy to understand, that guide them towards repairing and make it more affordable to repair. The repair sector also needs supportive policies with low administrative costs, but also policies that make it more attractive to become a repairer. The study thus shows how hard it is to mainstream new consumer behaviors, but also supply of services to support such a transition, without a well-designed policy mix.

Routinising a more sustainable way of consuming: The engagement in 'low tech' practices

Simon Vuille

University of Neuchâtel, Switzerland

Problem definition

Lying beneath the haunting shadow of resource scarcity and global warming, new ways of establishing production, distribution and consumption practices are emerging from civil society within Western societies. I propose to centre my study on one of these new ways of practicing and thinking through the empirical gateway of 'low-tech' practices. The low tech—for 'low technology'—qualifies objects, techniques or technical systems that meet three criteria: usefulness, accessibility, and sustainability. It is an attempt of social change through diffusion of practical, useful, and less environmentally harmful technologies, and it places itself against discourses that elevate (high) technology as the universal answer to any anthropic or biotic problem (Bloquel et al., 2022).

My aim is to apprehend how individuals organise themselves, as well as collectively, to change durably their consumption by trying to capture dynamic processes of change and routinisation. It is placed in a recent trend to look closely at everyday life (Hansen, 2023; Yates, 2022). More specifically, I will study people engaging in a conscious and volitional change by participating in a citizen science experiment^[1]. On the theoretical side, I'm using practice theories that are able to capture materials, competences, and meanings (Shove et al., 2012; Shove & Pantzar, 2005). It also captures the recursiveness needed to establish routines and the practical and embodied knowledge that it constitutes.

[1] This citizen science experiment is called "Biosphere Experience" (<https://www.biosphere-experience.org>).

Method

The citizen science experiment is organised around eight different low-tech practices (from the construction and use of a bioponic tank to a fog shower, or oyster mushrooms culture). Participants chose one or many of these practices and had one month to construct and implement the low-tech system in their everyday-life. The actual trial of the system lasts two months (from September to November 2025). This experiment is of particular interest because it reaches a large panel of people (approximately five hundred participants) and will generate broad longitudinal quantitative data via questionnaire-based regular feedback from participants. Moreover, it will bring longitudinal qualitative material thanks to diaries that some participants will be keeping along the experiment. Finally, in order to mobilise mixed-methods and deepen the analyses of processes, I will conduct individual interviews with some participant.

Results

Both the experiment and the analysis are ongoing. By the SCORAI conference, I will have finished data gathering and my analysis will be an advanced work in progress.

Significance to mainstreaming sustainable consumption

Firstly, the quantitative data allow me to dress socio-economic profiles of people engaging in low-tech practices. Secondly, both the quantitative and qualitative data help me analyse the processes and conditions of adoption or rejection of these practices. Through statistics, I will have results about the economic and social factors that can help the person pursue the low-tech practice through time. Thirdly, I can observe precisely the re-organising that the engagement in a new practice demands in regards to other routine practices. All of this can help the understanding of how to mainstream more sustainable consumption practices.

ATTITUDES TOWARDS SUSTAINABLE CONSUMPTION OF REMOTE AND HYBRID EMPLOYEES IN POLAND

Agnieszka Ziomek, Joanna Furmańczyk

Poznan University of Economics and Business, Poland

Problem definition

Sustainable development in the social and cultural dimension can be recognized as a set of certain behaviours and forms of consumption (Maciejewski, 2020; Klimczak & Gliszczynska-Swiglo, 2024). Within this framework, several research assess the influence of remote work on sustainable consumption attitudes. The lack of travel to the workplace and contact with other employees, as well as remaining isolated in remote work, encourage compulsive shopping and high consumption habits (Fabiani et al., 2021; Nori et al. 2022). Remote workers may distinguish in behaviours from hybrid as the last one work environment is similar both to on-site and remote work. The aim of the study is to identify similarities and differences in employees' behaviours according to the form of fully remote and hybrid work. Attention was paid to behaviours included in the twelfth goal of the SDG agenda (2022) as shopping and eating habits, product and media consumption.

Method

The final data was collected through a survey of 360 respondents working remotely or hybrid. To assess similarities and differences in group of workers a factor analysis and Chi-square statistic was performed. In the first one the KMO test was used to determine the adequacy of the data for factor analysis. Next the principal components method was used to extract the loadings, with Varimax rotation Analysis conducted separately for the sample of fully remote and hybrid workers. In each sample, a separate examination of factors in four areas was performed.

Results

Results indicate that remote workers more often than hybrids avoid shopping centres, refrain from purchasing ICT equipment and make a shopping list. Hybrid workers purchase more food from local

producers. Similarities of both workers groups refer to meet consumption and selection of food with some exceptions. The control variable gender showed the greater involvement of women in sustainable consumption compared to men in each of the behaviour areas.

Significance to mainstreaming sustainable consumption

When sustainable consumption patterns are popularized among employees in organizations, this attitude is present among those working at home. Problems with accepting SC attitudes are a derivative of consumer behaviour, environmental degradation, income inequality (Teneta-Skwiercz, 2017; Zralek, 2018). This work focuses on SC behaviours of remote and hybrid workers, and fits into the research gap by deepening the problem of remote or hybrid working, which focuses on similarities and differences in SC between them. As those workplaces environment is significantly different SC attitudes may also follow this conditions. Moreover the study suggests that workers and managers who work remotely or in hybrid form should adopt attitudes toward implementing sustainable consumption in any workplace. Moving away from traditional consumption towards sustainable consumption requires also further action from companies to improve employee attitudes towards implementing sustainable consumption in every workplace.

Persistent habits: Challenges to changing dietary patterns in less privileged adults with diabetes in Cochabamba, Bolivia

Sarah Kollnig¹, Rodrigo Alvaro Quispe Condori²

¹University of Applied Sciences Wiener Neustadt, Austria; ²Universidad Mayor de San Simon, Cochabamba, Bolivia

This study is concerned with the challenges encountered when working for changing dietary patterns. It takes up the case of less privileged adults with type 2 diabetes (T2D) in the Bolivian city of Cochabamba. Like many countries in Latin America, Bolivia has seen a significant increase in the prevalence of T2D in its population. In the city of Cochabamba, dietary habits are strongly influenced by Andean cultures as well as socio-economic position. This study wants to understand how less privileged people diagnosed with T2D resist or adapt to medical dietary recommendations. From a broader perspective, this case also helps to understand how to change dietary patterns towards more ecologically and socially sustainable habits.

For this study, 10 in-depth interviews were carried out with inhabitants of less privileged neighborhoods who have been diagnosed with T2D. These interviews aimed at understanding dietary patterns in greater detail. The interviewees were selected to achieve a balanced sample regarding age, gender, socio-economic status as well as how long they have lived with diabetes. The interviews focused on the relationships between dietary habits and health, changes made after the diagnosis, as well as the factors influencing adherence or resistance to dietary recommendations. The empirical analysis of the interview data centred around finding common themes in the participants' narratives, and relating these themes to the barriers to and the possibilities of dietary changes.

The results show that, despite a general consciousness about the necessity to change dietary patterns when facing T2D, traditional dietary habits are persisting. The interviewees continue consuming products that have been part of the Cochabamba diet for a long time, mainly potatoes, corn, as well as beef and pork. According to the interviewees, these products are the most easily accessible and the most familiar to them, as well as being of cultural significance. Many of them mentioned that, despite the medical recommendations for dietary changes, these new habits are difficult to implement due to the higher cost of a healthier diet, the social pressure to share meals with the family, and the lack of availability of healthier products in their vicinity ("food deserts"). The analysis also brings out leverage points for change, such as adapting dietary recommendations to the cultural context. It is important to actively include the affected population when working for solutions that are economically accessible to them and also reflect the local culture.

This study shows the persistence of unhealthy dietary patterns despite a severe medical diagnosis such as T2D. The in-depth interviews with less privileged inhabitants of Cochabamba city show that their dietary habits are molded by local culture, ethnic identities, as well as socio-economic status and neighborhood infrastructure. These results are highly relevant for the transition towards a more ecologically and socially sustainable diet, since they bring out factors hindering change even when facing serious and urgent recommendations for a different diet. The study highlights resistance to change, but also potential leverage points for changing dietary habits, particularly amongst the less privileged population in the Global South.

Consumption-based Allocation of Emissions from Cloud Computing Services: An equitable alternative to location-based accounting

Ian Varela Soares, Yarime Masaru, Magdalena Maria Klemun

The Hong Kong University of Science and Technology, Hong Kong S.A.R. (China)

Problem definition

Estimating cloud computing greenhouse gas emissions is prone to several attributional challenges. The traditional emission attribution criterion, location-based, allocates emissions to the inventories where the emitting activities physically occur. However, relying only on the location criterion for

allocating cloud emissions poses equity problems, given that there is a geographical separation between the cloud activity operation and the cloud consumption.

Method

This research investigates how using a consumption-based criterion for allocating cloud greenhouse gas emissions could provide a more accurate assessment of emission responsibility: allocating emissions responsibility to the cloud consumer who demands the cloud services. The analysis employs carbon accounting methodologies (ISO 14064 and GHG Protocol) to quantify the extent of electricity consumption and Scope 2 greenhouse gas emissions arising from major European data center hubs. The focus is on three countries with the largest data center capacity in the EU: Germany, Ireland, and the Netherlands. The study compares the electricity demand and emission inventories for the Information and Communication Technology (ICT) services sector in these countries from 2017 to 2022. For each country and year, the analysis estimates how much of the total ICT services electricity demand and emissions stem from cloud computing services, and within cloud computing, how much of the cloud emissions and electricity demand are either (a) from domestic demand of cloud consumers within the country; (b) from foreign cloud consumers demanding cloud services hosted in the country ('exporting' cloud services); and (c) from domestic consumers demanding cloud services overseas ('importing' cloud services).

Results

The results provide an estimation of the impact of cloud computing electricity consumption and Scope 2 GHG emissions over the entire national ICT sector. Additionally, it also showcases consumption patterns that government perform in cross-border cloud services: some of the data center hubs perform the whole of a carbon importer (e.g., Germany), avoiding additional cloud greenhouse gas emissions by outsourcing to other jurisdictions; others perform as carbon exporters (e.g., Ireland, Netherlands) holding additional emissions in their inventory that stems from overseas consumption. This analysis holds dual significance for policy planning. Firstly, it enhances the accuracy of estimating the emissions patterns associated with cloud computing by accounting for the cross-border consumption nature of these services. Secondly, it provides guidance for policymakers on how to allocate their emission inventory for ICT services, enabling more effective mitigation strategies and promoting emission accountability across jurisdictions

Significance to mainstreaming sustainable consumption

The main significance for mainstreaming sustainable consumption lies in attributing (organizational) consumer accountability about the electricity consumption and Scope 2 emissions responsibility of cloud computing software. Furthermore, the emphasis over reporting the environmental impact of cloud services provided by data center operators and cloud providers encourage governments to assign greater responsibility over the organizations to be more transparent about their emissions and take greater responsibility for improving energy and emission efficiency over ICT operations.

Detecting indirect impacts of digital daily life

Emilie Vrain

University of Oxford, United Kingdom

The digitalisation of daily life activities through automation often promises sustainable forms of consumption, offering energy efficiency gains, greater control for demand reduction, and a more integrated, decentralized, and flexible energy system. While much research investigates the direct impacts of automation technologies such as smart thermostats and other Internet of Things (IoT) devices on energy consumption, the indirect and systemic social impacts are often overlooked but can have significant consequences on sustainability.

This study explores the indirect impacts of automation through a mixed methods experimental research design, conducted as part of a UK living lab. Using a sub-sample of 10 households, the trial examined the use of smart robotic floor cleaners over one month. Detailed household activity-specific behavioural data, energy and time-use data, and attitudinal data were collected pre, during and post-trial. The range of methods used enabled measurements of the effects of floor cleaning automation not only on energy consumption but also on time-use, household roles and responsibilities, social norms, and practices.

The trial revealed significant societal and indirect impacts of automation: 1) a reduction in time spent planning and executing floor cleaning tasks, leading to multitasking and notable time rebound effects; 2) substantial shifts in household responsibilities, with the transition from traditional human-centric chores to automated tasks alleviating mental stress and family pressures. Positive shifts in household dynamics were discovered, along with the transferal of roles between household members based on their levels of technophilia; and 3) increased household tidiness and cleanliness, accompanied by heightened expectations for cleaning frequency.

While there were positive shifts in time management and household dynamics, these were accompanied by altered cleaning norms and increased energy consumption (depending on factors such as floor space and the digital skills of the users). These results provide insights into the underlying causal mechanisms of automation impacts and the complex interplay between technology, behaviour, and sustainable consumption practices. Findings emphasise the necessity of considering broader societal and behavioural effects when evaluating consequences and designing solutions to minimise negative impacts of digital automation on sustainable consumption.

Transitioning towards more plant-based diets: sharing expert knowledge through a system lens

Christa Blokhuis¹, Gert Jan Hofstede¹, Marga Ocké², Emely de Vet³

¹Wageningen University, Netherlands, The; ²Dutch National Institute for Public Health and the Environment; ³Tilburg University

Problem definition. Transitioning towards more plant-based diets is essential for public and planetary health. Current research about consumption practices of protein sources provides limited insight in the multidisciplinary nature and interconnectivity of the food environment. This study aimed to collect mental models of review authors by synthesizing both their implicit and explicit system views into an overarching system view.

Method. Published reviews were used to select participants and identify variables that explain the protein transition in relation to the food environment. To overcome differences in disciplines and scale levels (e.g. individual, interpersonal, environmental), variables were organized according to the Determinants of Nutrition and Eating Framework. Eight review authors shared their mental models in an interview. Participants were asked to construct a causal loop diagram (CLD), a tool proven valuable in making one's ontology explicit to others. Implicit system views in narrative were converted into CLDs using a coding framework.

Results. The overarching system view suggests that a multitude of feedback loops sustain current consumption patterns of protein sources, for example by reinforcement through habit, availability and peer support. Furthermore, several knowledge gaps in systemic understanding are to be addressed in future research. For instance the conditions under which stigmatization of vegetarians and education are prompted and/or maintained; the most effective point(s) of intervention; dynamics between consumption and production of meat; understanding of long-term behaviour; and interconnectedness of multiple variables within the food environment, for example social norms and habits.

Significance to mainstreaming sustainable consumption. This study suggests that a multitude of feedback loops sustain current consumption patterns of protein sources, demonstrating the necessity of systems thinking in developing a full understanding of potential pathways towards more sustainable consumption behaviour. Several aspects require attention to improve systemic understanding of the food environment: disagreement regarding variable relationships, reciprocity between the physical and social elements of the food environment, dietary pathways, and topics that have received limited empirical investigation, such as the role of a capitalistic market economy in meat consumption and cognitive capacity of consumers. The overarching system view shows that a CLD can be used as boundary objects to facilitate discussion about the variable relationships and feedback loops that explain the role of the food environment in sustainable food consumption.

Household Economics Overrule Sustainability: Representative Time Series of Consumption of KRAV-Certified Food in Sweden

John Magnus Roos

University of Borås, Sweden

Problem definition

KRAV is Sweden's most recognized sustainability label for food. KRAV-certified products are organic, but also impose stringent requirements regarding animal, and working conditions (KRAV, 2022). Consequently, KRAV-certified food represents both ecological and social sustainability. However, KRAV-certified products are generally more expensive than conventionally produced food (NielsenIQ ScanTrack, 2022; KRAV, 2022), leading to the assumption that Swedish households might reduce their purchases of KRAV-labeled items during an economic downturn.

In spring 2022, Sweden experienced a significant price increase across most food categories. Concurrently, interest rates rose sharply, first in June and again in September. Consequently, the "real disposable income" of Swedish households declined in both 2022 and 2023, affecting their capacity for consumption (The National Institute of Economic Research, 2022; 2023).

Reports from various regions indicate that consumers tend to abandon organic products during economically challenging times (The Swedish Consumer Agency, 2023). Therefore, this study aims to examine whether Swedish consumers reduced their purchases of organic products in 2022 and 2023, following substantial price increases in spring 2022 and subsequent interest rate hikes during summer and fall of the same year.

Method

Since 1986, the SOM Institute at the University of Gothenburg has conducted a national survey to map the habits and attitudes of the Swedish public. Data is collected through postal surveys, ensuring that conditions remain consistent over the years for comparability. The surveys use a nationally representative systematic random sample of individuals aged 16 to 90 years (sample sizes range from 3,000 to 3,750), with data collected from September to December each year.

From 2007 to 2023, twelve independent surveys included a question on the purchase frequency of organic food: "How often did you purchase KRAV-labeled food/products during the past twelve

months?" The response alternatives were: "Never" (coded as 0), "One time the last 12 months" (coded as 1), "One time every 6th month" (coded as 2), "One time every 3rd month" (coded as 4), "Once a month" (coded as 12), "Once a week" (coded as 52), "Several times a week" (coded as 104). Although this coding may slightly underestimate purchase occasions for the highest frequency, it remains consistent across the research period, ensuring reliable trend analysis.

Results

Figure 1 clearly illustrates a substantial decrease in purchases of KRAV-certified food in 2022, coinciding with the noted increases in prices and interest rates during that year.

Link to Figure 1: <https://imgur.com/a/iOCbYZk>

Significance for Mainstreaming Sustainable Consumption

If KRAV-certified food significantly benefits the planet, it is crucial to sustain its consumption (and production) even in economically challenging times. If consumers alone bear the responsibility for their behavior, there is a risk that economic concerns will overrule ecological, social, and economic sustainability. This trade-off between sustainability at the micro and macro levels needs serious consideration from policymakers.

Future evaluation of sustainable consumption: input-output analysis for consumption-based targets

Miriam Blumers^{1,2}, Thomas Gibon¹, Göran Finnveden²

¹Luxembourg Institute of Science and Technology (LIST); ²KTH Royal Institute of Technology, Stockholm

Problem definition:

In 2022 the Swedish all-parties parliamentary committee on Environmental Quality Objectives, unanimously suggested a consumption-based climate target of net-zero emissions in 2045. Consumption-based climate targets consider the greenhouse gas (GHG) emissions from a country's end-use consumption - a complementary view to the territorial accounting traditionally used in the UNFCCC's national inventory reporting. Higher-income countries as well as service-based economies generally report lower territorial GHG emissions compared to what they are responsible for when taking a consumption-based perspective. Thus, the territorial perspective alone might offer a distorted picture of a country's decarbonization efforts, especially in highly connected countries, as the upstream emissions in the value chain of imported goods are not taken into account in the importing country's inventory. This disconnect also renders any lifestyle-based environmental impact analysis challenging as the environmental footprint of final consumers may be relatively disconnected from the GHG inventory of the country they reside in.

Reaching a consumption-based emission target requires a specific combination of economic strategies and end-use policies. To account for changes, flexible tools are needed in order to analyse potential consequences of economic, energy and technological, social and behavioral measures and policies. To this end, environmentally extended multi-regional input-output (MRIO) analysis is used. Multi-regional IO analysis is a method to trace international supply chains using tables containing the monetary exchanges between sectors and countries. Extended with environmental data (e.g. GHG emissions) it provides information about the emissions embodied in products and services – from producer to consumer.

In this poster we will present results from a literature review of MRIO methods for analyzing consumption-based emissions in future scenarios.

Method:

A scoping literature review has been performed complemented with discussions with some of the researchers in the area.

Expected results:

Most MRIO studies in the literature have focused on accounting emissions that have already occurred. There are however some studies, including ongoing research, that also encompass future scenarios. In such studies, changes can be made in several different ways and parts of the calculations. For example, future scenarios can include changes in emission intensities, the consumption profiles as well as the production systems. Most studies so far seem to focus on changes in a few of these aspects. This poster will present an overview of published studies, a preliminary suggestion for best practice and suggestions for future developments.

Significance to mainstreaming sustainable consumption:

In order to systematically assess future environmental impacts of a specific demand by integrating prospective scenario modelling, input-output analysis and micro-economic methods to model demand and allow flexible analyses of consumption-impact elasticities can be useful. In the overall project, strategic policy scenarios for both Sweden and Luxembourg will be developed and target-fulfilling transformative scenarios/ pathways, where consumption is in line with climate targets, will be evaluated.

Referral incentives to promote sustainable fashion consumption among Gen Z

Annuska Toebast-Wensink

HU University of Applied Sciences

Problem definition

Generation Z (Gen Z) expresses strong interest in sustainable fashion, yet paradoxically fuels the growth of ultra-fast fashion brands, with companies like Shein reporting a 43% revenue increase to \$32.5 billion in 2023. To promote sustainable fashion consumption among this cohort, interventions must address key behavioral drivers influencing their purchasing decisions. Research suggests that an initial sustainable fashion purchase often leads to repeated such purchases, making the first purchase crucial. Referral incentives emerge as a promising strategy to promote these initial purchases, as they directly address several Gen Z behavioral drivers (e.g., affordability, social influence). This study investigates the effectiveness of various referral incentive designs and reward frames on the likelihood to refer sustainable fashion among Gen Z consumers, recognizing that referrals often lead to actual purchases and can catalyze a shift towards more sustainable consumption patterns.

Method

A randomized between-subjects experiment is conducted in collaboration with an existing sustainable fashion brand. Participants from the brand's customer email list are randomly assigned to one of six conditions in a 3x2 factorial design: 1) Incentive design: sender-benefiting, recipient-benefiting, or shared incentives, and 2) Reward frame: percentage discount or cash discount. The dependent variable is likelihood to refer. Meta perception, or how individuals anticipate others' judgments of their actions, is included as a mediating variable to understand its role in referral behavior.

Results

While actual results are pending, we hypothesize that shared incentives and cash discounts will be most effective in promoting referrals. We also expect meta perception to significantly influence referral likelihood, with positive meta perceptions associated with higher referral rates. Significance to mainstreaming sustainable consumption

This study addresses a critical gap in understanding how to effectively engage Gen Z in sustainable fashion consumption. By examining tailored referral incentives, we provide actionable insights for sustainable fashion brands to align Gen Z's purchasing behaviors with their stated sustainability values. The inclusion of meta perception offers a novel perspective on the psychological mechanisms underlying referral behavior for sustainable fashion. Our findings could lead to significant reductions in the fashion industry's environmental impact by promoting sustainable choices among Gen Z consumers, who are poised to become the largest fashion consumer group. Moreover, this study contributes to the academic understanding of referral incentives in sustainable fashion, offering a foundation for future research and providing valuable insights for policymakers considering economic incentives to promote sustainable fashion. The results may inform the development of more effective marketing strategies and policy interventions to accelerate the adoption of sustainable fashion among young consumers.

"Outdoor school": examination of a thinking lab of sustainability through life's ages.

Sophie Némot

Université de Bourgogne Franche-Comté - Maison des Sciences de l'Homme et de l'Environnement (MSHE UAR 3124) - Laboratoire de Sociologie et d'Anthropologie (LaSA - UBFC), France

Problem

The contemporary challenges of sustainable lifestyles are so acute that they will require a strong involvement from the youngest generations. In the 21st century, as a number of research has confirmed, the question of socialization between school, family, and the legacy of environmentalism arises. This paper proposes to approach the pedagogical initiative of non-classroom-based lessons as a topic. As a subject of discussion and in relation to a place, the cohabitation of different generations has been studied for several years (Némot, 2021, 2023). Using this in-depth analytical approach, the aim is to understand how the questions related to sustainability and to the inclusion of citizens have been reappropriated.

Method

A multi-sited ethnography claims less to be a metrical generalization than a circumstantial examination of the process of reflection on this issue. It provides some answers, by looking for topical concepts that can be useful for describing the services and practices related to "outdoor school".

Results

From metropolitan utopia to urban atopia, a long-term discourse analysis helps to trace the actualization of a eutopia. This recent case study opens a new reflection on the question of old ties around heterotopia.

Significance to mainstreaming sustainable consumption

First through online communication in the post-pandemic context, and then through face-to-face interviews and on-site observations, the last few years of investigation have brought to light the setting up of a thinking lab to mainstream sustainable consumption.

The Climate Scale and Card Game: Innovative Tools for Tangible Climate Action

Helen Czoska

Umweltbundesamt, Germany

Imagine feeling the impacts of climate actions and navigating the jungle of tips, advice, and goodwill about what one "should" do to save the climate. The Climate Scale answers a crucial question: Which climate protection measures truly make a difference? Designed to help consumers identify high-impact climate actions, the scale uses a market-style balance with up to 35 labeled cans, each representing the greenhouse gas savings of specific actions, such as adopting a plant-based diet. When cans are placed on the scale, the side with the greater climate protection effect sinks, offering a hands-on, visual understanding of impactful measures -all without being preachy.

This interactive tool achieves the following:

- Tangibly demonstrates the complex interconnections of climate protection.
- Differentiates significant actions ("big points") from smaller contributions ("peanuts").
- Delivers climate education through engaging, playful experiences.
- Adapts to diverse audiences and contexts.

Accompanying the Climate Scale is an array of supplementary materials, including step-by-step instructions for creating a DIY scale, detailed background information, FAQs, open-source design files for posters, educational resources aligned with ESD guidelines, and more—all freely available under a CC license.

Recognizing the challenge of scale transportation and time constraints in crafting the tool, the Climate Scale has evolved into an easily accessible card game. Available free of charge from the Federal Environment Agency Germany, the game offers versatile play options for groups of varying sizes. Both the Climate Scale and the card game effectively communicate the potential of high-impact behavioral changes, reduce barriers to climate-friendly choices, and foster sustainable lifestyles.

7:00pm

Evening Mingle

Location: **Stora Sparbanksfoajén**

Date: Wednesday, 09/Apr/2025

**8:00a
m -
9:45a
m**

Interventions toward circular consumption

Location: **Stora Salen**
Session Chair: **Elina Närvänen**
Session Chair: **Christian Fuentes**
Session Chair: **Nina Mesiranta**
Session Chair: **Gudrun Obersteiner**

Does the app To Good To Go influence the amount of food waste at household level?

Gudrun Obersteiner, Katharina Hofer, Sandra Luck, Elisabeth Schmied

BOKU University of Natural Resources and Life Sciences, Vienna, Austria

Problem

A significant proportion of greenhouse gas emissions, freshwater consumption and global agricultural land use can be attributed to food waste worldwide. Especially the retail sector is assumed to have an influence on food waste generation in the upstream and downstream stages of the food supply chain. The app Too Good To Go (TGTG) is dedicated as one possibility to combating food waste in the retail sector. Partner companies get the opportunity to sell products that have not been sold by the end of the day and are still edible to app users in the form of a surprise package at a cheaper price. Although the positive impact of the app on food waste in retail is undisputed, it cannot be ruled out that there is at least a partial shift in the amount of waste from the retail sectors to individual households.

Therefore it should be analysed to what extent the products in the surprise packages can actually be used and what proportion is subsequently disposed of by consumers, in order to examine whether these foods are ultimately saved from waste or not and therefore the app can be recommended as possibility for sustainable consumption.

Method

In cooperation with TGTG, a survey was conducted among TGTG users about how they handle the food from TGTG bags in shops. The questionnaire included socio-demographic data of the participants, satisfaction and quality of the surprise bags, the composition of the surprise bags and the actual use or disposal of the products.

Results

538 questionnaires could be used for the evaluation. It was found that a large proportion of participants use the TGTG service regularly and are satisfied with it. Over 90% of TGTG users are very satisfied (52%) or at least fairly satisfied (42%) with the quality of the food in the surprise bags and boxes.

The assessment of the composition of the contents in terms of product variety is not quite as positive. Only 27% are very satisfied here. However, the majority of respondents (62%) are rather satisfied and 10% are rather not satisfied. Again, only 1% of respondents are not satisfied with the product composition.

One of the main reasons for the analyses was to find out whether the positive effects of the app on waste generation in food retailing would lead to an increased waste generation at consumer level. A large proportion of those surveyed stated that they had hardly any waste. 44% did not have to dispose of anything from their last TGTG purchase and for 35% it was only small quantities, such as a few bad fruits. In summary, TGTG can clearly be said to have a relevant waste prevention potential. The amount of waste disposed of after TGTG purchases is in the same range as that of regular purchases.

Significance to mainstreaming sustainable consumption

The results show that using the TGTG supports sustainable consumption, as consumers can help to avoid food waste at the retail level and therefore save environmental impacts connected to wastage of food.

Encouraging a Circular Citizen Identity through Storytelling

Beatrice N. Beitz^{1,2}, **Wolfgang Irrek**^{1,3}, **Stephen Parkinson**⁴, **Ritvars Freimanis**⁵, **Christian A. Klöckner**⁶

¹Prospektkolleg e.V.; ²Universität Duisburg-Essen; ³Hochschule Ruhr-West; ⁴Earthwatch Europe; ⁵Riga Technical University; ⁶NTNU - Norges Teknisk-Naturvitenskaplige Universitet

Problem definition

The dominance of consumerism as the prevailing narrative of well-being and satisfaction poses a significant challenge to fostering sustainable behaviour. While environmental awareness has grown, efforts to promote sustainable practices often fail to connect with people on a deeper personal and social level. Traditional intervention approaches tend to rely on information, commitment, feedback and incentives, often overlooking the emotional, imaginative, and social aspects to drive cultural change. To overcome this, more holistic approaches are needed – ones that not only envision a circular economy future, but actively engage people in reimagining their roles within it.

Method

To address these challenges and engage people more deeply, Horizon Europe's CircleUp project has developed a new approach that emphasises social identity as a driver of behavioural change. It will be implemented within a broader intervention framework that will support 100 households and their social networks in Germany, Latvia, Norway and the UK to explore and adopt circular economy practices in two intervention phases. Drawing on the Social Identity Approach and Communities of Practice, participants will engage in everyday creative practices as part of a social game that promotes sustainable behaviour and peer learning through storytelling to strengthen their identity as "Circular Citizens". Using a gamified digital platform, they create "Circular Stories" to document and reflect on their engagement, sustainable solutions, and supporting infrastructure. These shared narratives help develop a collective vision of circular citizenship while reinforcing social bonds. The platform facilitates this by offering real-world tasks across four realms, which expand the social context from household actions to group collaboration, public local

engagement, and cross-cultural exchange between users in each country. In this way, participants build a universe of stories centered around sustainable lifestyles, resource efficiency, and collective action against climate change, showcasing practices such as reducing waste, sharing, reusing, and questioning the status quo.

Results

The prototype is currently in development, and the gamification concept and user interfaces will be presented to a wider audience for the first time during the session. This presentation will also include the results of preliminary testing and first "Circular Stories". The complete digital platform is expected to launch in 2025/26.

Significance to mainstreaming sustainable consumption

By leveraging creative participation, empowering people to meet their need for social validation and support, and drawing attention to the resources in their physical and social environments, people can experience a tangible connection to a circular economy and thus help to reframe what it means to live well beyond consumerism. The approach addresses people's need for social connection, helping to alleviate the negative effects of environmental distress and climate anxiety. By incorporating gamification, it promotes collaboration, participatory learning, and the co-creation of circular solutions. As a digital, open-source platform, it is widely scalable and capable of driving a cultural shift towards collective action on climate change across various population groups. Its customisability enables diverse stakeholders – such as schools, universities, NGOs, local communities, businesses, and policymakers – to tailor the platform for educational activities, workplace initiatives, or community projects.

Sustainable Interventions in Clothing Consumption and Food Waste: A Systematic Literature Review

Kirsi Laitala¹, Mari Ainasoja², Christian Fuentes³, Ingrid Haugsrud¹, Malla Mattila², Nina Mesiranta², Elina Närvänen², Rosalyn Old⁴, Emma Samsioe³, Sonja Sulankivi², Harald Throne-Holst¹, Martta Vänskä²

¹Oslo Metropolitan University, Norway; ²Tampere University, Finland; ³Lund University, Sweden; ⁴Collaborating Centre on Sustainable Consumption and Production (CSCP), Germany

Problem definition

Globally, household consumption is responsible for over 60% of GHG emissions and 50% to 80% of total resource use (Ivanova et al., 2016). In Europe, food and clothing (including footwear) are the most land- and water-intensive consumption categories (ibid). For food, wasted products represent 15% to 16% of the total environmental burden, with households responsible for 65% of this waste (Scherhauser et al., 2018). Among household products, clothing and detergents are significant contributors due to their production's environmental impact and high consumption volumes (Castellani et al., 2021).

Thus, along with improving production processes, changes in consumption practices are crucial. While households and consumers cannot be solely responsible for sustainable consumption, they do share some responsibility. This paper analyses interventions effective in shifting consumer behaviour towards more circular and sustainable practices, particularly in food waste and clothing consumption.

This paper is part of Horizon Europe project CARE: The Circular consumption Activities to tRansform households toward material Efficiency.

Method

A systematic literature review was conducted, focusing on peer-reviewed articles sourced from EBSCO, Web of Science, and Scopus. Search terms related to interventions (e.g., trial, challenge, pilot, initiative, case, or program) were combined with consumer/household and sustainability terms in the areas of food waste or clothing consumption. Studies were screened and selected based on relevance. The ongoing analysis focuses on identifying key intervention strategies and assessing their effectiveness in promoting sustainable practices. (The results presented are preliminary but will be finalized before the conference.)

Results

Most studies have been conducted in the global North, typically with small samples of fewer than 50 participants. The interventions employed varied in approach, ranging from simply providing participants with information or tips related to sustainability or economic benefits, to engaging them in challenges or experiments, enhancing enjoyment through gamification or convenience, or attempting to influence behaviour subconsciously through nudging or technological improvements. The most effective interventions combined multiple strategies or adopted a systems approach. Differences in approach were noted between the food waste and clothing experiments. Very few studies objectively measured the outcomes of the interventions. However, most studies identified barriers that should be addressed in future work when designing interventions.

Significance to mainstreaming sustainable consumption

The results of these studies are crucial for guiding future efforts to shift consumer behaviour and practices toward greater sustainability, as they highlight effective intervention strategies. These behavioural intervention studies also provide valuable empirical evidence to inform policy development, helping to design more impactful programs and initiatives.

References

Castellani, V., Sanyé-Mengual, E., & Sala, S. (2021). Environmental impacts of household goods in Europe: A process-based life cycle assessment model to assess consumption footprint. *Int. Journal of LCA*, 26(10), 2040-2055.
Ivanova, D., Stadler, K., Steen-Olsen, K., Wood, R., Vita, G., Tukker, A., & Hertwich, E.G. (2016). Environmental Impact Assessment of Household Consumption. *Journal of Industrial Ecology*, 20(3), 526-536.
Scherhauser, S., Moates, G., Hartikainen, H., Waldron, K., & Obersteiner, G. (2018). Environmental impacts of food waste in Europe. *Waste Management*, 77, 98-113.

Turning Electronics Repair into the Norm: Lessons from Repair Voucher Schemes

Magdolna Molnár

Brandenburg University of Technology, Germany

Problem: The premature replacement of electronic and electrical devices poses a significant resource and environmental challenge, particularly in Europe, a major consumer market. Extending the lifespan of electronics through repair not only conserves valuable resources by reducing consumption but also generates economic value through the repair industry. Despite these benefits, consumer demand for repairs has declined across most European countries, prompting policymakers to explore measures that support repair activities and promote responsible consumption. However, the literature offers limited insight into how consumers incorporate new circular consumption patterns into their daily routines and how these transitions can be effectively supported through targeted interventions. To tackle the high costs of repairs, many local and national authorities in Europe have introduced repair vouchers, with the European Union urging all member states to adopt similar funding measures in the coming years. Despite this, there is still a lack of research on the effectiveness of financial incentives in promoting sustainable consumption activities like repair, highlighting the need for further investigation before these policy tools are widely implemented.

Methods: This paper is based on an interdisciplinary mixed-methods doctoral study, examining the impact of repair vouchers on consumer participation in electronic device repair, taking Germany as a case study. The study is divided into two sub-studies: the first focused on consumers who have applied for repair vouchers, and the second examined the impact of vouchers on repair businesses. The research employed two online surveys and several in-depth interviews with voucher applicants and repair businesses, drawing on social practice theories to explore how households and individuals can shift towards circular consumption practices.

Results: Initial findings from the first part of the study suggest that repair vouchers, as a novel component within the repair provision system, help to lower the cost barrier for consumers and foster a culture of repair by emphasizing the societal value of product longevity. This leads to increased engagement in repair activities. However, the study also reveals that repair vouchers alone may not be sufficient to overcome structural barriers to repair. They are most effective when combined with other policy measures that support repair infrastructure and improve the reparability of devices. The second part of the study, which focuses on repair businesses, is currently in the data collection phase. Preliminary analysis indicates that repair vouchers benefit repair businesses by increasing societal attention to repair services. However, these businesses remain to face challenges due to the ongoing price competition with new devices, which often remain cheaper and easier available to consumers than repairs, even with the aid of vouchers. Although, some repair shops have reported that consumers are more willing to pay higher repair prices when they receive a voucher, suggesting a potential shift in consumer practices.

Significance: This study contributes to broader discussions on effective policy strategies for promoting circular practices by examining infrastructural barriers to repair, moving the focus beyond individual consumer decision-making. It also offers practical insights for authorities considering the implementation of financial incentives, such as repair vouchers, to encourage sustainable consumption.

The interplay of eco-design requirements and Circular Public Procurement criteria – demonstration of Swedish procurement of refurbished furniture

Asa Elisabeth Romson¹, Annelise de Jong²

¹IVL Swedish Environmental Research Institute, Stockholm University, Sweden; ²IVL Swedish Environmental Research Institute, KTH Royal Institute of Technology, Sweden

Problem definition

The transition to sustainable consumption requires the development of new business models based on more sustainable product and service development. Circular public procurement (CPP) aims to support such models *i.a.* by demanding long lived products useful for reuse and refurbishment. However, most markets for reused products are marginal and procurement efforts often fail to find suitable options. To regulate for markets of sustainable products need both 'pull factors' through voluntary soft regulation, and 'push factors' through mandatory direct regulation (Cordella et al., 2020). As no single policy tool combine those factors a mix of policies is used. Product performance requirements along public procurement is a policy mix that EU strengthens in the new eco-design regulation. Recent scholarship on circular economy indicates a further need of systemic approaches and reflections on the interplay of product policies (Horn et al., 2023; Dalhammar et al., 2021; Hartley and Howlett, 2021; Marrucci et al., 2019). Therefore, this article aims to unpack the dynamics between CPP and eco-design requirements, focusing on the roles for three key agents; EU legislators, municipal procurer and agents setting sustainable criteria. To investigate the possible links of these policy tools in the new framework we use the process of circular public procurement of furniture in Swedish municipalities as our demonstrating example.

Method

A mixed method approach is used. Policy analysis of the EU product policy area combined with regulatory analysis of new the eco-design regulation provides the knowledge for the overarching connection of eco-design requirements and CPP. Desktop research combined with interviews of local procurer provide insights in the practice of circular public procurement of furniture in Swedish municipalities, including the identification of key agents and their role.

Results

The main conclusion is the importance of timing in relation to business model developments, both when setting criteria in the public procurement and when defining the eco-design requirements for the product. Today, upcoming mandatory product requirements are not often considered setting demands in public procurement processes. This highlights the

need for better dialogue across governance levels to analyse market developments as well as the regulatory development. Also important is the distinction in formulating criteria in voluntary procurements and requirements mandatory for product to entry on the market. Further, CPP for furniture in Sweden shows that eco-design performance requirements could be critical to succeed in high ambition of local policy objectives. Finally, agents setting sustainable criteria are in general not familiar with processes to incorporate business models for refurbished furniture along the criteria for virgin products, leaving the municipal procurer with few alternatives.

Significance to mainstreaming sustainable consumption

Both the new eco-design regulation and the practice of CPP are still in its infant years. The policy development for sustainable business models needs much more scrutiny to be able to provide more robust answers on what can be fruitful ways ahead. Thus, this study contributes to the field of EU integrated product policy approach and its role for sustainable public consumption.

Digitally enabling circular consumption: On the appropriation and appreciation of renting, reselling, and repairing platforms

Christian Fuentes, Emma Samsioe

Lund University, Sweden

Problem definition

Consumers and their everyday practices are key for the transition to the circular economy. Circular consumption is however demanding for households. Consumers are expected to reuse, repair, and recycle products; they are expected to donate, resell, or swap the products they no longer use. This often demands specific *competence* – e.g., learning how to repair items – *tools and infrastructures* – e.g., recycling stations – access to social *networks* – e.g., swapping networks or circles of friends– and considerable consumption work. In response, several digital platforms have been developed and launched to address these problems. Examples include digital platforms for the buying and selling of second-hand clothes, digitally enabled repair services, or digital platforms for renting clothes. However, for these digital platforms to succeed, they must be made part of consumers' everyday lives, appropriated, and made to work, to provide benefits that enable circular consumption practices. How and under what conditions is this accomplished?

Method

There have to date been few studies addressing the role of digital platforms in circular consumption. This paper aims to address this paucity by empirically exploring and conceptualising under what conditions digital circular platforms are appropriated into households' everyday practices and if/how they come to enable and shape the circular consumption practices performed.

The paper draws on an ethnographically inspired field trial in which 24 households were asked to try one of three circular fashion consumption platforms for 3-6 months. The material consists of ethnographic interviews and self-monitoring material including reports of use of renting/reselling/repairing platforms.

Theoretically, we take a practice theory approach, conceptualizing clothing consumption as a set of everyday practices focused on the acquisition, use and disposal of clothing. It is within this nexus of practice that digital circular platforms have to be integrated and changed.

Results

The preliminary analysis suggests that while platforms offer a range of *circular benefits* – such as sustainably expanding consumers' wardrobes, mending favourite clothing items, and allowing them to resell unwanted clothes online – they are also difficult to appropriate. Many of the participants in our field trial experienced difficulties making the use of these circular fashion platforms part of their clothing routines. At times the styles of the clothes offered did not align with consumers' style (e.g. when renting clothes); in other cases, the services were found too work demanding (e.g., when reselling clothes); finally, it was not unusual that the services were found not to align with the temporalities of the households (e.g. when repairing clothes and having to wait for them to be returned). While the reasons varied between the services and households, the problems all had to do with household-platform fit. Consequently, while the circular services were appreciated, the processes of appropriation – of making the digital circular platforms part of households' everyday practices – were often problematic.

Significance to mainstreaming sustainable consumption

If digital platforms are to be successful in supporting the mainstreaming of circular consumption, the process of appropriation needs to be better understood.

**8:00a
m -
9:45a
m**

Social relations and sustainable lifestyles 1

Location: **Lilla Salen**

Session Chair: **Lucie Middlemiss**

Session Chair: **Ruth Isabelle Bookbinder**

Social relations and how people apply for energy grants

Ruth Bookbinder¹, Anne Owen², Lucie Middlemiss², Mark Davis²

¹University of Birmingham, United Kingdom; ²University of Leeds, United Kingdom

Problem definition

This paper builds on previous research led by Anne Owen et al., which found that people with Asian backgrounds, low-incomes and living in terraced housing applied for energy grants up to 12 times more than expected. High numbers of applications occurred without a targeted campaign to target these homeowners, pointing to other factors in driving

applications for energy grants. We suggest that a relational approach can help explain high application rates and shed light on the factors that encourage people to apply for grants.

Method

This study uses qualitative research methods to build on Owen et al.'s quantitative approach. Working with a trusted local anchor organisation we approached 30 homes where the address was attached to an energy grant application in the last five years. Of these homes, 20 people agreed to a semi-structured interview to discuss their experiences in applying for the grants. Interviews covered how they heard about the grant, why they decided to apply, what (if any) measures people had installed, and their experiences of the application and installation process.

Results

We found that people heard about the possibility of applying for a grant following a pamphlet drop or a door-to-door recruitment strategy. However, about a third of our interviewees didn't follow through with the application. This was due to a range of reasons, including a lack of trust that the measures would be appropriate for their homes and a language barrier that made people insecure in proceeding with the application. Indeed, several interviewees reported being assisted by adult children who spoke English and could complete the application and oversee the measures being installed. We also noted that interviewees rarely knew precisely which grant they were applying for, and treated the energy grant application as part of wider social welfare schemes.

Significance to mainstreaming sustainable consumption

Our findings have two major implications for energy policy. Firstly, interviewees' lack of awareness of particular schemes indicates that information about these schemes could be better distributed as part of details about broader social entitlements. Secondly, the number of people dropping out without having measures installed suggests that more resources need to be directed towards supporting people through the application process to ensure that they trust the scheme and the tradespeople who will be carrying out the work. Interviews with representatives from energy companies that fund measures under ECO drew attention to the critical role of local councils in identifying neighbourhoods to target. Our findings suggest that trusted local agencies could also play a role in improving take up rates of grants.

Talk about town: Exploring everyday energy talk amongst place relations

Shawn Bodden, Faye Wade

University of Edinburgh, United Kingdom

The relational approach identifies agencies and communities (or 'place relations') as crucial for navigating decision making amidst complex options for sustainable lifestyles. However, less consideration has been given to the commonplace, but nonetheless critical, talk that is shaped by, and shapes, these social relations. Whether a formal conversation with an energy advice specialist or a casual chat at the shop, people talk through opportunities, pressures, questions and new ideas with each other. How people navigate shifting options, recommendations, and initiatives aiming to promote sustainable lifestyles is no exception: from heat pumps and retrofit to community-owned energy and circular economies, the public has been presented with a vast – even overwhelming – array of opportunities to reduce their use of carbon. Our presentation considers the role of energy advice agencies, community organizations and local businesses in the circulation of energy talk within communities. Drawing on interactional approaches, such as conversation analysis and ethnomethodology, we will explore preliminary data collected from organisations operating in two Scottish communities. Through this, we aim to introduce a valuable relational methodology for understanding where energy talk happens within the everyday course of people's lives, and how these interactions provide affordances or obstacles for further engagements with sustainable living. Studying how people talk about their options can uncover when energy or sustainability gets introduced, how deliberation is navigated, what concerns are raised, and when energy conversations might get shut down. The presentation will discuss how local businesses and community organizations provide important, diverse, and potentially untapped pathways for the circulation of energy talk, and we will introduce our own ongoing work to build new occasions for talking through sustainable energy use in collaboration with community partners.

A relational approach of the potential of energy communities in shaping demand flexibility

Aurore Jeanne Stanislava Dudka

University of Trento, Italy

Under the RepowerEU initiative, renewable energy is reshaping the European energy landscape, increasingly shifting responsibility onto households to engage in energy flexibility by adopting new consumption practices and Smart Home Technologies (Vigurs et al. 2022). However, mainstream approaches to changing consumption patterns are mostly framed through a technical and economic lens, which often fall short in delivering results beyond initial trials. These approaches are hindered by barriers such as lack of awareness, difficulties with time-shifting, trust, and the potential development of opportunistic energy-intensive behaviors (Shove 2020; Sovacool et al. 2017). These challenges highlight the importance of adopting a social perspective on flexibility, that emphasizes how innovations can be effectively diffused and rooted in norms and values supporting sustainability (Strengers et al. 2020).

To address this gap, we adopt a relational approach (Middlemiss et al. 2024) and focus on Renewable Energy Communities (RECs), characterized by diverse interactions among members and having already demonstrated their strength as demand-side innovators (Barnes et al. 2022; Coenen and Hoppe 2022; Radtke and al. 2022). Rapidly growing across the EU (Wierling et al. 2023), RECs play a crucial role in legitimizing changes in energy consumption patterns. They emphasize the importance of social interactions and identities in driving engagement and innovation, fostering a more dynamic and sustainable relationship between citizens and energy practices (Ornetzeder and

Rohracher 2013). This approach provides new insights into flexibility, when framed as a collective issue at local scale (Christensen et al. 2020; Halkier 2020; Middlemiss 2023).

Based on the French cooperative CIREN, located in Bretagne—actively engaged in both individual and collective prosuming—this study draws on 35 semi-structured field interviews with members, the cooperative's board, as well as with other energy communities and experts involved in flexibility issues. The research explores the role that RECs can play in effectively integrating flexibility. Specifically, it seeks to understand how social interactions within these communities foster innovative socio-technical configurations that promote sustainable energy consumption patterns.

Our results show that energy communities, rooted in citizen interactions, are particularly effective in addressing flexibility challenges. These communities act as trusted intermediaries, fostering collective identities and driving innovation through member interactions, experimentation, and value development. They shift energy perceptions from invisibility to positivity while leveraging their local scale to amplify peer effects and position members as ambassadors, helping overcome key barriers like awareness and trust. However, participation in these initiatives may lead to resistance against smart home technologies, which some citizens perceive as disempowering, stemming from a desire to maintain a more active role in managing their energy usage. Additionally, while these initiatives try to reach vulnerable households, providing necessary support for their connection and engagement is crucial (Fox 2023).

Therefore, we recommend placing greater emphasis on relational approach theory and the role of energy communities at the policy level, recognizing the pivotal role of relationships in shaping energy consumption, particularly when individual and collective prosuming are interconnected. Additionally, we critique the current focus on flexibility as merely time-shifting, advocating for a broader definition that also includes sufficiency.

“It's one of the first things we're talking about” – Relational influences on low carbon living.

Fiona Shirani, Karen Henwood, Nick Pidgeon

Cardiff University, United Kingdom

There is an identified need for housing to decarbonise, yet new configurations of homes have implications for the everyday lives and relationships that unfold within them, which is of interest to social scientists. Active homes, which can generate and store electricity, include a range of technologies that may be unfamiliar to residents. With only a small number of active homes in the UK, little is known about how people find life in these innovative homes and adjust to the combination of technologies that they encompass. This presentation draws on insights from interviews with active home residents in South Wales, UK to address this gap. We highlight how the temporal perspective afforded by a qualitative longitudinal research study is particularly valuable in elucidating the dynamic, evolving and relational nature of learning to live in an active home, which has broader implications for research concerning lived experience. We foreground how residents' intimate and care relationships played an important role in their decisions to move to an active home. The temporal dataset also affords opportunities to explore changes in relational influences over the first few years of active home residency, which has potential broader implications for others' views and choices in relation to low carbon living.

The role of social relations between social enterprises and their users in shaping understandings and practices of 'healthy' and 'sustainable' food

Kate Burningham, Anastasia Loukianov

University of Surrey, United Kingdom

Abstract for session on *Social Relations and Sustainable Lifestyles*,

The scale of change needed to transform UK food systems for health, social justice and environment requires new ideas, organisational models and collaborative approaches that can meaningfully engage individuals and communities. Existing top-down approaches to the challenge of sustainable food provision and diet have failed to tackle the crisis of poor dietary health and sustainable food production. Our research explores the distinctive role which social enterprises can play in local engagement around healthy and sustainable food exploring their unique contribution to food systems that are more inclusive, sustainable and healthy. We have worked closely with six social enterprises who use food in a variety of different ways as part of their activities (e.g. growing, distributing, providing meals) in diverse community contexts.

In this paper we focus on the role of social relations between social enterprises and their local users in shaping how both parties talk about and enact food practices (Middlemiss et al 2024).

Drawing on focus groups and interviews with both representatives of social enterprises and their local users we explore various dimensions of the *relational work* involved. First, we consider the *interactions* through which social enterprises use food to build *affiliations* with and between local users and the value which these activities have. Secondly, we outline the prescriptions (Godin & Sahakian 2018) for healthy and sustainable food produced by the social enterprises and explore the dynamic relationships which exist between these prescriptions and the understandings and practices of their users. We show how the rapport, trust, and informal relationships that social enterprise staff establish with local users through informal food activities facilitate genuine collaborative approaches to healthy and sustainable food between local users and social enterprises.

Understanding Energy Habits: The Importance of Embodied Practices Formed by Social Relations and Collective Experience

Anders Rhiger Hansen

Aalborg University, Denmark

Human habits have puzzled scholars since ancient times. Still, questions of how habits reproduce and how to steer change in habitual conduct remain somewhat unresolved, not least concerning everyday practices demanding energy for heating and electricity. However, with the current crisis of climate mitigation, energy supply, and energy security, there is an urgent need to understand better, tackle, and 'work with' habits.

This paper aims to clarify how to understand energy habits. This account focuses on the concept of habits defined as habitual conduct formed by social relations and collective experience.

The paper shows two mechanisms of reproduction and change in energy habits. First, how **embodied experiences** are internalized in energy practices and carried across situations, decades, borders, and places. Second, how **social relations** influence the reproduction and sharing of energy practices. For example, through mechanisms of 'mirroring' and of intergenerational transmission.

Finally, the paper suggests that more empirical research investigates the importance of energy habits, as embodied experience, to the dynamics of energy practices, preferably applying longitudinal approaches and time-series data.

8:00a
m -
9:45a
m

Sustainable consumption and cities: sufficiency, wellbeing, urban nature, and experimentations

Location: **Nya Fest**

Session Chair: **Nathalie Ortar**

Session Chair: **Henrike Rau**

Session Chair: **Marlyne Sahakian**

Sustainable Consumption and Outdoor Spaces: A Living Lab Approach to Enhancing Urban Well-being in a Warming Climate

Julien Forbat, Orlane Moynat, Marlyne Sahakian, Shejale Sharayu

University of Geneva, Switzerland

Problem

The warming climate presents significant challenges to sustainable urban living, particularly regarding the use and comfort of outdoor spaces. Urban areas face the heat island effect, intensifying thermal discomfort and driving up energy demand for cooling during heat waves. In this context, there is a critical need to explore how urban nature and open spaces can enhance well-being, support sustainable consumption, and mitigate climate change effects. To design practical and locally acceptable solutions, it is essential to integrate the perspectives and needs of diverse stakeholders, including residents, local associations, and municipal authorities. This study investigates these dynamics through a living lab experiment conducted in the Jonction neighborhood of Geneva, Switzerland, aiming to identify pathways to improve well-being while fostering sustainable practices in outdoor urban spaces.

Method

The research employs a living lab approach, which enables real-life experimentation and co-creation with a broad array of local stakeholders. The goal is to explore social practices in outdoor spaces and develop participatory interventions to improve thermal comfort during periods of intense heat. In Jonction, efforts included conducting surveys to understand how residents use open spaces, mapping microclimates to identify thermal stress areas, and organizing community walks to explore local experiences and insights. These activities provided a comprehensive understanding of the neighborhood's spatial characteristics, usage patterns, and the varying needs of different groups, contributing to a more targeted approach to intervention design. The living lab approach emphasizes the integration of diverse stakeholder perspectives, fostering collective ownership over the co-designed interventions.

Results

The living lab experiments in Jonction demonstrated strong interest and active engagement from local stakeholders in tackling the challenges of heat waves and outdoor thermal comfort. Community members, through their involvement, identified key areas within the neighborhood that were prone to thermal stress and worked collaboratively to propose solutions to improve well-being in public spaces. These findings suggest that, in addition to material developments, such as small-scale, tactical urbanism interventions, social practices based on new institutional arrangements, habits and meanings can be effective in rapidly responding to the challenges posed by urban heat. The living lab process encouraged reflexivity among stakeholders, increasing awareness of the interconnectedness of co-creative processes and innovative solutions to urban thermal stress.

Significance to Mainstreaming Sustainable Consumption

The living lab experiment in Jonction highlights the crucial role of urban nature and temporary interventions in enhancing well-being and promoting sustainable consumption within urban settings. By fostering active participation and co-creation, such initiatives align community needs with broader goals of reducing energy consumption and building climate resilience. The project contributes to mainstreaming sustainable consumption by encouraging changes in social practices, enhancing microclimates, and reimagining urban spaces to reduce reliance on energy-intensive cooling solutions. The findings suggest that integrating social practices with environmental considerations in urban planning not only makes cities more resilient to the impacts of climate change but also promotes inclusivity, well-being, and a sense of community.

To Protect Nature whilst Using Nature. Sustainable Consumption of Nature and other Commodities

Ida Raunkjær, Søren Askegaard

University of Southern Denmark, Denmark

Introduction

A global shift towards both environmentally and socially sustainable consumption practices is fundamental to an ecologically equilibrated economy (Latour and Schultz, 2022). Humankind's relationship to "nature" is the fundamental question of the 21st Century (Descola 2013).

Consumer research increasingly addresses our relationship to "nature" in terms of interspecies connections in consumption (Bettany & Daly 2008), anti-consumption contexts (Bettany & Kerrane 2008), managerial training sessions (Smith 2016) or consumption of romanticised nature (Canniford & Shankar 2013). Grant et al. (2024) combines an interspecies with a consumption of nature perspective but changing nature-culture relationships are only slowly emerging in consumer research (Askegaard 2021).

Problem definition and context

In this study, we identify how a group of local members of DN works with the organisation's intention of "*beskytte naturen og benytte naturen*" [protect nature whilst using nature] as they are connecting this to climate action and to the intention of a massively supported transition to sustainable consumption practices.

The largest environmental organisation in Denmark, The Danish Society for Nature Conservation (DN), consists of 135,000 members; a high number in a Danish context, and the members are party-politically versatile. Officially, DN supports post-anthropocentric climate action, including a shift towards a non-growth economic paradigm (Hickel, 2020). However, its broad membership indicates a considerable discrepancy in the views on nature-culture relationships and its economic and social consequences. We aim to unpack some of these discrepancies and the frictions they generate.

Methods

During three months in early 2024, anthropological participant observation was conducted through nine meetings of a study circle formed in a local affiliation of DN, discussing the topic "why are we not acting upon the climate crisis?". Following this, 16 semi-structured interviews were carried out with participants, organisers, as well as dissidents of the study circle. Supplementing these ethnographic anthropological data are extensive fieldnotes and group meeting minutes, as well as netnographic/digital ethnographic methods (Pink, 20154) of analysing internet blog posts and correspondences within the group, and website content of the local and national groups.

Results

We detect three strategic domains in which DN members are conducting their critique within the organisational frames of DN. 1) A critical stance towards "superfluous consumption" and the advertising and marketing industries, 2) A plea for more inclusive politics of DN regarding recruitment of members among those typically mobilised by right-wing populism, e.g. workers-segments in precarious situations (Tsing, 2015), e.g., conventional agriculture (Barca, 2024) or among workers in building businesses, and 3) A higher focus on making children *consume* nature, and, thus, creating close bonds with more-than-human species (Haraway 2016; Rubow 2022).

Significance to mainstreaming consumption

We interpret the emergence of a local study circle as a problematisation of the organisation's non-inclusive member recruitment practice. By addressing the frictions underlying this initiative, our study helps environmental organisations such as DN to overcome them, thereby unleashing DN's potential for mainstreaming sustainable consumption and mass-mobilising for climate action through a broadly compelling narrative of Nature's value: as a scene to be consumed as well as an entity to be protected.

Synergies and trade-offs between urban accessibility and street greenery in European cities.

Elias Willberg¹, Robert Klein¹, Christoph Fink^{1,2}, Silviya Korpilo¹, Tuuli Toivonen¹

¹University of Helsinki, Finland; ²University of Vienna, Austria

Advancing environmentally and socially sustainable urban mobility is crucial for cities, with proximity and urban greening emerging as key strategies. The current proximity-oriented planning paradigm, such as the 15-minute city ideal, are based on the goal of promoting equitable access to amenities through short travel distances, mixed land use and by active travel. Simultaneously, urban greening also provides various social and ecological benefits by supporting health and wellbeing through multiple pathways, encouraging active travel, and by providing various ecosystem services. While proximity and greening-oriented strategies have various co-benefits for sustainable urban mobility, there is also an inherent trade-off due to limited space available for fitting both additional street infrastructure and street greenery into the urban layout. However, this trade-off is little studied.

In this presentation, we present results from our current research at the nexus of urban accessibility and greenery. By mapping walking accessibility to daily services across 43 European cities and linking the walkable routes with green cover data at high resolution, we reveal a consistent negative association between walking accessibility and walking greenery in European cities empirically capturing the trade-off between the two. By analysing the variation in access to daily services as well as the greenery exposure on the way, we also show substantial inequalities between and within European cities in their availability. Finally, by analysing varying configurations of urban environments from the street-level image data, we map spatial patterns in the distribution of streetscape space between various land use types.

Our research offers empirical evidence on the relationship between urban accessibility and street greenery across various geographical contexts. These findings serve planning and policy to identify strategies in advancing both greening and proximity-oriented sustainability strategies in European cities while mitigating their trade-offs. The findings also highlight the importance of broadening the view on social inequalities related to mobility to encompass the distribution of green travel environments.

City center revitalization through sustainable consumption offerings: Current insights from three real-world experiments in Germany

Franziska Stelzer, Michaela Roelfes

Wuppertal Institut für Klima, Umwelt, Energie gGmbH, Germany

Problem definition:

Primarily designed as places of commercial consumption, the classic shopping city in particular can hardly meet the new demands on public space in the city center today (Volgmann 2022). The chain-store, central shopping streets are unable to counter the competition from online retail and large shopping centers on the outskirts of the city, resulting in trading down and desertification effects (Heinrich Böll Foundation 2022). Municipalities are also faced with the challenge of selecting those goals, instruments and measures from the multitude of proposed visions and strategies for urban sustainability that fit the specific local challenges. It is also of great importance to involve the inhabitants of cities and municipalities in this transformative process (Rückert-John et al. 2021).

There are already a large number of different offers for sustainable consumption (Handelsverband Deutschland 2022, p. 32ff.): Products with sustainability seals, retailers as well as contact points that specialize in the resale, repair or sharing of used material goods or initiatives that are committed to the economy for the common good. However, many of these offerings lead a niche existence and are often only found in exceptional cases in the central shopping streets of city centers. But there are potentially synergetic effects between the goals and visions of city center development and the establishment of sustainable consumer offers in city centers. This is because sustainable consumption offerings often shift the focus from purely material needs to immaterial needs and thus to the functions of city centers that need to be strengthened in terms of sustainable city center development: housing, leisure, culture, mobility and community.

Method: The project "Cities as places of sustainable consumption" focusses on these challenges: It tests the role of sustainable consumption offerings in the transformation of city centers in three local real-world experiments in cities of Duisburg, Schwentintal and Würzburg in collaboration with practice partners from civil society, business development and municipalities. The real-world experiments take place between February 2024 and August 2025, and focus on one of three main topics: a) the development of an empty department store in the city center (intervention in the city of Duisburg), b) multiple vacant store spaces in the city center (intervention in the city of Schwentintal) and c) the combination of online retail and sustainable (especially circular) consumption in urban centers (intervention in the city of Würzburg).

The scientific frame of reference is the concept of transformative real-world labs (Schaepeke et al., 2017; Wanner et al., 2018) which concentrates on concrete societal problems and is characterized by an explicit intervention focus. The approach of Wiefek, Nagy & Schäfer (2024) is used to capture the impacts of the real-world experiments.

Results: The contribution summarizes the real-world experiments and presents the societal impact for the real-world experiment in Schwentintal.

Significance to mainstreaming sustainable consumption: This contribution shows ways in which sustainable consumption offerings can be used for city center revitalization and covers the topics of sustainable clothing consumption, delivery services for rental products and sustainable business models.

Well-being in the city: the sensible dimensions of Cyclability and Walkability

Nathalie Ortart¹, Hugo Montero², Lise Bourdeau-Lepage³, Anne-Laure Badin⁴, Lisa Rolland⁵

¹LAET, ENTPE, France; ²University of Lyon, France; ³EVS, University of Lyon 3, France; ⁴Lenha, ENTPE, France;

⁵EVS, ENSAL, France

In France, heat waves and scorching days can last for more than a month or two in the summer, exposing the Lyon conurbation to considerable risk. Some populations are in a situation of multiple exposure. Other populations, known as vulnerable groups, have difficulty coping with heat stress, which reduces physical, motor and cognitive capacities. These negative effects on the well-being and health of city dwellers call for a rethink of the way we design our living spaces, in particular to combat sedentary lifestyles and promote physical activity. Inspired by the One Health approach, local stakeholders can take the initiative for urban developments that integrate greening, the issue of urban dwellers' comfort (noise, pollution, heat) and that of feelings related to the environment, in order to encourage active travel such as walking and cycling. We propose to study, through quantitative and qualitative analysis, the sensitive dimensions of the walkability and cyclability of urbanised spaces, both of which involve the body and confront it with materiality as well as with the human and non-human inhabitants of cities. The aim is to understand the changes that need to be made in public space to produce a desirable urban future in the context of an ageing population and climate change.

We propose to consider the relationship with the body, the weather, materiality and living things as a whole. Based on a quantitative and qualitative analysis, this project investigates the sensitive and intelligent dimensions of walkability and cyclability of urbanised spaces, both of which involve the body and confront it with materiality, as well as with humans and non-humans inhabiting cities, in order to understand the essential changes that need to be made in public space to produce a desirable urban future in a context of population aging and climate change. After a description of the survey methodology, we will present the first results from the questionnaire survey.

Significance to mainstreaming sustainable consumption: how to design sustainable cities

Feasibility and acceptance of innovative housing solutions: Insights from Germany

Mahsa Bagheri, Alexandra Pröpper, Sirin Alibas, Songmin Yu

Fraunhofer Institute for Systems and Innovation Research ISI, Germany

The growing ageing population in European countries, particularly Germany, presents significant emotional and social challenges, with many elderly individuals living alone with limited social interaction. This demographic shift also profoundly affects the building sector, particularly due to the prevalence of under-occupied dwellings among this population group. Currently, around three-fourths of the German dwellings are occupied by only one or two persons, making these groups among the high consumers of residential floor area. Given that floor space in the building sector is a major contributor to high consumption (considering the energy consumption in both construction and use phase of the buildings), innovative forms of housing (e.g. co-housing, multi-generational housing), especially tailored to the needs of the elderly, could lead to substantial savings in floor space while at the same time reducing loneliness among the elderly population. In addition to such innovative forms, incentives to relocate could be another trigger for rightsizing housing and optimising the space use. Although mainly practical for the elderly population, such innovative solutions and strategies could also be directed towards other age groups. However, research indicates that residents, especially the elderly, are deeply attached to their current dwellings and, therefore, resistant to relocation. Thus, while in theory these instruments have a high potential for reduction, the actual feasibility and acceptability of such approaches remains to be investigated. This paper examines the willingness of residents to adopt such innovative housing solutions and strategies by analysing the empirical data from a household survey conducted in Germany. Building on the 1500 observations collected in this survey, the paper analyses the potential of these measures to reduce floor space and energy consumption in the German residential sector. First, the acceptability of these housing concepts – moving, sharing, innovative housing forms – and possible underlying factors (e.g. socio-demographic, financial) will be assessed. Then, the available indicators on these strategies will be translated into modelling parameters and the potential savings in the building sector through these instruments will be quantified using an agent-based building model. The results will help stakeholders and policy makers to make informed decisions, by showing whether it is advisable to promote these innovative solutions and instruments or whether resources would be better allocated to alternative strategies. By addressing both the spatial and social dimensions of housing, this research will contribute to a deeper understanding of how sustainable housing practices can be integrated into everyday life, fostering a more sustainable future for all age groups, especially by reducing the ever-increasing space use in the residential sector.

8:00a
m -
9:45a
m

Money can't buy it: reducing high consumption to unlock equity and wellbeing

Location: **Gustafscenen**

Session Chair: **Aimee Ambrose Ambrose**

Session Chair: **Lena Kilian**

Less is more: The sustainable potential of lifestyle minimalism

Amber Elizabeth Martin-Woodhead

Coventry University, United Kingdom

Problem

Minimalism is an increasingly popular lifestyle movement in western economies that involves voluntarily reducing consumption and limiting one's possessions to a bare minimum. This is with the intention of making space for the 'important' (potentially immaterial) things that are seen to add meaning and value to one's life. An emerging body of literature has brought to light an important theoretical tension of minimalism, with the lifestyle being both posited as both a form of individualism, based on personal motivations and self-development (Zalewska and Cobel-Tokarska, 2016), and also as a wider collective action fuelled by sustainable motivations and wider environmental concern (Blackburn et al., 2023, Kang et al., 2021, Lloyd and Pennington, 2020).

Method

This study addresses this theoretical tension to question the sustainable potential of lifestyle minimalism. This is achieved via a thematic analysis of in-depth interviews with 24 self-defined minimalists across the world. The research explores minimalists' motivations for adopting the lifestyle and their everyday consumption practices of acquisition, use and disposal, to question if minimalism is a purely individualist endeavour or an expression of wider environmental and sustainability concerns.

Results

The findings reveal that all participants adopt a minimalist lifestyle due to the personal benefits of having increased physical, temporal and mental space. Also, the majority of minimalists interviewed were either highly motivated by the wider environmental ramifications of consumption or, saw a contribution to sustainability as a positive 'by-product' of their minimalist lifestyle. In addition, there was a smaller group of participants who were primarily motivated by personal benefits, with no wider sustainability agenda.

Whilst the motivations for adopting a minimalist lifestyle were mixed, the findings revealed that minimalists carry out sustainable (non)consumption via their specific practices towards the acquisition, use and disposal of objects. These include undertaking highly limited, cautious and considered practices of acquisition, valuing owned objects and taking measures to care for them to keep them useable for as long as possible, and finally, divesting objects consciously and avoiding waste. Therefore, the practices of minimalist consumption can be seen as sustainable practices in outcome, if not always in intent.

Significance to mainstreaming sustainable consumption

The blurring between personal benefits and sustainability motivations and practices indicates that minimalism offers the potential to encourage a collective cultural shift that is critical of hyper-consumerism and its environmental impact, but, at the same time it allows individuals to achieve personal benefits and contentment from their minimalist lifestyles.

In fact, rather than seeing the personal benefits derived by minimalists as an obstacle to sustainability, they can be viewed as pathway towards it, as any reduced consumption lifestyle must offer personal benefits for it become popularised (Jackson, 2005, Black and Cherrier, 2010). The research therefore advances the agenda of mainstreaming sustainable consumption by arguing that lifestyle minimalism encourages sustainable consumption practices, alongside promoting individual wellbeing, to encourage their uptake.

Getting the Buy-in not to Buy – A Library of Things for Students

Sandra Pia Lioba Dettmer, Sarah Christensen, Wilson Matt

Swansea University, United Kingdom

Within the sharing economy, Library-of-Things (LoT) are spreading across countries such as Germany, the UK and Finland. As studies show they are met with enthusiasm in terms of the general idea and concept. The arguments for a LoT can be summarized in economic and ecological benefits, but also in terms of social effects as it can improve social cohesion and empower individuals.

Nevertheless, these potentials have so far rarely been realised and usage rates are low as individuals perceive barriers into the practical transition towards a sharing economy. Within the limited research available on the concept of LoT, the lack of a community in which the LoT can be embedded, is quoted as a barrier.

In this case study, we report our findings from setting up and running the first LoT for students.

A campus University, where students arrive with very limited possessions, have limited storage space as well as limited financial resources, provides a natural community for LoT users. International as well as home students arrive on campus with only basic equipment. They lack access to items which could enhance the student experience and cohesion. At the same time, this generation is known to care most about sustaining the environment.

Yet, no Library-of-Things for students exist where the library stock particularly reflects students' needs and would need to include recreational equipment (games, sports equipment, camping gear, musical instruments), event and presentation tools (microphone, speaker, etc) and miscellaneous items (locks, basic tools, battery chargers).

The case study presents our findings from developing a LoT with students for students. Teaching in the Business School offers various opportunities to involve students in the development and running of the LoT. Presenting the findings from the pilot LoT for students will enable other institutions to learn from the experience and they can use the tested set up to implement a LoT at other universities and colleges.

The initial findings from our quantitative research confirm the assumption that a LoT for students requires different stock items compared to a LoT in the community. Whereas there is some hesitation to borrow items, the involvement of the student community in the setting up and running process of the LoT helps to overcome this barrier.

Especially at business schools, many traditional subjects focus on the right decision-making processes in an environment with finite resources to ensure the long-term sustainability of organisations. Exposing students to alternative thinking away from the typical consumption models, offers practical solutions in terms of sustainable consumption.

Modelling Social Sufficiency: Integrating behavioural theories to explain desired levels of enough consumption.

Ernest Aigner, Anne Kraudi

Leuphana University Lüneburg, Germany

Problem definition

Sufficiency is increasingly acknowledged as a key strategy to address the ongoing acceleration of social and ecological crises. The literature on goals, behaviour and its determinants, covers calls for action and policy proposals across multiple scales building on a variety of theoretical models. The few empirical studies provide insights into existing sufficiency practices and aim to identify enablers and barriers to adopting those. Insights on what the public perceives as enough, i.e. social sufficiency levels of consumption, and its determinants remains underexplored. In this contribution we focus on the latter.

Method

To fill this research gap, we empirically test a novel framework of determinants of desired levels of consumption across a wide set of consumer goods and services. The framework builds on the theory of planned behaviour (TPB), the energy culture framework (ECF) and the social practice theory (SPT). Accordingly, the survey instruments cover perceived consumer norms and behavioural control; held consumption, socioeconomic, socio-political and environmental attitudes; actual household and public provisioning structures, capabilities and competencies and consumer practices. Survey instruments are largely adopted from earlier studies to ensure comparability. After pre-testing the survey in multiple stages, we validate the framework using structural equation modelling techniques.

Results

What people perceive as 'enough' consumption can be explained via several components of the respective theoretical models. Overall, we observe wide interaction between the survey components, challenging theoretical reasoning which builds on only one to the theories. Accordingly, the variance explanation of the synthesis of the models is higher than that of only one model. Perceived norms and actual infrastructures show the highest predictive power. This confirms theoretical contributions which argue that there is a need for a sufficiency change in society as a whole and

infrastructures that ease sufficiency modes of living. However, we also identify variation across socioeconomic and demographic characteristics.

Significance to mainstreaming sustainable consumption

Methodologically, we have presented a validated theoretical framework building on TPB, SPT and ECF. This allows to draw conclusions about the societal understanding of sufficiency, its determinants and identified barriers and enablers for mainstreaming sustainable consumption as part of sufficiency transformations. The model can inform the development of sufficiency pathways which contribute to mainstreaming sustainable consumption. In terms of multi-scale political action, the results show a need for a comprehensive transformation which entails mainstreaming sufficiency norms and provisioning structures that enable sufficiency modes of living in a wide variety of living conditions.

Critically Performing Post-Growth Marketing: A dystopian-optimist's guide to researcher activism

Carys Jane Egan-Wyer, Jon Bertilsson

Lund University School of Economics and Management, Sweden

Problem definition

Critical marketing faces a dilemma between utopian thinking in mainstream marketing sustainability research and the pessimistic standpoint of terminal marketing. This research addresses the need for a more optimistic approach in critical marketing that acknowledges the necessity for systemic change while providing actionable solutions for activist researchers.

Method

The conceptual study proposes a theoretical framework called 'dystopian optimism', which combines degrowth principles with critical performativity theory. This approach is analysed through a conceptual lens, exploring its potential to transform critical marketing and contribute to the realisation of post-growth futures.

Results

The research presents two main contributions:

1. A novel model of thought for critical marketing:

- Dystopian optimism counters both utopian thinking in mainstream marketing and the pessimism of terminal marketing.
- It supports the need for fundamental systemic change while offering inspiration for critical marketing scholars to participate in transformative change.
- The model emphasises the possibility of changing the system from within by altering norms, thoughts, values, and practices.
- It rehabilitates critical marketing by suggesting ways to be optimistic while still advocating for transformative change to a post-growth economic system.

2. A practical approach to realising post-growth futures:

- The study combines degrowth principles with critical performativity theory to offer a concrete path towards post-growth realities.
- It proposes that marketing researchers should actively contribute to degrowth by developing theoretical representations of post-growth conditions.
- It outlines *how* critical marketing researchers can contribute to this paradigm shift by theorising fringe utopian projects into dominant modes of consumption and production. (By teaching only growth-driven *business* models, we are seriously limiting the imagination of future marketers to perform alternative economic systems.)

Significance to mainstreaming sustainable consumption

This research significantly advances the discourse on mainstreaming sustainable consumption by:

1. Proposing a framework that bridges the gap between critical theory and practical implementation of post-growth principles.
2. Offering a pathway for critical marketing to actively shape sustainable consumption practices through theoretical performativity.
3. Demonstrating how degrowth principles can be integrated into marketing thought and practices, potentially normalising post-growth ideas in mainstream discourse.
4. Providing a model for intentionally using performativity to drive change towards sustainable consumption patterns.
5. Positioning critical marketing scholars as key actors in broadening societal imagination beyond current capitalist paradigms.
6. Suggesting concrete ways to transform alternative consumption models from fringe experiments to dominant practices.

By combining critical marketing insights with degrowth principles and performativity theory, our research offers a novel approach to mainstreaming sustainable consumption. It provides both theoretical grounding and practical suggestions for marketing scholars and practitioners to actively contribute to the transition towards a post-growth society, thereby addressing the urgent need for systemic change in consumption, production and marketing. It provides a framework for critical marketing theorists to perform desirable realities and contribute to a post-growth society.

Envisioning Sufficiency: Exploring Citizen Perspectives and Policy Barriers for Sustainable Consumption in Malmö

Julia Jokiahö, Fedra Vanhuyse

Stockholm Environment Institute, Sweden

Problem definition

While there is increased attention to the need for an absolute reduction of consumption to meet the Paris Agreement (Alfredsson et al. 2018; IPCC, 2022), and other sustainability goals (Bengtsson et al. 2018; O'Neill et al. 2018; Vita et al. 2019), there is still limited implementation of consumption-reduction policies at the local (Callmer & Bradley, 2021) and national level (Lindgren et al., 2023; Sandberg, 2021), in particular of sufficiency policy.

This lack of wider adoption of sufficiency policy has been suggested to be attributed to a lack of vision or deeper understanding of what a society based on sufficiency principles would entail (Lindgren et al., 2023; Pirgmaier, 2020; Sandberg, 2021; Tröger & Reese, 2021). In this vein, scholars have argued that a broader societal dialogue is needed, covering visions of the future and roadmaps for a transformative change (Büchs & Koch, 2019; Mont, 2019), leading to a deeper understanding of the cultural and societal barriers with sufficiency transitions (Büchs & Koch, 2019; Sandberg, 2021).

Our research therefore explored what sufficiency could look like, answering the following questions:

1. How do citizens envision a sufficient lifestyle?
1. What are the perceived barriers and enablers to live “sufficiently”?
1. How can policies for sufficiency be more effectively aligned with promoting a good life for all?

Method

We applied a case study approach, following Yin (2009), focusing on the city of Malmö, Sweden, given its commitment to reducing consumption-based emissions. To develop the sufficiency vision, we used social research methods including workshops, photo-voice (Bell, 2010), observational sketching (Heath & Chapman, 2018), and utopian sketching (Törnroth et al., 2022) as well as literature reviews, document and policy analysis. We developed a need-based backcasting workshop to explore a sufficiency scenario with citizens and experts and politicians. Backcasting involves envisioning a desirable future and working backward to the present to strategize how it can be achieved (Vergragt & Quist, 2011). It is particularly effective for addressing complex issues with value conflicts where transformative change is necessary. Workshop participants included residents from two of Malmö's neighbourhoods with high average consumption-based emissions.

Results

Our findings explore how citizens frame their views of a sufficiency-based society, and the extent to which local politicians focus on sufficiency. In the context of sufficiency, framing theory helps to illuminate how people perceive the appeal of transitioning to a sufficiency-oriented culture and their interpretation of the related challenges.

Significance to mainstreaming sustainable consumption

- First and foremost, it moves beyond theoretical debates to explore practical sufficiency vision and potential policies, barriers, and enablers.
- Secondly, it analyses citizens understanding these perceptions can help policymakers improve and gain support for sufficiency-oriented policies.
- Lastly, it highlights sufficiency at the local level, where it has been underexplored despite municipalities' important role in implementing policies and addressing citizens' needs.

Exploring high consumption lifestyles in the UK's affluent households

Amy Grace, Aimee Ambrose, Anna Hawkins, Stephen Parkes

Sheffield Hallam University, UK

High consumption lifestyles have been implicated in creating pressures on planetary boundaries, increasing inequality, inequity and reducing wellbeing (Garcia et al., 2021). However, it is the most affluent households that are disproportionately responsible for greenhouse gas emissions (GHGs) (Hubacek et al., 2017; Kartha et al., 2020) with approximately half of total emissions being attributed to households in the top 10% income decile (Khalfan et al., 2023). Without addressing consumption levels of the wealthiest in society, the scope for reducing household impact on environmental and social challenges is limited. However, the lack of research exploring the lived experiences of affluent households hinders the ability to deliver effective policy approaches to tackle this pressing issue.

This project adopts an exploratory approach to uncover what drives and locks in high consumption lifestyles in households that are in the top 10% of UK income and/or have accrued wealth. Institutional ethnography interviews have been conducted with ten households in the South Yorkshire region, in which participants were able to lead the discussion and foreground elements of their consumption that they choose (Robinson, Barron & Pottinger, 2021).

Early-stage findings indicate that affluent households typically do not know if their levels of consumption are comparatively high, or believe they are average. This is despite being able to take multiple holidays a year, live in larger homes and purchase goods and services when they want to. Their consumption is influenced by a complex

interaction of individual, social, cultural and structural factors that coalesce to produce specific choices and trends, thus demonstrating the complexity of consumers lived experience.

Current approaches to climate mitigation will not achieve the required reduction in emissions (Fawcett & Darby, 2019), however demand side approaches need to be appropriately targeted at those that have the scope to reduce their impact without reducing wellbeing (Garcia et al., 2021). These findings develop a crucial understanding of affluent households' consumer lifestyles, uncovering potential levers to address problematic levels of consumption.

8:00a m - 9:45a m Inclusion and Equality in Mainstreaming Sustainable Consumption

Location: **Sångsalen**

Session Chair: **Domen Bajde**

Session Chair: **Cristiano Smaniotto**

Discarding Well? How Grassroots Waste Innovations Centre Intersectional Justice.

Cat Acheson

University of East Anglia, United Kingdom

Mainstream approaches to reducing waste place a narrow focus on growth-oriented circular economy models and consumer behaviour change. These mainstream approaches are insufficient for responding to the complex challenges posed by dominant consumption and waste patterns. Furthermore, the innovative, creative, and subversive capacities of citizens and communities have been overlooked when it comes to reducing waste and relating differently to systems of consumption and discarding. This paper explores how grassroots groups are innovating radical approaches to preventing waste and / or discarding differently, in ways which foreground environmental and social justice across multiple intersecting struggles.

Guided by an intersectional understanding of how multiple axes of power and oppression interact to shape systems of discarding, this paper discusses two ethnographic case studies of grassroots waste innovations in the UK. These are: a reuse, recycling and food waste redistribution hub in Glasgow, and a fair and sustainable menstruation initiative in Norwich which promotes reusable period products. The paper finds that each case approaches waste and discarding in ways which centre intersectional justice. They do so firstly by using waste work to practice care, conviviality and political solidarity, and secondly by subverting dominant systems of classification and removal, which seek to render certain people and identities disposable. Whilst their strategies for pursuing intersectional justice through innovative waste work are incomplete, and raise new questions concerning the materials and perspectives which are discarded as new waste systems are established, the case studies demonstrate the radical potential of grassroots actors for advancing more effective and socially just ways of confronting the waste challenge. I conclude the paper by arguing that circular resource use and low-waste practices can become more mainstream through connecting these with the multiple social justice struggles facing marginalised communities across society.

Dreaming of solar panels – consumers' economic positions and sustainable housing

Eliisa Kylkilähti

University of Helsinki, Finland

Problem definition

Consumer-citizens are invited to take active climate action in areas such as housing, but it is often assumed they hold a middle-class position. For example, activity encouraging subsidies tend to flow to competent, high-income households who might act also without subsidy (Hajian et al. 2024; Stephens 2021, 1205; Si & Stephens 2021, 2). The economic dimension of consumption from the perspectives of the consumer's everyday life have remained limited, as the focus of consumer research has shifted towards socio-cultural perspectives (e.g. Evans & Gregson 2023). Understanding social and economic inequalities in consumer society requires embracing low-income household perspective (Hohnen 2017). It is important to increase understanding of households' possibilities to act in (energy) transition broadly in various life situations and from the viewpoints of people with different economic resources (Stephens 2021, 1208). This study asks, how consumers' different kind of economic positions frame their agency in sustainability of housing.

Method

The analysis combines selected citizen survey (n = 1448) responses with analysis of qualitative household interviews (n= 69). Both survey and background information form of qualitative interviews included questions about household income level and perceived financial situation. The data is organized accordingly to recognize how people from different financial positions discuss money and how they perceive their possibilities to take climate-wise action in the context of housing.

Results

The preliminary results indicate that solar panels, heat pumps and full renovations represent dream or something 'you should have' among many. However, currently only very few possess solar panels. Money is considered a constraint in all income groups, however, it is tied to different realities. For example, cutting heat consumption of own apartment attracts people in different economic positions. In general, financial reasoning of actions is important, yet, it takes different shape depending on the access to economic resources. Significance to mainstreaming sustainable consumption

This study sheds light on the relationship between consumers' economic resources and their possibilities to act. Deeper understanding of people's agentic capacity helps to design impactful policy measures and tools to engage people in different life situation to climate actions to avoid climate exclusion.

References

- Evans, D. M., & Gregson, N. (2023). Money, Debt and Finance: Reclaiming the Conditions of Possibility in Consumption Research. *Sociology*, 00380385231156339.
- Hajian, H., Pylsy, P., Simson, R., Ahmed, K., Sankelo, P., Mikola, A., & Kurnitski, J. (2024). Finnish energy renovation subsidies in multifamily apartment buildings: Lessons learnt and best practices. *Energy and Buildings*, 307, 113986.
- Hohnen, P. (2017). Poverty, financing and social exclusion in consumption research. In *Routledge handbook on consumption* (pp. 259-270). Routledge.
- Si, Y., & Stephens, J. C. (2021). Energy justice through solar: constructing and engaging low-income households. *Frontiers in Sustainable Cities*, 3, 632020.
- Stephens, J. C. (2021). Electrification: Opportunities for social justice and social innovation. *MRS Bulletin*, 46(12), 1205-1209
-

Fairness in Low-Carbon Consumption: Examining Transport Decarbonization for Older People in Sweden

Claudia Strambo¹, Elena Dawkins², Jindan Gong¹, Xylia Maria¹

¹Stockholm Environment Institute, Sweden; ²University of Surrey, UK

Problem definition

Vulnerable groups may face greater risks of loss from climate policy. Older people are especially prone to energy and transport poverty, facing barriers to mobility due to lower incomes, rural living, lack of public transport, information gaps, and physical limitations. From a consumer perspective, fairness in the transition means ensuring access to affordable, low-carbon transport options without placing undue burdens on those least able to adapt. To avoid worsening inequalities, it is essential to understand the potential losses and fairness concerns of older people and use this knowledge to inform efforts to promote sustainable consumption.

Method

We use an innovative mixed-method approach, combining carbon footprint and sociodemographic analysis of different societal groups, with a single cross-sectional survey of 1020 people, and 15 semi-structured interviews. The data were collected in Sweden, a wealthy country with both high average yet highly unequal carbon footprints, growing inequalities and aging population. The carbon footprint analysis identifies consumer groups that are older and at high risk of losing from a low-carbon transition, breaking down their carbon footprints by geography and consumption category. This provides insight into the scope of carbon footprint reductions needed and the potential capacity to cope with low-carbon policy impacts. The survey links general mobility habits with questions about valued activities for quality of life to give insight on the potential losses and benefits that policies to transition the transport sector can have on older people. Lastly, the interviews provide data on older people's fairness perceptions of transition policies in Sweden. These data combine to give us a rich understanding of key issues of fairness in low-carbon transport consumption for older people.

Results

The analysis of footprints and socio-economic and geographic characteristics of different societal groups in Sweden indicates that older people are at higher risk of losing from the low-carbon transition. People over 65 in Sweden rely heavily on cars for activities they consider essential to their quality of life, such as socializing with friends (76%) and family (83%). With transport decarbonization policies expected to increase the cost of car use and alternative options becoming less viable as their physical mobility declines, older people perceive a risk of reduced quality of life, social exclusion, and diminished independence if rising costs lead to rationed car journeys. Older people in rural areas in particular struggle to see how they will benefit from the transition. This highlights the need for targeted policy support and better communication around low-carbon transition policy.

Significance to mainstreaming sustainable consumption

It is essential that vulnerable groups are supported in a transition to lower-carbon consumption. For sustainable transport to benefit all groups—not just the wealthy or those with access to good public transport—it is vital to understand different perceptions of fairness, benefits, and losses. In the long term, this knowledge can inform transitional assistance policies for different consumer groups, improving policy acceptance and supporting successful policy implementation. This will become increasingly important as climate policies begin to impact consumption and lifestyles more deeply.

Justice, intersectionality and translocationality: a conceptual framework for inclusive sustainability research

Sherilyn MacGregor, Tally Katz-Gerro, Nafhesa Ali, Saima Ansari

University of Manchester, United Kingdom

We present a conceptual framework for making sustainable consumption research and policy more inclusive by centring the 'South within the North' (i.e., people who have migrated from climate challenged countries of the Global South to resettle in the Global North). Drawing on empirical research with Somalia- and Pakistani-born residents of Manchester, we articulate important concepts for analysing power and inequalities and for centring marginalised people in a way that avoids othering and homogenisation and enables understanding of complex positionalities. We argue that this framework could (and should) be used by other researchers working in this field. It is fleshed out in our forthcoming book, which should be done in time for the conference in July 2025.

The first concept in the framework is **justice**. Drawing on the theoretical literature on environmental/climate, racial and epistemic justice (e.g., Sultana 2022; Pellow 2021; Bhambra 2021), we put justice at the heart of the analysis. Consistent with this concept is the avoidance of othering our research participants and ensuring that our analysis contributes to improved understanding of the structural factors that shape their lives. We achieve this by careful contextualisation of the research and by researching symmetrically. Alongside our research to centre the knowledge and practices of GS-born participants, we conducted research with GN-born participants and key informants in positions of power and authority in Manchester. We make the case for this symmetrical approach in MacGregor et al. 2024.

The second concept is **intersectionality**, which draws on feminist and decolonial theoretical work that is connected to the concept of justice. Intersectionality is a way of seeing connections between multiple axes of similarity, difference, and inequality. It is an approach that not only ensures avoidance of problematic homogenisation of people who are described by simple labels (e.g., 'Muslims', 'women', 'migrants') but also keeps the analytical gaze steadily on the dynamics of structural power. The deployment of intersectional reflections enables analyses of 'the interconnections of particular systems of power' to be disrupted (Hill Collins 2017: 24). Intersectional considerations enhance analysis by providing clarity on how multiple identities are constituted, and which, in turn, interact with political institutions and movements.

The third concept in the framework is **translocationality**, which comes from Anthias's (2021) theoretical work on translocational positionalities. Anthias builds on intersectionality theory to develop ways of understanding the specificities of identity and belonging of people with experiences of migration and being members of diasporic communities. We adapt Anthias's work to develop our own concept of *translocational epistemology*. This refers to unique ways of knowing in two senses of the term 'translocational': knowledge that comes from moving from one geographical place (home) to another (journey based knowing) and maintaining emotional and familial ties to two (or more) places and knowledge that comes from changing one's social location from 'native-born' to 'migrant'. We further mobilise the concept of translocationality to reframe the concept of sustainability as plural, fluid and context dependent, with much to learn from migrant knowledge (as distinct from Indigenous knowledge).

The inclusion-sustainability nexus: A scoping review of consumer and sociology research

Cristiano Smaniotto, Mikkel Nøjgaard, Domen Bajde

University of Southern Denmark, Denmark

Problem definition

Environmental sustainability is closely intertwined with promoting inclusion, diversity, and equity within societies (UN 2023). Understanding the intricate connections between social inclusion and sustainable consumption is thereby crucial to ensure that sustainable practices are accessible to all and to address the often-disproportionate impact of environmental issues on marginalized populations. Accordingly, this paper reviews consumer research and sociology literature to explore the link between social inclusion and sustainable consumption.

Method

This study is based on a scoping review of extant research. Unlike systematic reviews, scoping reviews aim to explore existing literature to identify key concepts and themes within a broader topic (Arksey and O'Malley, 2005). The final sample consisted of 48 articles, coded based on 1) theoretical foundations, 2) explored axes of inclusion (e.g. social class, gender, ethnicity—Arsel et al., 2022), and 3) study context.

Results

Theoretical foundations. Our analysis revealed that most studies draw on Bourdieu's theory of symbolic distinction, showing that higher-class consumers are more prone to include social and environmental concerns in their consumption choices due to their "eco-habitus" (Carfagna et al., 2014). Lower-class consumers, in contrast, often focus on local issues (Schoolman, 2020) and lack the economic and cultural capital to access sustainable products and practices (Johnston et al., 2011). Bourdieusian research also suggests that higher-class consumers engage in sustainable consumption to pursue distinction and reproduce social inequalities (Bargain-Darrigues, 2023; Ramos, 2023), while lower-capital consumers feel powerlessness, fear and uncertainty in the face of environmental issues (Kennedy and Givens, 2019). Given the current focus on *symbolic distinction*, future studies could benefit from other theoretical perspectives, particularly *practice theories*, to highlight the role of material structures in reproducing barriers to inclusion in sustainable consumption.

Axes of inclusion. Most studies represent sustainability inclusion as a social class issue, with less frequent representation of gender, race, ethnicity, age, and sexuality. Very few studies adopt an intersectional perspective, considering how multiple axes interact to facilitate or complicate participation in sustainable practices. We therefore urge researchers to further examine how inclusion axes beyond social class structure participation in sustainable consumption and to be attentive to the intersections of various axes.

Research contexts. The majority of identified studies explore the sustainability-inclusion nexus in the context of food consumption within the Global North. While these contexts are important for studying inclusion issues in sustainability transitions, insights from these contexts may not be equally applicable to other consumption practices or geographical settings. We call for more attention to how sustainable consumption and social inclusion intersect in other regions, such as the Global South, and in relation to other forms of consumption.

Significance to mainstreaming sustainable consumption

By highlighting how social inclusion intersects with sustainable practices, we provide an overview of the barriers that prevent marginalized groups from participating in sustainable consumption. This understanding is crucial for developing strategies that make sustainable practices accessible and appealing to a broader audience. The paper furthermore serves as a source of inspiration for advancing this field of study.

8:00a
m -
9:45a
m

Workshop: Values for deep transformation – moving beyond an extrinsic framing of sustainable consumption policy

Location: **Aula**

Session Chair: **Hanna Eggestrand Vaughan**

Session Chair: **Tom Crompton**

The proposed workshop takes as its starting point the recognition that current consumption practices uphold, perpetuate and reinforce an unsustainable extrinsic value orientation. Shifting focus to intrinsic values has been identified as “one of the most important tipping points our societies need” (Lorek and Spangenberg, 2014, p. 42). Building on extensive academic and practical experience of values and social change, the facilitators will engage workshop participants at the nexus of values and transitions, together exploring how a values lens could inform sustainable consumption policy for deep transformations. Thus, the purpose and structure of this session is twofold. Firstly, the session introduces the participants to the dynamics of intrinsic and extrinsic values, and outlines how the current societal (over-) emphasis on extrinsic values creates lock-ins and perpetuates materialistic, hyper-consumerist practices (Kasser, 2016). This provides a theoretical grounding of the relevance of values in relation to sustainability transitions. Introducing the theoretical scope this way has been highly appreciated by sustainable consumption practitioners participating in a workshop series exploring similar issues. Secondly, drawing on a compilation of demand-oriented policy measures for sustainable consumption (prepared beforehand by the workshop organisers based on work by colleagues from the Mistra Sustainable Consumption research programme), the participants will undertake a mapping exercise, exploring the values seemingly foregrounded by the different policies. Considering the expert status of the participants as scholars and/or practitioners in relation to sustainable consumption, attaining their viewpoints on what sustainable consumption policies may forward intrinsic values and by what aspects and mechanisms (by the mapping and through the associated explorative discussions) will serve as critical input to ongoing research on the possibilities in this regard. All in all, the workshop will thus both sensitise the participants to the relevance of intrinsic values in enabling deep sustainability transformations and give key insights to spur engagement with this topic in their respective organizations/research environments, and inform current research aiming to create policy recommendations.

Workshop: Conflicts and confluences in sustainable consumption and lifestyles - A workshop inspired by the forthcoming book Vocabulary for Sustainable Consumption and Lifestyles (SC+L): A Language for Our Common Future (Part 1)

Location: **201**

Session Chair: **Laura Maria Wallnoefer**

Session Chair: **Philip J Vergragt**

This workshop invites researchers and practitioners to engage with the content of our forthcoming book, Vocabulary for Sustainable Consumption and Lifestyles—A Language for Our Common Future, as a starting point for deepening dialogue and collaboration among change agents in the field. Recognizing that diverse perspectives and conceptual framings influence how sustainability transitions and transformations unfold, the session will explore synergies, conflicts, and implementation challenges within the discourse on sustainable consumption and lifestyles (SC+L). The workshop consists of two main parts, one focusing on reflection on the concepts and the other on their implementation. In the reflexive part, we present an overview of the book’s thematic clusters (i.e., (A) Daily household decisions and lifestyles, (B) Concepts, frameworks, and applied theories, (C) Political economy, (D) Value shifts and social activism, (E) Governance, policy, and choice architecture) and the 87 included concepts ranging from Alternative Hedonism and Buen Vivir to Ubuntu and Wellbeing Economy. Participants will be invited to share their expectations and experiences, followed by a collective reflection on (1) the most frequently used concepts in the field and (2) the concepts that practitioners and researchers associate with and apply together. A short survey will help identify key concepts, followed by a fishbowl discussion about the four most used concepts regarding their synergies, interdependencies, and potential applications. We will also explore 10 to 20 concepts that are less frequently used or weakly linked to others, to uncover potential conceptual gaps, isolated, siloed research efforts, and conflicts that might present barriers to collective actions. The implementation part will shift the focus to practical applications of the concepts, examining (3) which concepts have seen broad implementation across different action areas—households, businesses, institutions, and civil society—as well as across consumption domains such as housing, mobility, food, and fashion. Participants will be asked to map widely applied concepts to relevant actors and consumption domains, discussing factors that drive or hinder their adoption. This will be followed by a second fishbowl discussion exploring (4) how more abstract, visionary concepts can be moved toward implementation, identifying key barriers and strategies for overcoming them. Drawing from best practices and real-world examples, we will discuss conflicts and confluences between theoretical frameworks and practical experiences and outline how concepts can be made actionable, ensuring their relevance in policy, industry, and daily life. In the concluding mapping exercise, participants will collaboratively identify (i) action areas and application fields (e.g., synergies between key concepts), connect them to (ii) key stakeholders and networks (e.g. influential actors), and (iii) available resources (e.g., funding opportunities), highlighting how a common language can empower change agents to effectively communicate, share ideas, and drive transformative change in sustainable consumption and lifestyles. To close the workshop, each participant will be invited to share three key takeaways and propose a concrete next step, with the potential to establish a follow-up working group. By fostering a deeper understanding of the conceptual landscape of SC+L and exploring both conflicts and confluences, this session aims to strengthen collaboration in the field.

8:00a
m -
9:45a
m

Workshop: Monitoring progress towards enabling net zero lifestyles

Location: **133**

Session Chair: **Paula Schöberlein**

The European Climate Neutrality Observatory (ECNO), launched in 2023, is an independent, science-based initiative that tracks the EU’s progress toward its 2050 goal of net zero GHG emissions. It monitors trends across thirteen sectors and cross-cutting ‘building blocks’ of a climate-neutral society, such as electricity, industry, finance, and lifestyles. ECNO delves into the ‘enablers’ or pre-conditions for change, not just overarching trends like GHG emissions. While sectors like electricity and industry offer more straightforward metrics—like renewable energy shares or industrial process efficiency—assessing lifestyles and sustainable consumption is more complex. Defining and quantitatively measuring the enablers and barriers to sustainable consumption poses challenges, as positive outcomes like decreased meat consumption or fewer kilometers driven do not explain the reasons behind these shifts. It is crucial here that we do not look at numbers that tell us progress on the sustainable lifestyles themselves, e.g. dietary habits, mobility and living choices, but what initiates this progress (ECNO, 2023). ECNO’s approach follows the assumption that, to live sustainably, the sustainable option must become the convenient choice, the most affordable, and the default. In short: Make it easy, make it cheap, make it normal. The first so-called enabler hints towards changes in the environment that provide the right choice architecture for people to live sustainably (Shove et al., 2023; Akenji et al., 2021:). This could be the availability of plant-based options in public canteens or an accessible public transport system (Reisch & Sunstein, 2021; UNEP, 2022). The affordability of sustainable consumption is the second enabler (Buenstorf & Cordes, 2008). This requires that living sustainably gives you a price advantage over more carbon-intensive choices. Thirdly, sustainable options must become the default – for the widespread, rapid update of net zero lifestyles must be driven by more than climate consciousness alone (Stoknes, 2014; Lazaric et al., 2020). This workshop aims to explore how to measure progress on these enablers with quantitative data. The discussion will focus on questions such as: what are the underlying drivers or enablers for a shift towards consumption patterns aligned with a net zero economy? What indicators can we use to track these and what data are available? We want to use the expertise and knowledge of the conference participants to further our thinking on the issue, to discuss and ‘peer-review’ ECNO’s approach. We also hope that the dialogue will broaden our search for new indicators that, if they are progressing, suggest progress in lifestyles. Examples could be investments in public transport or number of countries that mandate plant-based food in public canteens. These would then, ideally, impact people’s

8:00a
m -
9:45a
m

	everyday choices. We believe that the workshop will provide participants with a new perspective on how to measure progress on lifestyles while improving and grounding our approach through the concentrated knowledge on sustainable consumption in the room.
9:45a	Coffee Break
m -	Location: Stora Sparbanksfoajén
10:15a	
m	
10:15a	Doing Less in Everyday Life
m -	Location: Stora Salen
12:00p	Session Chair: Tullia Jack
m	

Idleness - an organising principle for sustainable consumption and production

Tullia Jack

Lund University, Sweden

Problem definition

The relentless pursuit of productivity and economic growth has led to unsustainable consumption patterns and environmental degradation. This research explores the concept of idleness as a potential antidote to overconsumption and a pathway to sustainable living. By tracing the development of idleness through sociological literature, including the works of Bertrand Russell, Paul Lafargue, John Maynard Keynes, and Jenny Odell, this study aims to reframe idleness as a valuable tool for promoting sustainable consumption practices.

Method

This research employs a comprehensive literature review and critical analysis of key texts on idleness from prominent sociologists and thinkers. The study examines Bertrand Russell's "In Praise of Idleness," Paul Lafargue's "The Right to Be Lazy," John Maynard Keynes' "Economic Possibilities for our Grandchildren," and Jenny Odell's "How to Do Nothing." These works are analyzed to trace the evolution of idleness as a concept and its potential implications for sustainable consumption.

Results

Contrary to predictions of increased leisure time due to technological advancements, contemporary society has experienced a decline in free time. Juliet Schor's research demonstrates that working hours have increased since the 1970s, despite productivity gains, leading to a "work-and-spend" cycle. Zygmunt Bauman's concept of "liquid modernity" further explains how the pressure to be productive and adaptable blurs boundaries between work and leisure. The study finds that genuine idleness, conceptualized as purposeful disengagement from consumerist and productivity-driven activities, has become increasingly rare. Even ostensibly leisure activities are often approached with a productivity mindset, aligning with Bauman's observations about the commodification of life. Despite sociological literature emphasising the importance of idle time, idleness is dwindling as an organising principle for society.

Significance to mainstreaming sustainable consumption

This research contributes to mainstreaming sustainable consumption by challenging the dominant discourse of efficiency for sustainability instead offering idleness as an organising principle for wellbeing and fulfillment. By promoting idleness, it encourages a reduction in unnecessary consumption and resource use. The study suggests that embracing idleness can lead to reduced environmental impact and increasing wellbeing. The research provides a theoretical foundation for policy recommendations that prioritize leisure time and work-life balance as means to promote sustainable everyday life. By reframing idleness as a valuable societal asset rather than a personal failing, this study offers a novel perspective on addressing unsustainable consumption patterns and contributes to the ongoing dialogue on mainstreaming sustainable consumption practices.

"Unproductive" labor as strategy for wellbeing and sustainability

Mikael Linnell

Lund University, Sweden

Problem definition: The current polycrisis of climate change; costs related to housing, energy and food; continued unsustainable extractivism; and accelerating loss of biodiversity, has clearly increased interest in altering lifestyles towards sustainability and sustainable consumption, and an overall slowed down throughput of matter and energy in society. In developed regions of the global north, people increasingly consider downshifting, self-limitation, voluntary simplicity, and minimalism as viable alternative strategies to sustain wellbeing in a consumerist society. These different strategies all serve to highlight the simple fact that wealthier humans need to enjoy "less" more (Allen 2024).

To allow for more free time, we need to spend less time on traditional wage labor, which requires a reevaluation of how we view work. As argued by Gerold et al. (2023), work may be understood as a biophysically intense, consumption-causing, heteronomous institution with ambivalent health impacts that stabilises societies in environmentally and socially unsustainable ways, and thus should be radically reduced. An important question that follows from this is what to do with the increased amount of free time; how can we enjoy "less" more?

In this preliminary paper I explore notions of "unproductive" work, by which is meant activities carried out instead of traditional wage labor. "Productive" work, then, can be understood as paid labor with the aim of maintaining (and accelerating) the high material and economic throughput in society, including current unsustainable modes of production and consumption (hence the quotation marks) (Barca 2017; Gerold et al. 2023; Nørgård 2013).

Method: The presentation is based on ongoing research within the project *Preparing for degrowth: social resilience, transformation and self-limitation*, and will direct attention to the meaningful practices of "unproductive" labor made possible by scaling down consumption-centered and productivity-pushing lifestyles. The empirical material consists of

in-depth interviews with people who are in a liminal phase (Varvarousis 2019) of transforming their everyday lives towards sustainability and increased free time. Through the interviews we get to meet five people, here named Anna, Tobias, Vera, Leo, and Sara, who, in various ways and for various reasons, have begun a change away from the detrimental existence associated with “productive” work. The interviewees are people with no particular affiliation in transition networks or communities, but who experience a need for change and thus have begun a process of downshifting.

Results: Ongoing research.

Significance to mainstreaming sustainable consumption: With the interview material as starting point, the presentation focus on four principal aspects: (1) how the participants use their free and “unproductive” time, (2) how they relate their ways of doing “less” to sustainability and anti-consumerism, (3) how they relate their ways of doing “less” to perceived wellbeing, and (4) potential expectations for them to explain and defend their lifestyle to an unsustainable and consumerist society.

De-intensifying everyday life (or doing less): outcomes of participation in sustainable living trials

Claire Hoolohan

University of Manchester, United Kingdom

Problem definition

High-carbon living is highly-consumptive and highly-mobile. Transport accounts for around one-fifth of global carbon dioxide emissions, of which passenger vehicles contribute around 45%, the vast majority from cars, and passenger aviation a further 9.4% (Richie, 2020). Considerable research has been invested in understanding mobility practices, revealing them to be complex and emergent. The integration of the car and the plane, within systems of auto- and aero-mobility create conditions that support the continued domination of these practices. Furthermore, mobility practices bundle with others, enabling the effective participation in practices related to work, leisure, and care (Greene et al., 2022). In these ways, high-carbon mobility becomes necessary, ordinary and non-negotiable. And yet, as contentious as it may be, effective decarbonisation requires these practices are abandoned. This research explores the lived experience of going without high-carbon travel modes, and the resulting de-intensification of everyday life that follows.

Methods

This presentation presents findings from two sustainable living trials; Going Car Free (a car-free living experiment) and Climate Perks (in which employers grant paid days off for low-carbon holiday travel). Partnered with the climate action charity Possible, these trials were evaluated as part of a programme of research within the ESRC Centre for Climate Change and Social Transformation which aims to understand ‘How can we as a society live differently – and better – in ways that meet the urgent need for rapid and far-reaching emission reductions?’. The present research takes a social practice perspective (Watson, 2012; Southerton, 2020), to understand how social change is patterned, co-ordinated and directed. Qualitative interview data is presented to demonstrate how defection from high-carbon travel practice contributes to the renegotiation of commitments and produces temporal experiences that resist the intensification of everyday life.

Results

Mobility practices are typically positioned as those that enable practices fixed in location (schooling, working, shopping), and posits that change in mobility practices could result from changes in neighbouring practices. Here, change in the connective practices requires the reorganisation of spatial and temporal commitments, as slower travel modes weave differently into the fabric of everyday experience. Data reveals these trials to be inhibitive – slow travel modes (typically) require more time and there are fewer connections between origin and destination. Consequently, participation in low-carbon mobility practices prevents participation in ordinary sequences and routines. However, personal experiences are not of loss and the data reveal an overwhelming sense of personal gain that emerges from doing less. Participants reflect on how high-carbon modes of travel contributed to the intensification of everyday life, enabling more commitments to be made and met, over greater distances and shorter spaces of time. Abandoning high-carbon mobility enabled pause for critical reflection on the lived experience of intensification, and on personal priorities for less-intensive ways of living.

Significance to mainstreaming sustainable consumption

This study thereby contributes empirical evidence to an ongoing conversation about the decarbonisation of everyday life, providing reflection on how defection from high-carbon practices enables productive renegotiation of spatial and temporal commitments.

Does a higher carbon footprint lead to higher life satisfaction?

Sarah Christine Olson¹, Enar Leferink¹, Michał Czepkiewicz², Jukka Heinonen¹, Áróra Árnadóttir¹

¹University of Iceland; ²University of Warsaw

Problem Definition: Changes in consumption are necessary to stay within the 1.5 degree warming limits. Affluent individuals and countries often have high carbon footprints while reaching high levels of wellbeing and life satisfaction. Some studies have found a link between increased carbon consumption and increased wellbeing, while other studies have not found this relationship and have found diminishing returns of life satisfaction with increased income. To explore the relationship between carbon footprints and life satisfaction, we look at the affluent Nordic countries, which are consistently ranked as some of the countries with the highest life satisfaction the world and have high carbon

footprints from a consumption perspective. This study aims to see the impact on various aspects of life satisfaction from the overall carbon footprint as well as eight different consumption domains to see the potential of achieving high life satisfaction at low emission levels.

Methods: To examine the relationship between carbon footprints and life satisfaction, we utilize the data from a carbon footprint calculator survey that was conducted between the fall of 2021 to the spring of 2022 with around 8,000 responses from the Nordic countries (Denmark, Finland, Iceland, Norway, Sweden). In the survey, respondents answered questions concerning various aspects of life satisfaction as well as reported information about their consumption over the past year in order to calculate their consumption-based carbon footprints. We analyzed both a general life satisfaction question and satisfaction with several life domains. The domains were grouped into material (related to financial and material situation, dwelling conditions and living environment) and social-psychological (personal growth, purpose in life, and societal participation). Regression analysis was used to see the relationship between these types of life satisfaction with the overall carbon footprint as well as eight different consumption domains (diet, housing energy, vehicle use, public transport, leisure travel, second home, pets, and goods and services).

Results: We found that overall life satisfaction and material life satisfaction had a slightly negative relationship with the carbon footprint meaning that life satisfaction does not necessarily increase with a high carbon footprint, however some consumption categories, especially leisure travel and owning a second home, showed a positive relationship with the carbon footprint meaning increased consumption in these categories increased these types of life satisfaction. Social-psychological life satisfaction, on the other hand, did not show a significant relationship with the overall carbon footprint or with the consumption domains, with the exception of leisure travel, meaning that social-psychological life satisfaction is not dependent on the carbon footprint. These results indicate that we can possibly reduce carbon consumption to reach more climate sustainable lifestyles without necessarily compromising life satisfaction.

Significance to mainstreaming sustainable consumption: These results are significant to mainstreaming sustainable consumption since they show the potential of life satisfaction, especially social-psychological aspects, not being dependent on the carbon footprint in the affluent context. The results also identify the potential consumption categories that may be more impactful to life satisfaction, so more climate compatible options can be promoted to meet these needs.

Normalizing what's outside the norm? On social (im)possibilities to consume less

Asa Callmer, Magnus Boström

Örebro university, Sweden

Reducing consumption levels is one of many strategies necessary in the transition to a sustainable society in line with the climate goals. The obstacles in the way of doing so are, however, numerous. Some of these obstacles are of social nature and have to do with, for example, how we relate with others through consumption, what type and amount of consumption that is expected from us in different social contexts, and the perceptions surrounding what "normal" consumption is. One key to mainstreaming sustainable consumption can be found in this last part: to challenge the current perception of "normal", and to normalize more sustainable (lower) levels of consumption. This paper aims to contribute to the understanding of this normalization process by answering the question: What are the factors at play in the normalization of consumption reduction and sufficiency-oriented lifestyles, and how are these experienced and handled by individual reducers?

Based on a qualitative interview study with 25 Swedish individuals in different stages of consumption reduction, the paper explores the social dimensions of this process and identifies the social obstacles and possibilities that the "reducers" face. Follow-up interviews have been done with 12 out of 25 interviewees, aiming to capture potential changes in their ambitions, reflections and experiences over time, and the interviewees have also answered three shorter surveys between the two interviews. The qualitative data is analyzed using a theoretical framework centering on social contexts, practices, and perceptions around "normal" consumption (including social norms).

The results suggest that these norms are changing in Sweden, at least in certain groups and partly driven by increased living costs. This in turn facilitates for more people to make more sustainable consumption choices, such as reducing energy consumption and shopping second hand. However, it can be discussed whether the reductions realized by some of the more "mainstream" reducers are actually challenging the conception of what is considered normal consumption or if these reducers tend to stay at a level of consumption that is socially comfortable.

Some of the factors that appear as central in the normalization process are financial motivations, increased knowledge and concern about the effects of mass consumption on climate and environment, time to develop alternative practices and competences, and critical reflections around the norms and meanings of mass-consumption and what it is that makes one feel contentment in life. The results furthermore point to the importance of a supportive social network and the potential for normalization that lies in daily conversations about what types and levels of consumption can be considered acceptable, sustainable and/or necessary. These conversations take place for example within the family, among friends, and at the workplace.

In outlining central aspects of importance for normalizing consumption reduction, this paper contributes to the understanding of the "whys and hows" of mainstreaming sustainable consumption and sufficiency-oriented lifestyles.

Barriers and enablers around transformative sharing

Diana Ivanova, Milena Büchs

University of Leeds, United Kingdom

Problem definition: Numerous barriers and enablers of sharing have been identified, but perceptions of related policy challenges and needs are poorly understood.

Method: We examine expert perspectives on policy challenges and recommendations that guide sharing oriented towards respecting ecological limits, supporting access to essential resources and services, and nurturing thriving relationships. The analysis is based on 27 semi-structured interviews with practitioners and scholars.

Results: The paper identifies policy challenges and recommendations for sharing and common ownership across three dimensions: institutional and economic; infrastructural; and socio-cultural. Examples of policy recommendations include: the provision and control of shared essential resources, public access, participation and ownership, supportive infrastructures, community, solidarity, and reciprocity norms.

Significance to mainstreaming sustainable consumption: Transforming consumption systems towards sustainability requires targetting the deeply-seated social, political, economic and technological barriers to transformation. Radical or transformative sharing has been proposed as an approach that can support fundamental changes. It integrates three key elements for a socio-ecological transformation: (1) sharing that provides prosperity within ecological limits; (2) sharing that supports access to essential goods and resources; and (3) sharing that nurtures thriving relationships. However, the potential of sharing initiatives to be deeply enabling for sustainability is not automatically realised. Previous research has identified numerous barriers and enablers to radical sharing; however, practitioners perspectives of the policy challenges, needs and options for enabling such sharing remain under-researched.

10:15a Social relations and sustainable lifestyles 2

m - Location: **Lilla Salen**
12:00p Session Chair: **Lucie Middlemiss**
m Session Chair: **Ruth Isabelle Bookbinder**

Institutional social relations for retrofit

Iain Cairns

University of Strathclyde, United Kingdom

In the UK, the housing stock is not being retrofitted for energy efficiency fast enough to meet targets for net zero. In this paper, we argue that existing policies are too reliant on individual incentives and, resultantly, have contributed to this shortfall by neglecting the contextual factors (e.g. the unique characteristics of specific locations) that underpin retrofit decision-making. While relational sociology has started to address how relationships between people, agencies and identities impact retrofits, it has not yet explored how the social relations between different agencies facilitate or hinder the uptake of retrofits in localities. This paper addresses this gap by exploring the inter-agency social relations of retrofit in three case studies: 1) tenements in Crosshill, Glasgow, 2) the private rented sector in Brighton and Hove and 3) Area Based Schemes in Leeds. In each case, we find that the relational work (efforts to build and maintain relationships) supporting retrofits depends on the involvement of the state and state agencies. Where this work is inadequate, little retrofitting occurs; where it is undertaken, it primarily supports state priorities (e.g. reducing fuel poverty). This paper contributes to debates on appropriate public policy for energy efficiency and to relational sociology's treatment of inter-agency relationships.

The relationality of moral intuitions: An experiment on normative uncertainties to broaden the scope of justice in energy decision-making

Nynke van Uffelen

Delft University of Technology, Belgium

Problem definition

The energy transition requires large-scale changes in infrastructure, technologies, regulations, and consumption patterns. Decision-making in this context, albeit by experts, policymakers, individuals, or businesses, is steered by values, including moral values such as justice. Intuitions about justice, in turn, are relationally shaped through (a) the institutions people are embedded in and (b) people's identities, which are often created through attachments to places and people and thus include regional and national identities. As a result, energy decision-making may prioritize regional and national interests, which can be seen as a moral bias and a problem for just energy transitions. In this study, we pose the following research question: How can we advance just decision-making on energy consumption, given the relational constitution of people's intuitions about justice?

Method

To explore this question, we engage in action research in the context of the port of Rotterdam in the Netherlands. In an experimental setting, participants play a serious game in which they have to make energy decisions on decarbonising the port under deep epistemic and normative complexity and uncertainty. In this, the effects of their decisions, namely (a) the monetary balance of the port of Rotterdam and (b) the global effects of the ensuing CO2 emissions, are gradually made tangible and visual. In other words, the participants are confronted with their relationality beyond their immediate regions and countries.

Results

This research project is still work in progress, and we hope to receive feedback and exchange ideas during the SCORAI conference.

Significance to mainstreaming sustainable consumption

The results of this study contribute to energy justice theory, as they explore the moral dimensions of relational perspectives on energy consumption behaviour. Moreover, our findings may contribute in practice to designing more just decision-making processes in the energy transition by broadening the scope of justice.

How do social relations shape the experience of the air-energy nexus for households in the WELLBASED study, and are families with children differentially affected?

Rebecca Sale¹, Lucie Middlemiss¹, Jim McQuaid¹, Catherine Noakes¹, Marco-Felipe King¹, Beverley Searle¹, Merel Stevens²

¹University of Leeds, United Kingdom; ²Erasmus University Medical Center, the Netherlands

Within the home, interactions between energy and air systems, including heating and cooling the household, can be described as processes at the 'air-energy nexus' (Bouzarovski and Robinson, 2022). Managing the indoor air-energy nexus is important because the home and indoor environments are critical for health, safety, comfort, and relationships, and people spend up to 87% of their time in indoor environments (Klepeis et al., 2001). However, some households, including those living in energy poverty, might struggle to manage the air-energy nexus. For example, it can be difficult for energy poor households to balance maintaining heat in the home, as well as adequately ventilating without losing heat, and this can increase the presence of damp and mould. Living in poor indoor environments can have negative impacts on physical and mental health, particularly for children. Therefore, this project aims to understand the experience and management of the air-energy nexus for different household types living in energy poverty by drawing upon a relational approach, to understand whether families with children are differentially affected by problems at the air-energy nexus and how this might be shaped by social relations. A social relations approach can be used to understand how relationships with family, friends, communities, and identity can affect practices and behaviours which might affect the processes at the air-energy nexus. This work will analyse interviews, surveys, and indoor air quality data from energy poor households in the WELLBASED project, which is a study across six European cities looking at the impact of an intervention programme on the health and wellbeing of energy-poor households. Outcomes of this work could shape guidance for families with children about managing their homes sustainably, and ultimately improve health and wellbeing for these families.

Mainstreaming relational retrofit for low consumption futures

Catherine Butler, Lucy McFadzean

University of Exeter, United Kingdom

Housing has long been recognised as a key site of consumption requiring deep transformation to enable moves toward sustainability. Recent literature has foregrounded relational, regenerative approaches to transition as ways to move beyond more narrowly conceived individualist and technologically focused concepts of sustainable housing. These ideas have found significant traction and have been developed within communities around the world. Our research in the UK is one such example where we have applied relational approaches to developing retrofit with positive outcomes for people, place, and environment. However, challenges remain in considering issues of scaling and expanding relational approaches to transform homes beyond single localities. Drawing on Tsing's notion of nonscalability, this paper tackles questions of how to mainstream relational approaches to reduced consumption through the example of housing retrofit. The paper will first draw on qualitative interviews and workshops in two UK locations to set out how relational approaches are crucial to developing more effective, just, and regenerative low consumption housing. Then the analysis will move to examine how such approaches can be developed and implemented more widely, while still retaining relational principles. Going beyond theoretical reflection, the paper will offer insights into the possibilities and challenges for practical widespread implementation of regenerative community-based retrofit that accounts for housing as inherently relational.

How would we know if energy policy was relational?

Stephen Hall

University of York, United Kingdom

The promise of relational approaches to sustainable consumption could be transformative. In the energy system it would require a revolution in the underpinning assumptions of what energy consumers and markets are, and what they could achieve. In this contribution we use a relational lens to analyze whether different types of energy policy genuinely challenge the status quo of system governance, whether they are as 'radical' or 'mission led' as they seem. We reflect on current debates in energy politics, over whether we govern the energy transition through bold 'Mission-Led' government or pragmatic 'Radical Incrementalism'? A mission-led approach has an emboldened state setting clear goals for transformational change. Radical Incrementalism calls for pragmatic interventions that can be implemented quickly and benefit millions. Here we explore how the UK government's commitment to 'Mission-Led' government applies to domestic energy. We expose our collective ignorance on whether the current energy transition is fair, and then describe the risks that Net Zero policy is making inequality worse. We explore how 'Mission Led' and 'Radical Incrementalist' approaches might pursue fairer low carbon futures for domestic consumers. We argue both Radical Incrementalism and Mission-Led government could challenge mainstream assumptions on how people behave in energy markets, by adopting a 'relational' approach to domestic energy consumers. This would supplant 'rational' assumptions about consumers, with promising implications for Net Zero.

10:15a Public support for consumption-based policy

m - Location: Nya Fest
12:00p Session Chair: Emma Ejelöv
m

Political parties and their role in the mainstreaming of strong sustainable consumption – Paving the way or just blocking it?

Lars Erik Berker

University of Münster, Germany

Problem

definition

Strong sustainable consumption (SSC), e.g., referring to sufficiency, is an essential component of counteracting the multiple (social-)ecological crises. However, mainstreaming SSC faces several well-researched challenges of which a dominant consumerist and growth-dependent culture is one of the most fundamental. Since they act within this culture established actors of the political process are often seen as hindering the diffusion of SSC by researchers (and activists). This applies not least to political parties. However, studies that investigate this claim are rare and political parties often neglected in the literature on sustainable consumption and socio-ecological transitions. Therefore, this contribution intends to explore the nexus of political parties and SSC on both a theoretical and empirical basis.

Method

Theoretically, this contribution draws upon party research and policy analysis literature in order to make the case for political parties as key agents of SSC mainstreaming. Empirically, it applies the method of comparative case studies and asks whether there are indeed no parties advocating SSC in key sectors like food, housing, mobility and repair, and, thus, potentially contribute to its mainstreaming. Primary data sources are recent party programmes and other party publications. The investigation focuses on green and left-socialist parties in four European countries that are often characterised as so-called environmental policy pioneers, i.e., Austria, Germany, the Netherlands and Sweden. Building on insights from the aforementioned literature, these parties may serve as most-likely cases for positions in favour of SSC.

Results

Theoretically, this contribution argues that political parties – despite their currently at least controversial role – must be understood as key agents for the mainstreaming of SSC. Not only do political parties play a pivotal role in final policy-making in most contemporary democracies, but they also often set crucial landmarks for the extent to which and how public discussions on a particular issue develop. In fact, the democratic agenda-setting process is not only bottom-up but often top-down as well. Furthermore, it presents empirical insights into political parties' positions on and framings of sustainable consumption. It will be intriguing to see to which extent some political parties indeed embrace SSC in their communication. In addition, it will be discussed which party features make political parties address SSC and how a stronger emphasis on SSC could be attractive for political parties to (re)gain voters and counteract components of the current crisis of democracy such as the rise of populist radical right parties. *Significance to mainstreaming sustainable consumption* This contribution investigates political parties as persistently powerful agents of agenda-setting and issue mainstreaming in modern democracies. It reflects on the extent to which today's parties already fulfil this role in the context of SSC, discusses the background to current positioning and framing and outlines perspectives for the role of political parties in the mainstreaming of SSC.

Mitigating consumption-based greenhouse gas emissions in the Nordic countries

Eskil Engström¹, Markus Larsson¹, Karin Bradley¹, Merethe Dotterud Leiren², Emma Ejelöv³, Göran Finnveden¹, Karen Haugs Langvik², Jukka Taneli Heinonen⁴, Jörgen Larsson³, John Thøgersen⁵

¹Royal Technology Institute Stockholm; ²CICERO – Center for International Climate Research; ³Chalmers University of Technology; ⁴University of Iceland; ⁵Aarhus University

The Nordic countries have positioned themselves as climate frontrunners, yet consumption-based greenhouse gas (GHG) emissions, which account for emissions embedded in trade, remain comparatively high. At the same time, the IPCC (2023) has underscored that demand-oriented strategies will be imperative to deliver immediate, deep, rapid, and sustained GHG reductions in line with the Paris Agreement. This article reviews existing Nordic strategies and examines proposed and implemented consumption-oriented policy measures to reduce consumption-based GHG emissions. Through a scoping review of academic and grey literature, approximately 100 unique policy measures were identified, with 21 selected for deeper multi-criteria analysis using the Policy Delphi method. In two rounds of ranking and dialogue, 23 Nordic experts assessed these measures' potential to reduce GHG emissions and their feasibility. This paper will present results from the Policy-Delphi. The findings suggest that while many consumption-oriented measures exist, there is also a need for wider policy packages. Experts also highlight that stronger versions of the consumption-oriented measures are required for significant emissions reductions. However, such measures may face trade-offs in terms of feasibility, including lower public and political acceptance. Compensatory measures—where pollution charges fund low-emission alternatives—are recommended to enhance feasibility. This article will also discuss the relevance of expert multi-criteria analysis to identify a wider set of promising policies to drive demand changes towards reduced consumption-based emissions.

Can it really be that easy? - Social Representations of Voluntary Carbon Offsetting

Laura Salmivaara, Mari Niva, Annukka Vainio

University of Helsinki, Finland

Voluntary carbon offsetting has emerged from the need to strive for carbon neutrality in order to limit the rise in global average temperature to 1.5°C compared to pre-industrial times. Finland has set a target of being carbon neutral by 2035 and declared a new Finnish Climate Change Act. However, despite the potential of carbon offsetting to drive

carbon neutrality, it is currently guided in Finland on the basis of international good practices, while EU and domestic regulation is still being developed. In addition, earlier research suggests that citizens are sceptical about voluntary emission offsets, making it more difficult for offsets to be adopted more widely as a means of reducing emissions. A prerequisite for engaging consumers in effective carbon offsetting is a shared understanding of it among stakeholders. In order to achieve this, it is necessary to explore how citizens currently conceptualise voluntary carbon offsetting.

The objective of our research is to analyse the complementary role of voluntary offsetting in climate change mitigation and to understand how it is perceived and understood by citizens. In our paper, we use the social representation theory to examine how citizens create a shared understanding of the concept of voluntary carbon offsetting. The study is based on qualitative data from eight online focus group interviews, three of which consisted of forest owners. The interviews were arranged in December 2023 with 44 participants aged between 18 and 73, residing in different parts of Finland. We identify four main themes through which the participants addressed voluntary offsetting. These were Equality - Inequality, Efficiency - Inefficiency, Individual Responsibility - Corporate Responsibility, and Reliability - Unreliability. Through these, the participants anchored voluntary carbon offsetting into culturally familiar categories imbued with socially significant meanings. During the discussions, the participants developed their shared understandings of offsetting by reflecting on whether everyone has or should have an opportunity to compensate for their emissions, whether voluntary offsetting is an efficient means of reducing carbon emissions, whose responsibility it is to compensate, and whether the existing schemes are reliable. In their view, carbon offsetting covers not only monetary compensation, but also other actions (such as one's own consumption habits) that they felt were genuinely voluntary, more concrete, and thus effective.

The study contributes to developing understanding of how people create and shape their mutual understanding of a new, abstract concept in the field of climate change and its mitigation. By so doing, the research also contributes to identifying possibilities to promote acceptance and effectiveness of political guidance. The results indicate that the roots of polarized discussion around voluntary carbon offsetting in part may be explained by differences in the social representations of carbon offsetting.

A willingness to reduce? Exploring the potential for sufficiency-oriented sustainability transitions in Norway

Gisle Solbu¹, Martin Inge Standal², Berit Therese Nilsen², Lucia Liste², Patric Wallin¹

¹Norwegian University of Science and Technology, Norway; ²NTNU Social Research

In recent years, the concept of sufficiency has attracted more attention in sustainable consumption research. Often juxtaposed with principles like efficiency – which discuss sustainability along with economic growth and focuses on production-side emission reductions – sufficiency suggests alternative sustainability pathways by emphasizing reduced consumption. It stresses the importance of meeting people's basic needs equitably and respecting ecological limits while avoiding overconsumption. This thinking has also influenced policy-making. For instance, the IPCC has underscored the vital role of sufficiency-oriented policies in mitigating emissions by complementing efficiency-oriented policies (IPCC, 2022). Despite sufficiency becoming a more prevalent concept for addressing sustainability issues, deeper discussions about its social acceptability and broader societal implications are scarce. As a result, we lack a comprehensive understanding of the potential for sufficiency-oriented transition strategies, raising questions about the feasibility of sufficiency pathways.

This paper aims to explore archetypes of acceptability of sufficiency-oriented sustainability strategies in Norway, a high-income context characterized by generally high individual CO₂ footprints. We ask: what common subgroups of individuals exist based on radical concepts of reducing consumption, and how do these subgroups correspond with citizens' perspectives on future societal development, their existing consumption practices, and their perceived responsibilities in sustainability transitions? We explore this question by applying a novel survey design to a representative sample of the Norwegian population (n1000). The survey maps the respondents' individual CO₂ footprints and their acceptability of sufficiency-oriented policy interventions. We utilize a latent class analysis approach to identify common subgroups of policy intervention attitudes and investigate how the CO₂ footprints are distributed within these groups. Through this approach, we seek to understand how varying consumption levels (high, medium, and low CO₂ footprints) are distributed within common stances on concepts of reducing consumption. The survey thus aims to unpack whether archetypes of resistance or willingness to reduce consumption are associated with individuals' CO₂ footprints. We argue that this provides an important starting point for the ongoing discussions on sufficiency as it gives indications on typical responses to- and the political feasibility of sufficiency-oriented strategies, how citizens perceive their responsibilities in sustainability transitions and ultimately outlines the policy and regulatory frameworks needed to support sufficiency objectives.

References:

IPCC, (2022) 'Summary for Policymakers'. In: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA.

From policy to plate: Insights into policy-driven dietary shifts in Germany and Spain

Catherine May Reyes¹, Igor Nikolic², Laura Scherer¹

¹Leiden University, Netherlands; ²Delft University of Technology, Netherlands

Problem definition

Global dietary choices, particularly the overconsumption of meat, are deeply intertwined with health and environmental consequences. The food system contributes to 21-37% of global greenhouse gas emissions, primarily from livestock production, which drives climate change and environmental degradation. The European Union, especially Germany and Spain, exhibits some of the highest levels of meat consumption, reflecting deep cultural roots and economic interests. However, this consumption pattern poses severe risks, including an increased incidence of chronic diseases like cardiovascular disorders and colorectal cancer. Despite the recognized need to shift towards more sustainable diets, effective strategies for reducing meat consumption remain underexplored. This study seeks to address this gap by evaluating policy interventions aimed at reducing meat consumption in Germany and Spain, with the broader goal of informing sustainable dietary practices.

Method

This study employs Agent-Based Modelling (ABM) to simulate and analyze meat consumption behaviors in Germany and Spain. ABMs are adept at capturing the complexities of systems where individual entities (agents) interact dynamically within their environments, leading to emergent behaviors at the population level. The model simulates the effects of policy interventions—including enhancing vegetarian options, implementing meat taxes, and promoting health-focused social campaigns—on meat consumption patterns. The ABM framework enables a comparative analysis between the two countries, accounting for cultural, socio-economic, and demographic differences that influence consumer responses. Additionally, the model explores how different societal groups within each country react to these interventions, providing a nuanced understanding of policy impacts. Statistical analyses, including Welch's t-tests and Monte Carlo simulations, were used to validate the findings and assess the variability of outcomes.

Results

The study found that a multifaceted approach, combining various strategies, was most effective in reducing meat consumption. Enhancing the availability of vegetarian options proved to be a successful nudging technique, and meat taxes substantially decreased consumption, particularly in Spain, where price sensitivity is higher. Health-centric campaigns had a modest impact individually but contributed to overall reductions when combined with other measures. Differential responses were observed across societal groups; women adapted more readily to policy changes, while higher education was correlated with increased meat consumption, likely due to higher income levels. Low-income individuals showed a greater reduction in meat consumption compared to high-income individuals when exposed to a 20% meat tax and increased vegetarian options. These findings highlight the importance of tailoring policy interventions to specific societal groups to maximize their effectiveness.

Significance to mainstreaming sustainable consumption

This research offers critical insights into the challenges of mainstreaming sustainable consumption, particularly regarding dietary habits. The findings underscore the necessity of employing tailored, multi-pronged strategies that account for the diverse behaviors and economic realities of various societal groups. By demonstrating the effectiveness of specific interventions, this study contributes to the broader effort to shift consumption patterns toward sustainability. Policymakers can leverage these insights to design informed, context-specific policies that address both environmental and public health goals, thereby advancing the mainstreaming of sustainable consumption practices at both national and global levels.

The role of local governments in enabling sustainable food consumption among citizens

Asa Svenfelt, Sara Gustafsson, Brita Hermelin

Linköpings universitet, Sweden

Problem definition

Current discourses on sustainable development stress the importance of thinking globally and acting locally, identifying cities and local governments as central hubs for operationalising national and international sustainability ambitions. Additionally, there is broad consensus that achieving sustainable development requires collaboration across various sectors, domains, and organisational boundaries. This includes engaging a wide range of actors and stakeholders, such as politicians, consumers, citizens, producers, and technology developers. Hence, the discussion about local initiatives for sustainable development is very much about governance. This study focuses on sustainable food consumption and explores how Swedish local governments can in various ways support sustainable food consumptions among their population. In this, the local governments can have many different roles not least through policy implementation, and through governance that implies collaboration and community engagement. Questions that will guide the analysis in this study is: Which roles do local governments play in this context? How can local governments develop an outreaching approach to engage local actors in issues related to sustainable food consumption? Which strategic tools do local governments use?

Method

The project applies a qualitative research design based on various types of empirical material from Swedish local governments. The research process has a two-step approach where the first was about developing a basic understanding of Swedish local governments' outreaching initiatives to sustainable food consumption. This was done through a desktop study including all 290 local governments in Sweden. Based on the findings from the scanning a sample of local governments were selected for more in depth studies. These studies involved analysis of policy and planning documents, and interviews with politicians, public officials and local representatives from civic society.

Results

The result from this study shows that consumption related policy and strategies of Swedish local governments - primarily target their internal processes and activities within their own organisational boundaries. Examples include strategies for public procurement, and policies for canteens across various welfare institutions (schools, elderly care, etc). There are however also several examples of local governments that have already engaged in enabling

sustainable food consumption among its' citizens. Many of these have, or are in the process of, adopting consumption based local climate targets.

Other tentative results from the experiences of those initiatives are that local government play diverse roles in promoting sustainable food consumption, such as through policy enforcement, public education and partnerships with stakeholders. Local governments adopt varied approaches to outreach, with some focusing on direct public engagement, while others rely more on policy initiatives targeted towards organisation within civil society and the private sector.

Significance to mainstreaming sustainable consumption

through this study we will identify key barriers and success factors to engaging other local actors towards a more sustainable food consumption. Finally, by studying various local initiatives, the project will contribute to the state of the art for how local governments assume their roles for sustainable development. The various case studies provide knowledge about how local initiatives can be implemented in different locations and how they can manifest themselves.

10:15a **Sufficiency-oriented consumption practices for a circular society**
m - Location: **Gustafscenen**
12:00p Session Chair: **Henrike Rau**
m Session Chair: **Mary Greene**

Circular consumption and the social and cultural practices of decay

Helen Holmes

University of Manchester, United Kingdom

This paper argues for the importance of understanding the social practices of decay to improve circular forms of consumption. Although recognition is growing for the need to understand and encourage circular consumption, to date an active engagement with the role that decay and decay practices play in this has been limited. Decay features to varying degrees and through a variety of different lenses within heritage studies, geography, anthropology and the more nascent interdisciplinary field of discard studies. Heritage studies consider the practices of decay in relation to ecologically significant landscapes, whilst geographers and urban studies scholars reflect on infrastructural decay. In anthropology and the emerging field of discard studies decay is peripheral to the central focus on waste. Likewise, in sociological studies of consumption, particularly that which considers circular initiatives and different 'R' pathways (reuse, repair, recycling and so forth), decay features in work on waste and disposal but is rarely a central facet. Not only is academic engagement with decay limited, but the equation of decay with waste is also problematic. Decay is perceived as something which happens to an object when we discard it, or an activity which pushes us to discard of something because it is decaying. However, decay is much more than just an act of waste but features in all manner of everyday consumption practices. Recognising this has implications for circular consumption and, more broadly, sustainable consumption.

Drawing on empirical examples, this paper illuminates five conceptual areas of decay which should be considered for further study. In turn these focus on valuing decay, the practices and temporalities associated with decay, infrastructures of decay, the moralities of decay, and finally transformations and performativities of decay. In doing so, I make three key arguments: firstly, that decay can be crucial to circular practices which enable material transformations (e.g. composting). Secondly, I posit that engaging with decay enables a more thorough understanding of materials and resources and their abilities to be circulated better; and, third and finally, that a core part of the above requires appreciating the social and cultural everyday understandings and practices of decay.

Sufficiency-oriented consumption practices and their potential for circularity

Henrike Rau, Eoin Grealis, Antonia Matern

LMU Munich, Germany

The unsustainable nature of current production and consumption systems has accelerated the quest for pathways towards enhanced circularity. However, while there has been a notable focus on supply-side transformations, demand-side approaches that seek to promote circular consumption have not yet received adequate attention. Moreover, much research on circularity has focused on efficiency-oriented practices such as recycling and reusing while sufficiency-oriented practices such as rethinking or refusing consumption have only recently gained attention. Through an analysis of twenty qualitative interviews on circular consumption practices conducted in 2024 in Germany, this paper examines how and why individuals and households adopt or reject practices such as sharing, commoning, and second-hand purchases. Focusing on two high impact areas – mobility and housing –, and paying attention to the ambiguous role of digital tools in promoting circularity, this study reveals distinct pathways towards circular consumption that reflect householders' (non-)engagement in specific practice constellations. We complement these insights with quantitative data from a Pan-European survey of sufficiency-oriented circular consumption practices to capture trends regarding their current and future uptake in five European countries (D, IT, NL, LT, UK). Attention is paid to issues of public acceptance of promising circular consumption practices and opportunities and barriers arising from social and material conditions people find themselves in, including the built environment, transport systems, neighbourly relations and prevailing norms and prescriptions concerning circularity. The results highlight the potential of intentionally avoiding resource-intensive practices as a crucial pathway towards achieving a sufficiency-based circularity.

Do urban repair initiatives foster inclusivity? A practice-based approach

Jordan Young, Mary Greene, Sanneke Kloppenburg

Environmental Policy Group, Wageningen University & Research, The Netherlands

Problem definition

The transition towards a circular economy has the potential to reconfigure patterns of consumption towards sufficiency. An emerging sufficiency-based circular household practice ranked highly on the 'R-ladder' is repairing. The dominant technocratic and market-based view of repairing sees it as a way to increase resource efficiency, reduce waste and extend product lifetime (McLaren et al., 2020; Niskanen et al., 2021; van der Velden, 2021). However, this view neglects the transformative potential of repairing initiatives to serve as a catalyst for inclusiveness and social cohesion (McLaren et al., 2020; Rogers et al., 2021). Therefore scholars have been calling for a greater scrutinisation of the inclusiveness of initiatives facilitating circular practices such as repairing (Luukkonen et al., 2024). This paper addresses the question to what extent repair initiatives address, support or undermine inclusive repairing.

Method

Repair initiatives in four urban contexts (Amsterdam, Arnhem, Nijmegen, Wageningen) are analysed and described through a practice theory-based mapping methodology. We use a mixed method approach combining website analysis, surveys and interviews with repair project initiators with an interest in making repair accessible to different societal groups.

Results

A typology of repair initiatives is developed that generates insights into factors supporting or hindering initiatives towards inclusive repairing practices. We find that the capability of repair initiatives to foster inclusive repairing is strongly influenced by the system of provision - i.e. the material, legal and socio-cultural context it is embedded in - as well as the complex dynamics of people's daily lives. Following this perspective, we discuss how systems of provision and repair initiatives can enhance inclusive repair in the emergence and scaling of repair practices in everyday urban life.

Significance to mainstreaming sustainable consumption

The conceptual novelty of this paper is a typology of repair initiatives that allows to make inferences about their capabilities to foster inclusiveness in emerging repair practices. Empirically, this paper offers the first explicit account of factors contributing to inclusion or exclusion of emerging repair practices. Findings can be used by initiators of repair collectives and policy-makers to reflect on their organisation's capacity to contribute to inclusive sufficiency-oriented circular society.

Full bibliography available upon request.

Fostering transformation through sharing practices: Mapping emerging imaginaries of sharing among Dutch urban sharing initiatives using a practice based typology.

Job van der Linden, Mary Greene, Sanneke Kloppenburg

Wageningen University and Research, Netherlands, The

Problem definition

In the transition towards a circular economy, sharing has been identified as a promising form of sustainable consumption. However, research has predominantly focused on market-based sharing, assessing sharing initiatives primarily in terms of efficiency (Ryu et al, 2019). This technocratic and market-oriented lens risks overlooking the broader transformative potential of sharing practices. Despite the proliferation of urban initiatives supporting various forms of everyday sharing – from digital platforms, to libraries of things and sharing groups – how new sharing practices emerge and become embedded in daily lives of practitioners remains under researched (Greene et. al, 2024). This paper addresses this gap by investigating how sharing initiatives introduce and support the upscaling sharing practices and the diverse visions of circular futures they promote.

Method:

To investigate these dynamics, this paper integrates a practice theory approach with the concept of imaginaries. Practice theory highlights the pathways through which circular practices can emerge, stabilize or transform (Spaargaren et al, 2016), while the conceptual lens of imaginaries can provide insights into the transformative ambitions of change embedded in these initiatives (Schmid et al, 2022). This combined framework is operationalized through a mixed methods approach that integrates website analysis, surveys and interviews, to map sharing initiatives in four Dutch cities (Amsterdam, Arnhem, Nijmegen and Wageningen).

Results:

This paper introduces a novel typology grounded in the combined practice theory and imaginaries framework to investigate how sharing practices emerge and evolve in diverse urban contexts. It also explores how new sharing imaginaries materialize through different types of initiatives and spread across networks and sharing cultures (Katrini, 2018).

Significance to mainstreaming sustainable consumption:

Theoretically this paper adds to the literature on (sociotechnical) imaginaries by conceptualizing them not only as discursive regimes (Jasanoff and Kim, 2013), but also as embedded in everyday practices. By broadening the understanding of sharing's role in advancing circularity beyond economic efficiency to include cultural and social dimensions, this approach provides insights into how sharing can become more deeply integrated into mainstream consumption patterns, thereby supporting wider adoption of sustainable practices.

References

- Greene, M., Hobson, K., & Jaeger-Erben, M. (2024). Bringing the circular economy home— Insights from socio-technical perspectives on everyday consumption. *Cleaner and Responsible Consumption*, 12: 100157. <https://doi.org/10.1016/j.clrc.2023.100157>
- Katrini, E. (2018). Sharing Culture: On definitions, values, and emergence. *The Sociological Review Monographs*. 66 (2): 425-446. <http://doi.org/10.1177/0038026118758550>
- Jasanoff, S., Kim, S., (2013). Sociotechnical Imaginaries and National Energy Policies. *Science as Culture*. 22 (2): 189-196. <https://doi.org.ezproxy.library.wur.nl/10.1080/09505431.2013.786990>
- Ryu, H., Basu, M., & Saito, O., (2019). *What and how are we sharing? A systematic review of the sharing paradigm and practices*. *Sustainability Science*, 14: 515-527. <https://doi.org/10.1007/s11625-018-0638-2>
- Schmid, B., Serlavós, M., Hirt, L. F., (2022). Community energy initiatives as a space for emerging imaginaries? Experiences from Switzerland. *Energy Communities*: 167-181. <https://doi.org/10.1016/B978-0-323-91135-1.00006-7>
- Spaargaren, G., Weenink, D., & Lamers, M., (2016). *Practice Theory and Research: Exploring the Dynamics of Social Life*. Routledge, Oxon & New York.
-

Living well with less: Enacting sufficiency-oriented consumption practices in a high consumption society

Emmelina Eriksson

Lund University, Sweden

Problem

Household consumption drives up to 80% of resource use and over 60% of global GHG emissions (Ivanova et al., 2015). Past efforts to make consumption more sustainable, focusing on efficiency measures and technological solutions have failed to address rising levels of consumption and tackle urgent sustainability challenges (Lorek & Fuchs, 2013). There is now a broad agreement that affluent societies must complement efficiency gains with lifestyle changes, including absolute reductions in consumption (O'Neill et al., 2018; IPCC, 2023) to ensure a good life for all and mitigate environmental and climate crises.

In response to this, a field of research focusing on sufficiency in consumption has emerged (e.g. Spangenberg & Lorek, 2019; Sandberg, 2021; Kropfeld, 2022). Sufficiency can be understood as both a means and an end in sustainability (Jungell-Michelsson & Heikkurinen, 2022). A sufficiency approach to consumption accentuates well-being beyond materialism, characterized by values such as enhanced community engagement (Persson & Klintman, 2022) and promotes maximum and minimum consumption levels (Spangenberg & Lorek, 2019). However, how a transition from overconsumption to sufficiency can be realized in our contemporary growth-focused socio-economic system remains an open question.

Previous studies have looked at meanings of sufficiency practices (e.g. Callmer, 2019; Suski et al., 2023), the potential for more sufficiency-oriented consumption in specific areas (e.g. Cohen 2021) and created a typology of consumption changes (Sandberg, 2021). While these studies provide valuable insights into consumer motivations and transition possibilities, less attention has been paid to how consumers integrate sufficiency practices into their daily lives or how different sufficiency practices interconnect. This is important to understand as consumption is deeply embedded in the socio-material and temporal structures of daily life, limiting consumers' agency when striving to make more sustainable consumption choices (Kropfeld, 2022).

Method

This study will explore these issues by using a practice theoretical approach to study sufficiency in household consumption. Aiming to understand how sufficiency-oriented consumption practices become integrated into everyday life, how these practices interconnect, and how they connect to other household practices. Semi-structured in-depth interviews complemented by auto-photography and house-tours will be used to empirically study how Swedish households perform sufficiency-oriented consumption practices related to food, housing and mobility. Focus group workshops will further explore future imaginaries of consumption from a sufficiency perspective, and visions and meanings of living well with less.

Expected results

As consumption is affected by the socio-material context and spatial-temporal organization of society and everyday life, the integration of sufficiency-oriented consumption practices within different consumption areas will likely be more or less difficult depending on how well these practices connect and align within the exiting nexus of household practices.

Significance to mainstreaming sustainable consumption

Despite growing interest, sufficiency remains a radical concept as it challenges the dominant consumer culture and redefines the relationship between consumption and life-satisfaction (Spangenberg & Lorek, 2019; Persson & Klintman, 2022). Understanding how and when sufficiency-oriented consumption practices become normalized, and the barriers consumers experience for their further adoption, is thus crucial to understand how sufficiency can be enabled in affluent societies.

Sufficiency vs abundance: Challenging a myth

Josefine Henman, Oksana Mont

Lund University, Sweden

Problem definition

In order to tackle the climate and biodiversity crises, stay within the planetary boundaries (Rockström et al., 2009) and ensure what Raworth (2017) defines as a 'safe and just space for humanity', it is increasingly recognized that current consumption patterns need to change drastically (IPCC, 2022). In light of this, the notion of sufficiency has gained ground, which recognizes that overall consumption needs to decrease to levels that are 'good enough' and envisions "a society where we manage with (in some cases much) less" (Bocken & Short, 2020, p. 1). However, the notion of sufficiency is often met with resistance – there is a prevailing belief that individuals naturally desire abundance, and that sufficiency equates to deprivation, scarcity and sacrifice. This narrative, which falsely portrays sufficiency as "living in caves", prevents policymakers, businesses, and individuals from advancing sustainable consumption practices (Bocken & Short, 2016; Mont et al., 2013), and from embracing the much-needed radical transformation of our economy (Jackson, 2009; Kallis et al., 2018; Raworth, 2017). Building on previous research dispelling myths about sustainable consumption in general (Mont et al., 2013), and sufficiency in particular (Mont & Lehner, 2023), this contribution traces the roots of the 'sufficiency myth' and develops arguments to counter it. The following questions are explored: What are the historical and cultural origins of the myth that sufficiency means living in caves? What are the key arguments to dispel the myth?

Method

This contribution draws on empirical findings from studies on citizens' perspectives on sustainable lifestyles, as well as on sustainable consumption literature, focusing on how sufficiency has been misunderstood and contested in policy and business contexts. Results are also based on semi-structured expert interviews with sufficiency scholars.

Results

Preliminary findings suggest that the 'sufficiency myth' to a large extent is both historically constructed and empirically unfounded. Its historical and cultural origins are tied to developments such as the rise of industrialization and consumer capitalism, which have equated more with better, and higher levels of material wealth with higher levels of well-being – a narrative perpetuated by media. In terms of dispelling the myth, key strategies include clarifying the meaning of sufficiency (e.g. Spengler's (2016) 'two types of enough'), and eliminating the misconception that sufficiency diminishes joy (Soper, 2020). Moreover, recent findings from the EU 1.5° Lifestyles project suggest that lower consumption is linked to greater well-being, and that there is growing public support for sufficiency-oriented policies (Lehner et al., 2024; Richter et al., 2024). Connected to this, sufficiency-driven business models (see e.g. Gossen & Niessen, 2024) provide practical examples of how sufficiency principles can be operationalised and successfully incorporated.

Significance to mainstreaming sustainable consumption

By using the 'sufficiency myth' as a case study, this contribution provides a broader understanding of how to challenge and change dominant societal narratives that impede progress towards mainstreaming sustainable consumption. We offer a conceptual framework for dispelling other, similar myths in the field of sustainable consumption, and propose a set of research questions to guide future studies.

10:15a m - 12:00p m **Over- and under-consumption: deviations and norms in sustainable heating**
Location: **Sångsalen**
Session Chair: **Sini Numminen**
Session Chair: **Jenny von Platten**

Accounting for the energy poor in mainstreaming demand flexibility

Outi Pitkänen, Kaisa Matschoss

University of Helsinki, Finland

Problem definition

With the increasing share of renewable energy production, it is envisioned that flexible consumption will become a mainstreamed characteristic of future electricity systems. The challenge in this transition is that it requires engaging households in the reduction and time shifting of energy use. The transition can, however, impact various types of households in unequal ways and can increase the levels of energy poverty (von Platten 2022). Recently, such unequal outcomes have been addressed in a growing body of literature on energy poverty and vulnerability (e.g. Bouzarovski et al. 2023). A question that is still unknown is how and under which conditions demand flexibility solutions could increase the resilience of households and strengthen active energy citizenship in a fair and just manner.

Method

Our research is based on a nationally representative survey on energy vulnerability, perceptions on flexible energy consumption and the conditions for adopting demand-side management solutions. The data will be collected during the autumn and winter of 2024-25 and will cover responses from approximately 1000 Finnish households. Our focus is on examining the responses of the respondents who are in the risk of energy poverty, and we aim to understand what role energy vulnerability plays in how flexible energy consumption might play out in these households.

Results

As the empirical research on the justice aspects of demand-side management technologies remains scant, we aim to contribute with insights that can inform how to account for the needs of the vulnerable consumers in the introduction of demand-side management technologies and services. For instance, we expect the survey to provide data on how many people consider themselves energy poor and how many people struggle with paying their energy bills and the reasons behind it (e.g. whether the difficulty is due to income, high energy consumption, energy prices or health issues, etc.). Our survey will enable examining the coping strategies of the energy poor with high bills, for example whether they have needed to reduce heating in order to save on energy expenses. Moreover, given that the survey will be nationally representative, we want to compare the responses of energy vulnerable respondents to the general population to learn about differences in flexible consumption and the prospects of adopting demand-side management solutions.

Significance to mainstreaming sustainable consumption

The significance of this research to mainstreaming sustainable consumption is that demand side flexibility is envisioned to become widely spread in future societies. For a fair transition process, it is important to acknowledge all dimensions of sustainability, including that it is unsustainable if this transition leads to underconsumption among certain parts of the population, notably the energy poor. This research contributes with increasing the understanding of how the context of the energy poor and vulnerable could be accounted for in this mainstreaming process.

What we feel, see, and touch is what ‘sticks’ most to us: Exploring the interconnection of senses, memory, and practices to understand sustainable energy demand

Line Valdorff Madsen, Anders Rhiger Hansen

Aalborg University, Denmark

A sustainable transition of energy systems requires knowledge of how energy demand is sustained, reproduced, and changed. Studies suggest that sensory experiences are important to everyday practices related to domestic heating, hot water, and electricity use. Thus, incorporating sensory elements into practices is important to understand what engages practitioners (to perform practices) and what creates meaning (to perform the practices in a specific way).

However, what is often referred to as social practice theory (SPT), has not yet taken the interconnection between sensory experiences and cognitive mechanisms of remembering or embodying routines, e.g., motor skills and mirror neurons, to the internalization of practices, also known as *embodied practices* or *habits*. These interconnections are essential to explore to shed light on how practices, or habits, change, also in the course of mainstreaming sustainable consumption. Thus, the paper combines frameworks from cognitive science, emphasizing the connection between senses and memory, and SPT, emphasizing the social and material formation of practices.

Building on this, the paper presents empirical examples of how to understand the interconnection between senses, memory, and practices in shaping household energy demand.

First, examples from a study on time-shifting electricity consumption show that the sensation of clothes (fabric, textiles, and detergent) plays an important role in how to (properly) wash and dry clothes. Moreover, practices with strong sensory elements seem to be ‘remembered’ well, in the sense that householders tend to emphasize practices that include descriptions of sensory experiences.

Second, examples from studies on practices of heating demand in different settings illustrate how comfort is perceived and negotiated through sensory experiences, such as bodily and tactile sensations of warmth, or textile and other materials. Such sensations are forming how heating practices are performed (e.g. how heating technologies are regulated) and become embodied as ‘comfort memories’ of specific socio-material arrangements.

Adapting to the energy crisis: Heating behavioural shifts and deprivation across five European countries

Abigail Alexander-Haw^{1,2}, Joachim Schleich^{1,3}

¹Fraunhofer ISI, Germany; ²Utrecht University; ³Grenoble Ecole de Management

Problem definition

The energy crisis triggered by the Russian invasion of Ukraine offers a unique context to investigate how external shocks affect household energy consumption behaviours and perceived experience of deprivation. Although energy-saving strategies are well-documented, successful cases of their widespread adoption remain limited. This study examines whether significant increases in energy costs during the crisis led to substantial changes in heating behaviours and heightened energy-related deprivation across approximately 3,700 European households, thereby providing insights into the potential for mainstreaming sustainable consumption.

Method

Using survey panel data from Denmark, France, Germany, Italy, and Latvia, we analyse household heating behaviours and experiences of energy-related deprivation before and after the onset of the crisis. Econometric models are employed to assess changes in key behaviours such as room temperature, heated area, and shower frequency. Additionally, we evaluate perceptions of energy deprivation (e.g., unsafe room temperatures, inability to pay energy bills) alongside broader indicators of economic strain, such as the inability to afford a holiday. The study further investigates the extent to which baseline energy consumption levels influence households’ likelihood to adopt energy-saving measures.

Results

Descriptive analysis indicates a significant reduction in average room temperatures across all countries in 2022 compared to 2021, not only among households that experienced increased energy prices but also among those that did not, suggesting behavioural adjustments beyond rising energy costs alone. Preliminary multivariate analysis reveals that while higher heating costs did not consistently lead to significant changes in behaviour, energy deprivation indicators—such as an inability to maintain safe temperatures or meet basic living expenses—were significantly more prevalent among households facing increased energy costs. Notably, households with higher baseline energy consumption behaviours, who typically have higher incomes, were less likely to adopt energy-saving behaviours, indicating possible behavioural inflexibility among high-energy consumers.

Significance to mainstreaming sustainable consumption

This study underscores the unequal distribution of energy deprivation, with lower-income households disproportionately bearing the burden of rising energy costs. The inflexibility of high-energy consumption habits suggests the need for further research to determine what additional measures—beyond price increases—might incentivise behavioral change among top consumers.

Unequal access to energy infrastructure in Swedish singel-family housing

Jack Vahnberg

Malmö University, Sweden

Problem definition

Energy inequality is broadly a well-researched topic, particularly from the perspectives of energy poverty and vulnerability. It can be considered as a spatial phenomenon, and vulnerable households are seen to be clustered geographically (Riva et al., 2021; Mulder et al., 2023; Robinson et al., 2017). This is reproduced at different geographical levels, with inequalities present on regional (Bouzarovski, 2019; Bouzarovski and Herrero, 2017), inter-country (Vahnberg et al., 2024; Lis et al., 2017), as well as within urban centra (Chatzikonstantinou and Vatavali, 2017).

Even considered as a spatial phenomenon, there are some gaps in the existing literature. Specifically, there is a lack of research on household-level clustering of vulnerable households. As much research is conducted on aggregate data, there is an issue of modified area unit problem, which would be corrected using higher resolution data. Moreover, there is a lack of research on energy wealth – households with substantially larger energy consumption than median or sufficient levels – and their corresponding distribution.

Method

In our proposed article, we plan to map energy inequality in the single-family housing stock with higher-resolution data. Using a unique dataset comprising of EPCs and household-level socioeconomic data, merged on property-level, comprising approximately 40% of the Swedish single-family housing stock, we ask the question: To what extent does energy vulnerability differ between different groups in the single-family housing stock? Specifically, does gender, racial and geographical factors determine one's energetic quality?

Results

The high-resolution data, combined with high-quality data over the housing stock, lets us do two important things. First, we can assess within municipal spatial clustering, cementing the intuition that energy poverty and energy wealth are deeply spatial phenomena. Second, we can assess the energetic quality of housing for different social groups, drawing a different line of energy inequality. Rather than focusing on marginal effects, we have the advantage of a large dataset to estimate actual differences in energy access between groups.

To separate income effects from the effects of inadequate housing, we run a separate analysis with a low-income high-cost (LIHC) indicator and one with energy classification as dependent variables. To complement a spatial analysis of uneven development, we frame the analysis of this unequal access in terms of the Swedish gendered welfare state (Melby et al., 2008), and the role of race in Sweden (Hu'binette et al., 2023).

Significance to mainstreaming sustainable consumption

When considering sustainable energy consumption, distribution of consumption is a crucial aspect. Failing to take disadvantaged groups into account, as well as to fail to highlight which groups tend to overconsume energy, leads us unable to estimate distributional effects of sustainability measures. Not only are policy measures with negative distributional effects an unwanted ill, it might in turn have adverse effects on public support for such policy changes. Having a detailed account of the housing stock, and the households within that stock, is the first step in evaluating energy consumption policies from a distributional perspective.

Energy Performance Gap Heterogeneity: Analyzing discrepancies between predicted and measured residential heating demand across types of housing and households

Anders Rhiger Hansen, Markus Schaffer

Aalborg University, Denmark

Previous research has established a discrepancy between the measured heating consumption and the predicted heating demand in residential buildings. However, while this so-called performance gap is well-established, there is little evidence on the explanations for variations in the discrepancies.

This study investigates heterogeneity in the energy performance gap using data on more than 200,000 Danish households with a valid energy performance certificate (EPC) and annual data on energy consumption for heating and domestic hot water in three years, from 2019 to 2021.

The paper provides improved estimates of performance gaps across energy labels and heterogeneous estimates of the performance gap across building and household types. In addition, the paper investigates whether the 'performance gaps' are stable across years, while controlling for weather and household characteristics.

Savers' profile. How Finnish households reduced their material consumption during the energy crisis?

Sini Numminen¹, Erkki Mervaala², Tuuli Hirvilampi³, Mikko Jalas¹

¹Aalto University, Department of Design, Finland; ²Finnish Environment Institute, Finland; ³Tampere University, Faculty of Social Sciences, Finland

Energy crisis winter 2022–2023 pushed consumers to consider their consumption practices and levels. This study analyses the energy survey data (N=4,771) collected in the autumn 2022 from Finnish people about how they planned to save money during the upcoming winter that was doomed to be harsh with skyrocketing energy prices and economic downturn. The survey methodology is presented in [1]. In this presentation, we focus on the open ended questions of the survey where respondents described their consumption-saving practices. Using statistical methods, qualitative analysis and topic modeling, we illustrate the types and frequencies of consumption reduction practices manifested during the energy crisis.

The findings show various practices including indoor temperature decreases, avoiding car use and stopping purchasing luxury items, and even radical and energy-disruptive life changes such as moving home. Some respondents reported consumption reductions of basic goods, such as food and medicine. The request to save energy is thus in many ways linked to the reduction of material consumption at the household level. We illustrate how energy vulnerability manifests in the daily lives of different Finnish households. Our results offer insight for policymakers about how economic hardship and poverty is connected with energy vulnerability during an energy price crisis in a Nordic country. The empirical findings can contribute to the development of eco-social policies that are needed to tackle the regressive and socially harmful impacts of higher energy prices.

[1] S. Numminen, T. Kajoskoski, Y. Kaltampanidis, and M. Jalas, "Energy vulnerability of detached home owners in Finland: An explorative study," *Energy and Buildings*, vol. 310, p. 114082, May 2024, doi: 10.1016/j.enbuild.2024.114082.

Workshop: Facilitation of circular lifestyles in cities

Location: **Aula**

Session Chair: **Mariann Szabó**

Session Chair: **Laura Spengler**

Session Chair: **Helen Czoska**

**10:15a
m -
12:00p
m**

City centres throughout Europe are confronted with various challenges, like increasing vacancies or the loss of utilization. With the NiCE project, we are addressing these challenges and bringing them together with the ideas and solutions of circular lifestyles to create a more sustainable and resilient urban future. During the interactive workshop we will introduce first results by the NiCE project, including: (1) a virtual exhibition of 30 good practices related to sustainable lifestyles from NiCE partner cities; (2) a strategy framework for the promotion and establishment of circular lifestyles in cities/city centres; and (3) a "monitor tool" for the analysis of the status quo, challenges, and potentials for circular lifestyles in cities. Participants will be encouraged to share ideas and express interest for the uptake of different results, as well as they can test the virtual exhibition with their own notebooks/ smartphones and in-site appliances. This workshop is open to everyone with an interest in city development and circular lifestyles, whether you are a local authority, NGO or a passionate individual eager to contribute to the circular transition in cities. The NiCE project is supported by the Interreg CENTRAL EUROPE Programme with co-financing from the European Regional Development Fund.

Workshop: Conflicts and confluences in sustainable consumption and lifestyle - or A language for our common future – vocabulary on sustainable consumption and lifestyles (Part 2)

Location: **201**

Session Chair: **Laura Maria Wallnoefer**

Session Chair: **Philip J Vergragt**

**10:15a
m -
12:00p
m**

This workshop invites researchers and practitioners to engage with the content of our forthcoming book, *Vocabulary for Sustainable Consumption and Lifestyles—A Language for Our Common Future*, as a starting point for deepening dialogue and collaboration among change agents in the field. Recognizing that diverse perspectives and conceptual framings influence how sustainability transitions and transformations unfold, the session will explore synergies, conflicts, and implementation challenges within the discourse on sustainable consumption and lifestyles (SC+L). The workshop consists of two main parts, one focusing on reflection on the concepts and the other on their implementation. In the reflexive part, we present an overview of the book's thematic clusters (i.e., (A) Daily household decisions and lifestyles, (B) Concepts, frameworks, and applied theories, (C) Political economy, (D) Value shifts and social activism, (E) Governance, policy, and choice architecture) and the 87 included concepts ranging from Alternative Hedonism and Buen Vivir to Ubuntu and Wellbeing Economy. Participants will be invited to share their expectations and experiences, followed by a collective reflection on (1) the most frequently used concepts in the field and (2) the concepts that practitioners and researchers associate with and apply together. A short survey will help identify key concepts, followed by a fishbowl discussion about the four most used concepts regarding their synergies, interdependencies, and potential applications. We will also explore 10 to 20 concepts that are less frequently used or weakly linked to others, to uncover potential conceptual gaps, isolated, siloed research efforts, and conflicts that might present barriers to collective actions. The implementation part will shift the focus to practical applications of the concepts, examining (3) which concepts have seen broad implementation across different action areas—households, businesses, institutions, and civil society—as well as across consumption domains such as housing, mobility, food, and fashion. Participants will be asked to map widely applied concepts to relevant actors and consumption domains, discussing factors that drive or hinder their adoption. This will be followed by a second fishbowl discussion exploring (4) how more abstract, visionary concepts can be moved toward implementation, identifying key barriers and strategies for overcoming them. Drawing from best practices and real-world examples, we will discuss conflicts and confluences between theoretical frameworks and practical experiences and outline how concepts can be made actionable, ensuring their relevance in policy, industry, and daily life. In the concluding mapping exercise, participants will collaboratively identify (i) action areas and application fields (e.g., synergies between key concepts), connect them to (ii) key stakeholders and networks (e.g. influential actors), and (iii) available resources (e.g., funding opportunities), highlighting how a common language can empower change agents to effectively communicate, share ideas, and drive transformative change in sustainable consumption and lifestyles. To close the workshop, each participant will be invited to share three key takeaways and propose a concrete next step, with the potential to establish a follow-up working group. By fostering a deeper understanding of the conceptual landscape of SC+L and exploring both conflicts and confluences, this session aims to strengthen collaboration in the field.

10:15a m - 12:00p m Workshop: "A Gap in the Green Jacket? Re-design, Re-use, Re-cycle: The 'Kleiderherz Glonn' Project as a Social Tipping Point for Sustainable Community Transformation"

Location: **133**

Session Chair: **Angelika Bachmann**

	In this workshop, we present the project “Kleiderherz Glonn” as a model for sustainable consumption and social transformation. In particular, we look at how the phenomenon of social tipping points can be used to give a minority of people visibility and more voice, thereby indirectly influencing political decision-makers. The basis is the impetus for a value change towards sustainable development and sustainable consumption on a broad basis through a supposedly “non-political project”. This project works by integrating diverse actors of a community “from below” ultimately “politically upwards”, emphasizing the importance of bottom-up approaches in achieving sustainable consumption. We see the success story of our small second-hand fashion project as a possible model for similar “community grassroots movements”, which could become catalysts for the transformation of a community.” In the first part, a presentation method will be used, showcasing important milestones of the project, challenges, and short portraits of the members of the “Kleiderherz Glonn e.V.” team. We will draw comparisons to similar second-hand projects and critically engage with the implications of fast fashion on resource management and the problem of disposal. In the second part, we use “Lego Serious Play” to facilitate the transfer of our project to the specific situations of the participants and make use of its concept of “hand knowledge” of a problem-solving-technique. Through the presentation of a real and successful model for sustainable consumption and social transformation, we hope to make a valuable contribution to the conference. We believe that our workshop will provide participants with new perspectives and tools to make progress in spreading sustainable consumption.
12:00p m - 1:00p m	Lunch Location: Stora Sparbanksfoajén
1:00p m - 2:00p m	Keynote Manisha Anantharaman - Mainstreaming sustainable consumption in a deeply unequal world Location: Stora Salen Session Chair: Doris Fuchs Sustainable consumption research is now confronting the proposition that to mainstream sustainable consumption, we must understand the structural barriers and opportunities for transformative change. But what do we mean by structural barriers? This talk invites sustainable consumption scholars to expand our analytical frameworks by situating sustainability within the sociocultural and geopolitical dynamics of the contemporary political economy. In the first part of this talk, I will examine these dynamics through ethnographic research in India, exploring how elite and middle-class green lifestyle movements serve as mechanisms for securing ecological legitimacy and moral authority for the privileged at the expense of the marginalized. This “performative environmentalism” emerges from and reinforces an ideological apparatus that stigmatizes poverty as individual failure. It also conceals how greening and mainstreaming consumption depends on the invisible labor of the poor and working classes. These urban dynamics are replicated at global scales, wherein affluent nations and elites externalize environmental costs and labor onto racialized and impoverished populations—both within and beyond their borders—while positioning themselves as the moral leaders of the green transition. Next, I will consider the broader theoretical and political implications of these dynamics. I will critically engage with normative debates in sustainable consumption—including those emerging from sufficiency and degrowth perspectives—arguing that while these frameworks propose alternative pathways, they often fail to fully consider the geopolitical and cultural valence of consumption. Drawing insights from feminist and decolonial perspectives, I outline the contours of an alternative, praxis-oriented approach that reconceptualizes sustainability relationally—as a terrain of collective, political, and trans-local struggle.
2:00p m - 3:45p m	Promoting sufficiency - understandings, practices and reprogramming Location: Stora Salen Session Chair: Toke Haunstrup Christensen Session Chair: Marlyne Sahakian Session Chair: Line Kryger Aagaard Session Chair: Kirsten Gram-Hanssen

Reprogramming as a sufficiency strategy: Implications for food, mobility and housing

Line Kryger Aagaard, Toke Haunstrup Christensen, Kirsten Gram-Hanssen

Aalborg University, Denmark

As the climate crisis and biodiversity loss accelerate, it is widely acknowledged that existing patterns of consumption and production need to change. While policy approaches often frame a green transition by the building of new infrastructures and technological innovations, these are also time-consuming and resource-intensive, which runs counter to the urgency of achieving rapid reductions in environmental footprints, especially in affluent societies.

The notion of sufficiency has been highlighted in the literature as an approach to reaching more sustainable levels of consumption and production, by addressing fundamental needs rather than accelerating wants, and ensuring a fair consumption space for all within planetary boundaries. Existing research has pointed to different ways of working with sufficiency, for example in relation to voluntary reductions and minimalist lifestyles. However, such cases remain scattered and are unlikely to succeed alone in terms of the pace and scope needed in consumption reductions.

In the present paper we therefore look instead to social practices and how these can be performed less resource-intensively and avoid the pursuit of new constructions and infrastructural development. For this purpose, we engage with the concept of “reprogramming” (Christensen & Gram-Hanssen 2024) which entails strategies focused on altering practices within existing material infrastructures and social institutions, or adjusting these structures, to promote resource-light practices.

We explore how strategies of reprogramming can be applied to food, mobility, and housing – three key domains in everyday life and responsible for the majority of environmental impacts. In food, for example, existing agricultural infrastructure and land use can be reprogrammed to reduce emissions and restore biodiversity, by growing more lentils and beans and having less animals. In mobility, reprogramming might involve optimizing current transport systems and vehicles for collective use. In housing, strategies could include repurposing the existing building stock, sharing spaces, and adopting more flexible living arrangements in response to shifting life course needs.

Drawing on empirical data from focus groups with professional stakeholders across public, private, and civil society sectors involved in sustainable consumption within these domains, we discuss the opportunities and barriers to implementing reprogramming strategies. By examining current practices and the challenges faced by these stakeholders, we identify key openings for applying reprogramming to achieve the most significant energy and resource reductions with minimal new material interventions. Our findings highlight the need to address regulatory, economic, and cultural factors in order to realize these possibilities. The paper contributes to ongoing discussions on

sustainability by offering actionable insights into how consumption can be transformed through existing infrastructures, without the need for extensive new development.

Sufficiency at the level of society – why does the potential remain untapped?

Satu Lähteenoja^{1,2}, Seona Candy¹, Salla Kässi¹, Teemu Koskimäki³, Aleksi Neuvonen¹

¹Demos Helsinki, Finland; ²Aalto University, Department of Design, Finland; ³University of Eastern Finland, Department of Social Sciences, Finland

Current proposals for a better future, especially from political leaders, typically rely on economic growth. However, growth-dependent welfare states are struggling to bring economic activity within safe and just ecological limits, while also securing wellbeing (Fioramonti et al., 2022; Vogel and Hickel, 2023).

Sustainability scientists argue there is a need for alternative welfare models, which deliver growth independent essential services and functions (Corlet Walker et al., 2021; Koskimäki, 2023). The operationalisation of sufficiency solutions for sustainability is increasingly a topic of discussion in academic literature (Iten et al., 2024). However, insight is needed into how societal stakeholders understand and interpret sufficiency and what barriers prevent wide-scale implementation. To address these key questions, we present research on the perspectives of Finnish sustainability and welfare professionals on the topic of sufficiency and sufficiency solutions. We identify key topics under which sufficiency is and is not discussed, and analyse stakeholders' views on why the 'sufficiency potential' (IPCC, 2022) remains largely untapped.

The data was gathered via surveys and interviews with participants from the kick-off event for the sufficiency-focused SISU project in May 2024. The invitation-based event targeted individuals from different backgrounds who work or are experts on sustainability and welfare (ministries, researchers, companies, foundations, and CSOs). 50 registered participants received the survey prior to the event, resulting in 27 responses. Eight respondents also volunteered for online semi-structured interviews following the event. Using an abductive approach, we conducted a thematic analysis based on the three spheres of transformation model by O'Brien and Sygna (2013). The three spheres are practical (behaviours and technical responses); political (systems and structures); and personal (beliefs, values, worldviews and paradigms). The survey material was analysed and then enriched with the interview data. There was a special focus on the political sphere, as it creates conditions for transformations in the practical sphere and was often mentioned by the interviewees as hindering actions and discussions on sufficiency in their organizational contexts.

The concept of sufficiency – especially sufficiency solutions – is fairly new to the respondents. There is a lack of clarity in the term itself and understanding the differences with degrowth. However, respondents could identify sufficiency solutions and their importance to the sustainability transition from each sphere. In the practical sphere, possible solutions (e.g. reducing consumption) were relatively well understood. Regarding the political sphere, interviewees identified solutions (e.g. addressing growth dependency, and decoupling growth from environmental damage) but had difficulty discussing and advocating for them due to ideological associations. Respondents also expressed concerns that sufficiency models may require radical cuts to public services. To support mindset change in the personal sphere, they called for better conceptual definitions of sufficiency solutions, with accessible examples and narratives to enable constructive and non-polarised public discussion.

In the sustainable consumption literature, sufficiency is seen as one key solution to decrease environmental burden and increase wellbeing. Our results highlight the need for more evidence and examples to support fruitful public discussion on, and inform the operationalisation of sufficiency as one solution to the sustainability crisis.

Sufficiency in the Spotlight: Finnish Media's Role in Shaping Sustainable Consumption

Senja Laakso

Tampere University, Finland

Sufficiency in the Spotlight: Finnish Media's Role in Shaping Sustainable Consumption

Senja Laakso, Tampere University (senja.laakso@tuni.fi)

To mitigate the climate crisis and other ecological challenges in a timely and equitable manner, humanity must fundamentally change both volumes and patterns of consumption, as well as the embedded energy and resource use (Ivanova et al., 2020). Consequently, there is growing academic interest in the concept of sufficiency, which refers to "enoughness" and sustainable wellbeing (Fuchs et al., 2021; Spengler, 2016). However, the idea of absolute reductions to stay within ecological limits is still largely absent in policymaking (e.g., Nuorivaara, 2024). Moreover, while sufficiency has been part of the lifestyles of voluntary simplicity and self-sufficiency for some, we are also witnessing reverse trends towards "more, bigger, and better" in everyday life (Aro, 2017; Sahakian, 2022).

Studies focusing on the co-evolution of everyday practices and technologies have highlighted the role of escalating expectations for comfort, cleanliness, and convenience in increasing consumption (Shove, 2003). These meanings are shaped and "made" through interactions between various institutions and actors in society. Media not only serves as a platform for these interactions but also actively shapes representations. Previous studies have shown, for example, the role of media in the development of cleanliness conventions (Jack, 2020) and spatial norms in housing (Sandberg, 2018).

In this on-going study, I analyze the meanings attached to discourses of sufficiency in Finnish media. The data consists of a sample of media items from the years 2000-2002, 2010-2012, 2021-2022, and 2024, from the two main national media outlets: Helsingin Sanomat and Yle. By examining media items focusing on sufficiency in mundane consumption in housing, mobility, eating, and leisure across the 2000s (including the increased awareness of saving during the energy crisis), this paper captures the variety of discourses attached to sufficiency and the underlying meanings. It

sheds light on how the media frames sufficiency and suggests alternative discourses for mainstreaming sufficiency across consumption domains, towards a post-growth society.

References:

- Aro 2017. "A bigger living room required a bigger TV" – doing and negotiating necessity in well-to-do households. *J Consum Cult* 20(4).
- Fuchs et al. 2021. Consumption corridors: Living a good life within sustainable limits.
- Ivanova et al. 2020. Quantifying the potential for climate change mitigation of consumption options. *Environ Res Lett* 15(9), 093001.
- Jack 2020. Representations—a critical look at media's role in cleanliness conventions and Inconspicuous consumption. *J Consum Cult*, 20(3), 324-346.
- Nuorivaara 2024. Sufficiency gains limited attention in Finnish climate policy on household consumption. *Cons Soc*, 1-19.
- Sahakian 2022. 'More, bigger, better' household appliances: Contesting normativity in practices through emotions. *J Consum Cult* 22(1).
- Sandberg 2018. Downsizing of housing: negotiating sufficiency and spatial norms. *J Macromarketing* 38(2), 154-167.
- Shove 2003. *Comfort, Cleanliness and Convenience: The Social Organisation of Normality*. Berg.
- Spengler 2016. Two types of 'enough': sufficiency as minimum and maximum. *Environ Polit*, 25(5), 921-940.
-

How good is small? Living in space-efficient apartments

Paula Femenias, Kaj Granath, Elton Chan

Chalmers University of Technology, Sweden

This paper explores how people live in small living spaces. Limited floor space per person has been identified as one important target for decarbonizing housing. Studies have shown that the current Swedish average of 42 sqm per person living space needs to be reduced to 15-20 sqm to reach sustainable futures within our planetary boundaries. However, to ensure long-term sustainability, it is important to know how these smaller living spaces fulfil the basic needs and well-being on an individual and a societal level and how these homes align with the striving for just and inclusive societies.

In fact, the last decades have seen a radical decrease in the size of constructed apartments, especially for smaller apartments. In Stockholm, 1-bedroom apartments have decreased in size by a third and studio apartments have almost halved in size. In Göteborg, with only minor exceptions, all recently constructed studio apartments are below 35 sqm. While this is promising in relation to the need to delimit floor space, it also raises concerns about how people are affected by living in small spaces. In addition to shrinking living spaces, new smaller apartments (< 35 sqm apartments) tend to be single-sided and are exempted from current building codes in relation to daylight and noise, making them more susceptible to different problems such as overheating. The need to live sufficiently in a smaller space also has to meet future trends where the home is more central as people work, do remote shopping, and receive delivery at home. There is also an increasing expectation from society that health and elderly care should fit in the home.

It is against this backdrop that this paper seeks to explore the current trend of shrinking apartment production in Sweden, how small apartments have impacted the way people live, to what extent they fulfil both living needs and societal functions within or beyond the limits of the individual apartment, and how they align with a necessary transition and reprogramming for space and resource sufficiency. Based on a variety of data, including national statistics (SCB) on housing in Sweden, a collection of blueprints from last year's housing development in Göteborg (the totality of granted building permits in the last 8 years), and 4-6 semi-structured interviews with residents living in small size apartments, this study aims to showcase the scale and nature of both possibilities and drawbacks of smaller apartments. Preliminary results are the above-mentioned decrease in apartment sizes and observations that the small apartments are often clustered and found in densely built locations close to traffic routes.

The study will contribute to a discussion about mainstream sustainable consumption through shrinking apartment sizes. It should be noted that the yearly addition to the existing housing stock is less than one per cent of the total number of dwellings in Sweden. The current overconsumption of living space cannot be solved by just shrinking the floor space in the already small apartments.

Atlas for reprogramming the city

Dan van der Horst, Benjamin Bach, Andrew Sudmant

University of Edinburgh, United Kingdom

Problem definition

High levels of car dependency are associated with unsustainable lifestyles. Being dependent on the car to attend work, school, household needs and leisure is costly for both the driver and society, due to the many negative externalities (environmental, social, health) associated with auto-mobility systems. Reducing one's car dependency is not simply a matter of personal preferences and free choice. Household financial constraints combined with the spatial inequalities of service provision in the neo-liberal city, mean that people often have quite limited options in terms of where they live and how they can access key services. Car dependency is not just a personal problem; allowing car-dependency to fester in urban environments where (road) space is scarce, creates a negative feedback loops that affects everyone.

Life becomes harder for those who cannot afford a car as they face more 'service deserts' and greater social health and environmental inequalities. Secondly it affects those who can afford a car but would prefer to walk, cycle or use public transport; as these alternatives become less healthy, slower and/or more dangerous, people are forced into their cars and thus get involuntarily locked into a high carbon lifestyle.

This is why the idea of 'reprogramming' is so important. Local authorities need to rethink and restructure the institutional and material urban 'landscape' to push back the car in favour of healthier and more low carbon forms of urban mobility that can ensure sufficient and equitable access to key services. But this is a diverse spatio-temporal 'landscape' so what kind of 'reprogramming' needs to happen where and when?

Method

In recent years we have worked with a range of local authorities in the UK, developing strategic advice with key stakeholders (e.g. through Climate Commissions) and demonstrating new analytical tools for local authority sustainability planning, including co-benefit assessments of potential investments and spatial mapping of (non-car) access to key services (x minute neighbourhood/city). Pulling these diverse experiences together, we have come to realise that there is a need for an interactive online data platform to support place-based sustainability literacy and facilitate consultation, co-creation, participative planning and even counter-mapping for more sustainable urban futures.

Results

We developed the concept of an 'Atlas' for Reprogramming for urban sustainability. Traditionally, Atlases displayed parts of the planet and 'the lie of the land' in a broad range of maps, with legends displaying a range of thematic interests. Atlases were a marvel of (lots of) data visualisation but they always had an underlying user purpose. After a review of existing digital Atlases, we develop a conceptual framework for our urban reprogramming Atlas as a boundary object for climate action and sustainability transitions. We discuss core sufficiency themes within urban morphology archetypes and illustrate some of its potential functionality, from mapping of co-benefits of active transport corridors to the zoning of urban areas into new built, fit, refit and retrofit of particular sustainability design interventions.

Significance to mainstreaming sustainable consumption

the Atlas informs urban transitions to healthier lower carbon lifestyles

Social innovation for sustainable consumption with a sufficiency-based approach.

Mathilda Johnsson

Malmö University

Problem definition

In 2015, the United Nations established sustainable consumption as one of the 17 Sustainable Development Goals (SDG 12) and thereby also part of Agenda 2030. As part of the strategic shift toward sustainable consumption, two key approaches emerged: sufficiency and efficiency (Sachs, 2015). While the efficiency approach aligns with economic growth by promoting resource use optimization, the sufficiency approach critically re-examines existing consumption patterns and lifestyles, advocating for reduced consumption to minimize resource depletion (Spangenberg, 2018; Lorek, 2018). Based on the lack of a sufficiency-based approach in current sustainable consumption strategies this paper argues that citizen-led initiatives and social innovation are crucial to balancing the predominant efficiency-driven, growth-focused paradigm with sufficiency-based approaches.

Method

Through a review of the concepts of sustainable consumption and social innovation, this paper introduces a framework that incorporates a sufficiency perspective as the basis for a study. The pilot study follows an inductive approach, employing qualitative methods, specifically semi-structured interviews. Two categories of interviewees are identified: (1) experts in consumption and consumer behavior, offering insights into the impacts of consumption on individuals, markets, and society; and (2) representatives from social enterprises (NGOs) within the sustainable fashion sector, selected due to fashion's significant environmental footprint and the author's expertise. This sector serves as a specific focus, but the findings of the study are intended to be applicable across broader contexts of sustainable consumption.

Results

The pilot study identifies three key components of a sufficiency-based strategy for sustainable consumption: collective action, behavior change, and policymaking. First, collective action such as workshops promoting circular economy initiatives like repairs, remaking, and sharing thrive in small, local hubs and encourage knowledge sharing and dialogue. Second, behavior change is identified as a significant challenge due to confirmed social norms. Social media plays a vital role in promoting sustainable lifestyles through storytelling and role models. Lastly, the role of policymaking in social innovation remains debated. While some initiatives have the potential to influence policy, further research is needed to determine its place in sufficiency-based strategies. These three strategies are essential for counterbalancing the efficiency-driven focus of the private sector and governments.

Significance to mainstreaming sustainable consumption

The study's findings highlight that while a sufficiency-based approach presents significant challenges within the current market-driven economy, civil society and social innovations hold considerable promise in mainstreaming sustainable consumption. Additionally, this paper provides recommendations for further exploration of social innovation's role in advancing sufficiency-based strategies, suggesting pathways to integrate these approaches more effectively when implementing sustainable consumption initiatives.

Necessity and excess in long-distance travel: Results from a mixed-methods project in Poland**Michał Czepkiewicz^{1,2}, Filip Schmidt¹, Marta Skowrońska¹, Dawid Krysiński^{1,3}, Marianna Kostecka¹, Giulio Mattioli⁴**¹Adam Mickiewicz University in Poznań, Poland; ²University of Warsaw, Poland; ³University of Wrocław, Poland; ⁴TU Dortmund, Germany**Problem definition**

Sustainable consumption and specific models, such as consumption corridors, propose reducing excessive consumption and supporting access to necessary consumption (i.e., needed to satisfy human needs and achieve decent living standards). So far, relatively new research has been done to address these vital questions in the context of long-distance travel, a high-impact activity. The emerging notion of "long-distance travel poverty" has not been so far linked to human needs or perceptions of necessity.

Method

This article concerns the social perception and understanding of necessary and excessive forms of long-distance travel (e.g., vacations away from home, visiting relatives abroad, flights). It includes results from a mixed-methods project conducted in Poznań and Tri-city areas (Poland) in 2022-2024. It analyses survey data from about 1000 participants with questions on the perception of the necessity of various forms and frequencies of long-distance travel and questions on socio-demographics, life situations, mobility patterns, and attitudes. It thematically analyses data from 36 individual interviews on the perceptions of necessity or excess of various long-distance travel purposes, modes, and frequencies. The analysis also applies quantitative-spatial methods to summarize interviewee responses to selected questions.

Results

There is a marked difference in perceiving long-distance travel as necessary depending on domestic or international destination. **About 50% of participants** consider annual domestic vacations away from home and visiting friends or relatives living in a different part of the country a few times a year as necessary. Only **about 20% of respondents** consider annual holidays abroad, visits to friends or relatives living abroad, or one flight per year as necessary. Regression highlights the role of education level, engaging in specific social practices, having previous long-distance travel experiences, internationally distributed social networks, and positive attitudes towards traveling in shaping the perception of international travel and flying as necessary.

The difference between necessity and excess is rarely discrete. There is a spectrum in between, differentiated by travel purposes, modes, frequencies, and other trip characteristics and by the life situations and dispositions of the travelers. The results support the notion of a space for "normal consumption" that enables flourishing between necessary and excessive. The interviewees used multiple justifications of necessity that corresponded with previous studies and theories. Linking annual vacations away from home to human needs revolved around getting rest and distancing oneself from work and the demands of everyday life, which requires leaving one's everyday environment. Some interviewees referred to vacationing away from home as something everyone should be able to afford or should not be restricted. Regarding visiting friends or relatives, study participants referred to social norms associated with family relationships.

Significance to mainstreaming sustainable consumption

The study applied the notions of necessary and excessive consumption to a survey of the general population in Polish urban areas, revealing correlating variables, discourses, and justifications used to argue for a necessary or excessive status of consumption. The results have implications for current policymaking (such as potentially taxing excessive forms of travel) and potential future, more deeply participatory collective ways of defining consumption corridors.

If the Sky was Limited: Airtravel, Academic Success and Wellbeing. Perceptions within Higher Education – The Case of Nord University**Tanja Ellingsen**

FSV, Nord university, Norway

Academia plays a critical role in achieving the goal of net zero emissions and creating a sustainable future, not only through their production of knowledge or educational outreach, but also by advocating for policies that will help the world transition to a low-carbon future. Despite various initiatives and good intentions, HEIs yet often have large carbon budgets, partly caused by air-travel (Paredes-Canencio et al, 2024).

This paper explores this topic via an institutional case study in Norway and look at the practices and drivers behind the academic community to undertake air-travel, if and how they consider alternative forms of transport, and how the various practices influence the respondent's well-being. Based on 15 qualitative interviews with regards to academic air-travel at Nord university this paper investigates the tension between academic requirements to travel and the institution's formal commitment to sustainability within Strategy2030 plan and membership within the SEA-EU Alliance, where sustainability is a core issue. The findings show that, while some academics do express concern about climate change, very few were willing to change their own current practice and travel less, as they considered it more of an institutional responsibility, rather than their own. Moreover, alternative forms of transportation and pro-environmental policies were lacking at the institutional level. In addition, few respondents perceived reduction of air travel as a realistic outcome, given that they considered it very important in terms of success within academic life, especially for young academics. Although some of the respondents considered air travel, and travel more generally to be stressful and impact their work-life balance and well-being, some of them also emphasized the joy and importance of meeting other academics with mutual research-interests. However, air-travel due to short-term meetings (1-day or shorter) as well

as for teaching across campuses were considered less important/attractive, and most respondents expressed relief that Covid had changed some of the practices, lowering some of the pressure and expectations of (air-)travel in the sector. Living so far north was also considered a particular barrier against alternative forms of transportation; due to the time it would take to get to the destination and back. In conclusion, the respondents were clear on the need for institutional and political change for larger individual change to occur and air-travel (and CO₂ emissions) reduction to be met within higher education.

Is There Flight Shame in a Post-Socialist Country? Exploring the Role of Social Emotions in (Un)sustainable Consumption

Marianna Magdalena Kostecka¹, Michał Czepkiewicz^{2,4}, Filip Schmidt¹, Marta Skowrońska¹, Dawid Krysiński³

¹Adam Mickiewicz University in Poznań, Poland; ²University of Warsaw; ³University of Wrocław; ⁴University of Iceland

Problem definition

The number of people flying has been rapidly increasing over the past years, with air travel associated with diverse narratives and emotions. These range from social mobility, cultural enrichment, and personal development, to overconsumption and carelessness in the face of climate change. As a result, air travel evokes a wide spectrum of feelings, from pride and joy to guilt and shame (Gössling, 2019; Gössling et al. 2020; Mkono, 2020, 2022; Wormbs & Wolrath Söderberg, 2021; Doran et al., 2021; Andersen, 2022).

In Western Europe, air travel became widespread earlier than in Eastern Europe and may no longer be viewed as distinctive. Growing climate awareness has further complicated the experience of flying, where it can evoke feelings of shame. In contrast, in post-socialist countries like Poland, where air travel became more accessible only in recent decades, the practice has been viewed as aspirational. However, as Poles have caught up with the West in terms of long-distance travel, the question arises: do they now feel ashamed of flying?

Method

The presentation is based on a mixed-methods research conducted in two Polish metropolitan areas (Poznań and Tricity) in 2023-24, including a geo-questionnaire and 38 individual in-depth interviews. We analyze the interviews through the lens of mobility biographies. This approach allows us to trace how individuals' travel habits, preferences, and perceptions of air travel evolve over time, shaped by personal life events, socio-economic changes, and shifting access to mobility. To contextualize these findings, we situate them within broader socio-technical changes in aeromobility, which we explore through desk research methods. This includes analyzing shifts in aviation accessibility, the rise of low-cost carriers, and changing social norms surrounding travel, helping to better understand the complex interplay between individual behaviors and structural influences on air travel in Poland.

Results

Our findings reveal that flight shame remains limited and incidental. One reason for this is that, for many Poles, flying is still surrounded by an atmosphere of uniqueness and prestige, making it particularly difficult for individuals to reduce or give up air travel. Social pressure to travel, combined with the wide-ranging personal and social rewards associated with flying, suggests that concepts like "no-travel shame" may be necessary to understand why air travel reduction is so challenging.

Significance to mainstreaming sustainable consumption

Efforts to promote sustainable consumption in Poland must address the deeply entrenched travel norms that glorify frequent flying. Without strong social support for flight reduction or greater individual accountability for travel-related emissions, flight shame is unlikely to become a significant driver of behavior change. In contrast, the powerful societal expectation to travel may hinder the adoption of more sustainable, low-emission lifestyles. Addressing these cultural dynamics will be crucial for achieving any meaningful shift towards sustainable consumption in the context of air travel.

The privilege and burden of healthy environments: Exploring the interplay of residential relocations and car ownership across socioeconomic groups in light of air pollution, green coverage and the built environment in Helsinki Metropolitan Area, Finland

Ákos Gosztonyi, Sanna Ala-Mantila

University of Helsinki, Finland

Problem definition

Transportation is among the largest energy consumers in cities, and road traffic is the key contributor to air pollution in Helsinki Metropolitan Area, Finland. Research suggests that exposure to outdoor air pollution and residential proximity to green areas are linked to socioeconomic status. Several studies indicate that residential relocations are partially driven by the environmental goods urban areas have to offer, and individual life events and socioeconomic characteristics have also been found to play a role in residents' decisions to move, with more privileged groups being more likely to settle in "healthier" environments (e.g., Saucy et al., 2023). The neighborhood types across which relocations happen have been demonstrated to have a significant impact on sustainable travel behavior as well, depending on available transport infrastructure within neighborhoods (e.g., De Vos et al., 2018). However, little is understood about residential relocation dynamics below neighborhood level, and even less about how the relocation of socioeconomic groups to greener and better air quality environments may impact transport-induced air pollution due to changing travel behaviors. In our study we address these two gaps in literature.

Method

To do so, we harmonize and utilize high-resolution air pollution, micro-level socioeconomic, relocation, car ownership, built environment (including transport infrastructure) and green coverage information from Helsinki Metropolitan Area, Finland between 2018-2023. We implement a two-stage modeling approach. First, we express relocation rate as a function of built environmental, socioeconomic, and environmental factors, where air pollution is lagged and interacted with socioeconomic factors and car ownership. Second, we model car ownership rate as the function of relocations while controlling for environmental, built environment and socioeconomic variables. This approach allows us to first, untangle the impact of environmental, socioeconomic, and built environment factors on relocations at a fine scale, and second, understand how relocations influence car ownership rates, taking into account (built) environmental and socioeconomic characteristics as well.

Results

Our preliminary findings indicate that both air pollution and green coverage have a significant impact on residential relocation rates. For example, better air quality and greener locations show lower rates of relocations. When air pollution is interacted with variables associated with lower socioeconomic status, our initial results indicate that air pollution may have an increased impact on relocations, indicating that e.g., lower socioeconomic status locations are potentially more sensitive to air pollution. Further, we find that areas with lower density of public transportation options increase car ownership rates upon rising in-movers. This relationship is, however, moderated in divergent ways when we interact density of public transportation options with socioeconomic variables.

Significance to mainstreaming sustainable consumption

The relocation patterns and car ownership dynamics identified in our study suggest that policies targeting sustainable consumption and more sustainable transportation systems should extend beyond individual-level behavioral change. Structural changes are needed to reduce car dependency, as well as the risk of transport poverty while not compromising healthy living environments. Expanding accessible public and active transportation in both affluent and lower socioeconomic status areas is essential for reducing environmental inequalities and for mainstreaming sustainable consumption.

'The Experience Is Just a Flight Away': Newspaper Coverage of Air Travel in Contemporary Norway

Anna Przybyszewska

Nord University, Norway

Problem definition

Norway is often considered a leader in sustainability. Research has found that the majority of Norwegians are willing to reduce their carbon footprint and support the goal of significantly cutting Norway's emissions. However, the lifestyles and consumer attitudes of Norwegians are not as sustainable as Norwegians declare or perceive them to be. Air travel is the most significant form of individual consumption in terms of its climate impact, and the average Norwegian flies 10 times more often than the average European. In terms of carbon footprint from domestic flights per capita, Norway ranks first in Europe and third globally, behind the U.S. and Australia. Hyperaeromobility among Norwegians not only contrasts with Norway's green image but also poses a challenge in the effort to reduce national CO₂ emissions.

While the 'flight shame' movement resonated deeply in Sweden, leading to a noticeable, conscious shift away from flying in favor of alternative means of transport, in Norway, 'flight shame' has elicited divergent reactions. This indicates that although Norwegians express a desire to reduce their carbon footprint, this does not necessarily extend to the number of flights they take.

Method

Media discourses both influence and reflect social and public opinions. Applying critical discourse analysis, I analysed the discourses on flying in the three most widely read newspapers in Norway: *Dagbladet*, *VG*, and *NRK*. The analysis considers articles, advertisements, and illustrations related to air travel published between 1993 and 2023.

Results

Guided by the research question *How have the main discourses around air travel looked like and evolved in Norwegian newspapers over the last three decades?*, I identify and explore two dissonant discourses: (1) 'carefree air travel' and (2) 'calls for climate action and reduced flying.'

The discourse of 'carefree air travel' has been dominant in the period under study and primarily promotes consumer attitudes and lifestyles, cheap flights, and the global accessibility of destinations and services. Whether there is a football match in England, a cycling tour in the Himalayas, or a dolphin trainer course in Mexico, 'The experience is just a flight away.'¹ I examine how consumption-based meanings of holidays have been shaped and maintained.

In contrast, the discourse of 'calling for climate action and reduced flying' has intensified significantly later, particularly after 2010. Over the last decade these two dissonant discourses have coexisted, often appearing on adjacent pages of the same newspaper.

Significance to mainstreaming sustainable consumption

Media coverage can facilitate collective change or limit and shape the behavior of individuals who are central to greater social change. The identified discourse of 'carefree air travel' constitutes an obstacle to achieving sustainable mobility and reducing consumption-based carbon footprints in Norway. The contradictory messages arising from the dissonant discourses resonate with the attitudes of Norwegians who, on the one hand, support reducing CO₂ emissions but, on the other hand, do not reduce the number of their flights. Understanding how discourses around flying have been shaped can inform efforts to promote less carbon-intensive mobility practices.

¹ *VG*, 25.12.2012

Flying less, winning more? Exploring air travel reduction in the Norwegian football federation

Max Koch¹, Monica Guillen-Royo², Jakob Utgård³, Emil Dæhlin², Borgar Aamaas²

¹Lund University, Sweden; ²CICERO, Norway; ³Oslomet, Norway

The field of football has experienced structural changes towards globalisation, commodification and professionalisation. After a break during the coronavirus pandemic, greenhouse gas emissions from football leagues and national, continental, and world championships grow again and contribute significantly to the estimated 30 million tonnes of CO₂ global sports are responsible for. The expansion in the number of teams competing in international tournaments has resulted in more matches at both club and national team levels, drastically increasing corresponding travel activities, the majority of which is undertaken by airplanes. Using Norway as case, we ask what a national football federation is doing and could be doing to reduce its ecological footprint from air travel while maintaining or even increasing the wellbeing of players and staff.

We apply a combination of social practice theory and the Avoid, Shift, Improve (ASI)-scheme to identify and understand the relevant material, socio-cultural and normative elements of current travel practices and to outline the potentials for alternative and more sustainable ones, using the mobility practices of the Norwegian women and men's senior national teams as cases. This is based on an empirical triangulation of qualitative and quantitative data analyses: on the one hand, we conduct 15 semi-structured interviews about organizational challenges, economic, normative and cultural aspects (including work-life balance issues) of national team-related travelling with senior representatives of the Norwegian Football Association (NFF) from areas including coaching of and playing in the national women and men's football teams, tournament logistics, elite coach and players education and sports administration as well as an analysis of relevant documents such as the NFF's travel policy. On the other hand, we calculate the greenhouse gas emissions from senior national team matches for 2023 including specific emissions data from NFF flying which we contextualize within and contrast with Norwegian climate emission reduction targets, as well as quantify the growth in travel length for the national team in recent decades.

The paper is structured as follows: First, interpreting relevant previous studies, we contextualize the Norwegian case as a representative of a smaller, rich and, within Europe, geographically peripheral country in the recent structural changes of the field of international football and the climate emergency. Second, we present the mobility status quo of the senior national teams by calculating their carbon footprints and interpreting the interview data as well as relevant documents. Third, using the ASI scheme, we sketch the NFF's potential for carbon footprint reduction resulting from flying without wellbeing losses against the background of the quantitative and qualitative data. We conclude with some policy-relevant suggestions directed at the national (football federations and clubs) and international (UEFA, FIFA) levels that are significant for mainstreaming flying less in the field of football and sustainable consumption in general.

**2:00p
m -
3:45p
m**

Organising for strong sustainability - A case for sufficiency and regenerative practices

Location: **Nya Fest**

Session Chair: **Laura Niessen**

Session Chair: **Maike Gossen**

Session Chair: **Laura Beyeler**

Economics of Sufficiency: Investigating Sufficiency-oriented Practices in Businesses

Maike Gossen¹, Laura Niessen^{1,2}, Laura Beyeler³, Lisa Walsleben¹

¹Technische Universität Berlin, Germany; ²Maastricht University, The Netherlands; ³Brandenburg University of Technology Cottbus-Senftenberg, Germany

Problem definition

Sustainability crises such as climate change and resource scarcity threaten not only social well-being, but also the economic sector. While green growth is heralded as a solution by some, it does not seem to be succeeding in stopping the continuous transgression of planetary boundaries (Richardson et al. 2023). Rather, a new paradigm seems to be needed that goes beyond efficiency and consistency to include sufficiency (Figge et al., 2014). In such a "sufficiency economy", consumers are encouraged to reduce their resource consumption to a sustainable level while satisfying their needs for well-being (Bocken and Short 2016), and companies need to change their business model and marketing strategies (Gossen et al., 2019; Niessen & Bocken, 2021). Companies can offer long-lasting products and life-extending services, create local and sufficiency-oriented value, and redefine growth and organizational meaning (Beyeler & Jaeger-Erben, 2022). Sufficiency-oriented businesses are still a niche phenomenon, but sufficiency strategies such as reducing sales or limiting production volumes are already being used by companies as a response to sustainability challenges.

Method

This contribution aims to capture and analyse sufficiency strategies in different businesses, understand barriers and drivers, and learn about potential coping strategies to overcome barriers encountered. To achieve these goals, a mixed methodology is used. First, a semi-structured literature review provides an overview of existing research and forms the theoretical basis for the empirical data collection. The sample for the empirical studies will be limited to companies in Germany, Austria and Switzerland in order to collect data with a similar cultural background. Secondly, exploratory expert interviews will be conducted with 10-15 exemplary sufficiency businesses to understand their motivations and strategies, but also controversies that arise when pursuing sufficiency as a business. These interviews will serve as the basis for the development of a quantitative survey. The survey represents the third step and will be used to gain insights into the prevalence of sufficiency strategies in German-speaking companies. A sample of at least 200 businesses will be asked about their acceptance of sufficiency strategies, their experiences and possible supporting and inhibiting influences. The sample for the survey will go beyond sufficiency practitioners, but will be limited to companies interested in sustainability to ensure usable data.

Results

Preliminary results will be presented at the SCORAI conference as (1) the literature review and (2) the qualitative interviews will be completed, while (3) the analysis of the quantitative survey data will be underway. Expected results include the identification of sufficiency strategies applied in different businesses, the motivation for their implementation, hindering and supporting factors for sufficiency businesses, and potential conflicts or controversies arising from a sufficiency orientation.

Significance to mainstreaming sustainable consumption

Due to their strategic position in the supply chain, companies' decisions and activities influence both upstream production and downstream consumption (Spaargaren 2011). As a result, they have a significant impact on consumers' lifestyles and consumption behaviour. Through promoting sufficiency, they might pose an important lever to address levels of overconsumption and social inequality.

Regulation and sustainable value creation: A comparative analysis of business model adaptation towards sustainability

Annabelle Mueller

University of Bamberg, Germany

Exploitative business models accelerate the climate crisis and thus, consumer voices for 'greening' firms' value creation practices are getting louder. Firms have started to adapt their business models towards sustainability, seeking value creation practices that are tenable by ecosystems and social systems in the long run. However, industry regulation shapes organizational discretion for sustainability, raising the question of how firms facing unlike levels of regulation differ regarding their choices to engage in, and their paths towards, sustainable business model adaptation. To address this question, we conduct a qualitative, comparative case study drawing on 45 semi-structured interviews from four organizations with top managerial intents to adapt their business models towards sustainability. Two of these firms operate in highly regulated industries, while the other two operate in weakly regulated industries.

We find that firms in weakly regulated industries make changes to core value creation practices, such as product design (*material* change), while firms in highly regulated industries make changes only to supportive practices, such as shipping (*immaterial* change). With regards to value curation practices, the firms differ regarding their legacy business models, not the level of regulation. Firms with a product business model base their curation practices in tangible aspects such as cost and stability (*material* orientation), while firms with a solutions business model base their curation practices in intangible aspects such as organizational identification (*immaterial* orientation). Based on these findings, we conclude that firms in highly regulated industries enjoy less discretion for sustainable business model adaptation, and thus direct their efforts towards changing supportive instead of core value creation practices. Furthermore, firms with a solutions business model seem to have less discretion regarding the way they value and select sustainability activities, and thus focus on intangible criteria in curating sustainable value.

This paper makes several contributions. First, we contribute to the literature on mainstreaming sustainable consumption by means of business model adaptation. We particularly show how the choice to adapt incumbents' business models towards sustainability is not only a matter of choice, but also a matter of discretion, where regulation can remain a hindering element that produces superficial business model adjustments at best. We thereby also highlight the importance of integrating regulatory considerations into research and practice on business model adaptation towards sustainability. Second, our paper speaks to policy makers by pointing out how the enabling of sustainable consumption choices across different industries is only possible if governments and legislators integrate sustainability criteria into business policies and regulations, particularly for facilitating sustainable business model adaptation in strongly regulated industries. Third, our paper also has implications for organizations seeking to enable sustainable consumption choices. We do this by showing how value curation practices differ between product and service business models. Based on this, we recommend managers to consider the peculiarities of their organizations' legacy business models in designing the conditions under which organizational members create, test, and implement ideas for sustainable business model adaptation.

From Reduction to Regeneration: Leveraging Business Model Innovation to Mainstream Sustainable Consumption

Maren Ingrid Kropfeld¹, Maike Gossen², Katrin Pakizer³, Nancy Bocken⁴

¹Tomorrow University; ²Technische Universität Berlin; ³ZHAW School of Management and Law; ⁴Maastricht University

The global overconsumption of resources and environmental degradation pose significant challenges to sustainable development, particularly in developed countries. Business models focusing on sufficiency and regeneration have been proposed as solutions to these issues (Bocken et al., 2024). Sufficiency business models aim to reduce resource use and encourage mindful consumption (Bocken et al., 2022; Niessen & Bocken, 2021), while regenerative models strive for net positive impacts that restore ecosystems and communities (Konietzko et al., 2023; Hahn & Tampe, 2021). However, there is limited understanding of how these two models can complement each other to foster mainstream sustainable consumption. This study explores the complementarities between sufficiency and regenerative business models to identify how they might jointly address the systemic challenges of sustainability.

This research employs a comprehensive literature review to compare sufficiency and regenerative business models. Using Scopus and Web of Science, we applied a theory-driven search strategy to capture publications related to sufficiency and regeneration in sustainable business contexts (Azrian, 2011; Berger, 2016). Backward and forward snowballing methods and consultations with experts helped enrich the dataset with diverse perspectives. Articles were

selected based on their focus on sufficiency or regenerative business strategies and practices, ensuring a thorough analysis of their conceptual foundations and practical applications (Baldassarre et al., 2020).

Preliminary insights suggest that sufficiency and regenerative business models, though differences in focus, offer complementary strategies for promoting sustainable consumption. Sufficiency models emphasize moderate consumption and promote the longevity of products, which can lead to reduced resource use and waste (Bocken et al., 2022; Beyeler & Jaeger-Erben, 2022). However, they often struggle with scalability and broader market adoption due to their inherent focus on reduction (Bocken & Short, 2016; Gossen & Kropfeld, 2022). Regenerative models address these challenges by embedding business practices within larger socio-ecological systems, focusing on positive environmental and social impacts, and fostering innovation and adaptability (Konietzko et al., 2023; Hahn & Tampe, 2021). By integrating regenerative principles, sufficiency models could enhance their scalability and appeal, making sustainable consumption more mainstream. This integration could lead to business models that not only reduce harm but actively contribute to ecological and social regeneration.

This work's expected findings highlight the potential for bridging disparate research streams on sufficiency and regenerative business models to advance sustainable consumption on a broader scale. By understanding and leveraging the synergies between these models, businesses can create more holistic and appealing value propositions that attract a wider consumer base. This integrated approach could help businesses shift from merely reducing negative impacts to fostering a net positive impact, aligning economic activities with the ecological and social limits to consumption. Such a strategy not only supports the goals of sustainable consumption but also promotes a transformation in business practices that is necessary to stay within planetary boundaries (O'Neill et al., 2018). By exploring how sufficiency and regenerative models can complement each other, this study aims to accelerate the adoption of sustainable consumption patterns, offering a path for businesses to contribute positively to the environment and society while remaining economically viable.

Transformative Corporate Sustainability: Co-Creation, Identity, and Behavioural Change in and Through Novel Customer-Business Partnerships

Patrick Elf¹, Sophie Whitehouse²

¹Middlesex University, United Kingdom; ²King's College London, United Kingdom

1. Problem definition

Customer-business interactions are mostly characterized by commercial exchange relationships that are often superficial and foster unsustainable behaviours (e.g. unsustainable consumption behaviours). To remain within planetary boundaries while ensuring the wellbeing of people and the environment, businesses must adopt novel, transformative practices that go beyond conventional CSR and corporate sustainability initiatives. However, there is a need for further insights and understanding into the process of developing sustainable initiatives that enable customers and businesses to engage in transformative practices.

2. Method

In this study, we draw on extensive, multi-layered qualitative data collected over six years from a longitudinal study on behaviour and lifestyle changes with a major international retailer operating in the UK. The data were collected from blog posts and additional, complimentary qualitative data of six distinct samples (n= 742 participants in total). Following an abductive approach, we set out to identify thematic categories. An abductive approach was employed to identify thematic categories, acknowledging and fostering the interplay between method, data, and theory. This approach allowed for iterative interpretation of emerging themes by oscillating between literature and data, providing the necessary flexibility to identify potentially interesting areas throughout the research process.

3. Results

The findings suggest that the behaviour and lifestyle change project supported participants in their efforts to adopt more sustainable lifestyles by acting as a trusted partner and facilitating connections and identity formation. Drawing on Social Representation Theory, we demonstrate how the reification of words contributed to the development and adoption of shared social representations and their relevance to identity construction and subsequent behavioural outcomes. Through the interaction, a commitment towards living more sustainably emerged with implications for individuals and the business alike.

4. Significance to mainstreaming sustainable consumption

The research provides deeper insights into the role, significance and potential of co-creational corporate sustainability approaches that go beyond instrumental and transactional approaches. It illustrates the importance of identity for behaviour change (e.g. adoption of more sustainable consumption behaviours) and stressed the implications for strategy and the urgent need to redefine businesses' role in society. Notably, it provides a tentative example of what transformative corporate sustainability might look like, and can potentially serve as inspiration for other businesses to follow lead.

Barriers and enablers to foster the transition towards sustainable business models

Vanessa Mato-Santiso¹, Marta Rey-García², Nadin Ozcelik³

¹University of A Coruña (UDC), Spain; ²University of A Coruña (UDC), Spain; ³CESUGA, Spain

Problem definition

To attain the Paris Agreement target of 1.5°C, it has become necessary to foster the transition towards more sustainable business models. These models place the onus on proactive multi-stakeholder management, innovation,

plus a long-term outlook to meet sustainability goals, creating value for the triple bottom line. Against this backdrop, this presentation's main goal is to identify which barriers hinder the move towards sustainable business models, and which enablers can promote such models that are more focused on the social and environmental approach to sustainability, and not exclusively on the economic dimension.

Method

The Spanish case is explored through the Delphi technique, based on three rounds of an on-line survey, in combination with focus group discussions after holding a face-to-face workshop. In this research, the Delphi method was used for data collection, moderated by academic researchers. A group of ten Spanish experts culled from different fields was selected to participate in both qualitative techniques. The participants were hand-picked as to strive for diversity in expert profiles. The purpose was to recruit stakeholders who either hold relevant positions related to the shift towards sustainable business models. The "Policies and tools for mainstreaming 1.5° Lifestyles" project leaders provided guidelines of organizational profiles that should be represented in both methods. An ad hoc survey questionnaire was designed that included questions on barriers and enablers reviewed in the theoretical background.

Results

The barriers to fostering sustainable businesses include the complexity of integrating technological innovation, current business rules, guidelines, moral principles, and outcome measurements, as well as the reallocation of resources and processes. Other barriers noted involve challenges in co-creation of profits, balancing social and environmental benefits (Triple Bottom Line), efforts to engage in extensive interaction with external stakeholders, and changes in existing business methods and tools (rarely sustainability driven). Conversely, the following enablers were identified: valuing sustainable business practices, strategic focus on innovation in sustainable business models, along with education and awareness on the part of consumers vis-à-vis environmental impacts. Further driving factors include achieving a balanced focus on shareholder and stakeholder value, collaborative R&D, patient investments thinking in the long-term rather than the short-term, people capability development, enabling innovation structure and ring-fenced resources for sustainable business model innovation, incentive scheme for sustainability, and implementing performance metrics for sustainability.

Significance to mainstreaming sustainable consumption

Aside from viewing the 1.5°C target as a technical requirement to mitigate climate emergency, it can also be perceived as an opportunity to drive fundamental changes required in personal belief systems, values, structures, and how societies and economies are arranged. Individuals can play an important role in reaching the 1.5°C target by adopting more sustainable lifestyles, aiming for simplicity, responsible consumption or other choices comprising the green economy. However, today's consumer behavior still fails to reflect the concept of sustainable consumption and lifestyles. This may be due not only to selfish decision-making, or economic barriers, but also to other types of structural barriers or simply down to a shortfall in knowledge regarding availability of sustainable options companies can provide.

2:00p
m -
3:45p
m

Living Labs and Thinking Labs to Mainstream Sustainable Consumption and Lifestyles: visioning, experimenting and co-creating solutions

Location: **Gustafscenen**
Session Chair: **Julia Backhaus**
Session Chair: **Edina Vadovics**

Navigating the Lab Landscape: Identifying Scalable Solutions for Sustainable Consumption

Julia Backhaus, Stefan John, Gudrun Rohde
RWTH Aachen University, Germany

Problem definition

In recent years, the proliferation of various "labs" – from Living Labs and Real-world Labs to City, Urban or Transition Labs – has marked a new era in experimentation and innovation for sustainability transitions. These diverse lab formats, each with their own methods of stakeholder engagement and experimentation, are often touted as key to fostering sustainability. However, with so many lab approaches available, a critical question arises: Which characteristics of labs are best suited to develop scalable solutions that can drive the widespread adoption of sustainable consumption practices?

Method

To investigate this question, we conducted 20 semi-structured interviews with individuals leading or actively participating in different types of labs across Europe, primarily in Germany, with at least a partial focus on sustainable consumption. The interviews provided insights into the design, setting and set-up of the different labs and the mechanisms by which these labs seek to generate scalable solutions. Using comparative content analysis, we identified common themes and differences across lab types, paying particular attention to the characteristics that appear essential for developing solutions with scalable consumption impacts.

Results

Three core attributes were consistently identified as critical for scalability:

1. **Strong citizen engagement:** Labs that prioritize deep, ongoing citizen involvement tend to achieve greater success in shifting consumption patterns. Active co-creation processes that empower citizens to experiment with sustainable practices can lead to a stronger sense of ownership and thus long-term change.
2. **Institutional integration:** Living Labs that are well-integrated into existing policy frameworks and supported by local governments or regional institutions have a greater ability to scale up their innovations. Such integration facilitates the mainstreaming of successful pilots by embedding them into broader regulatory or planning mechanisms.
3. **Infrastructural integration:** For Living Labs to scale successfully, their innovations need to be integrated into existing physical or digital infrastructures which tends to require additional time

investments. To ensure that successful initiatives can transition from temporary pilots to permanent structures, they need to connect seamlessly with established systems like transportation, energy grids, or urban planning frameworks as well as social practices.

Additionally, our analysis pointed to a critical need for clarity on what constitutes a “scalable solution”. In the context of sustainable consumption, scalability entails not only the replication of successful initiatives across different regions but also their integration into existing systems in a way that can influence broader social, economic, and policy frameworks. The most effective approaches were those that could be implemented at the local or grassroots level, while also exerting influence on higher-level systemic changes.

Significance for mainstreaming sustainable consumption

Our research demonstrates that while many types of labs offer potentials for fostering sustainable consumption, not all are equally effective in developing scalable solutions. Labs must be designed with citizen engagement, cross-sector and inter-institutional collaboration, as well as seamless integration at their core if they are to have the desired impact on mainstreaming sustainable consumption. The proliferation of labs offers diverse avenues for experimentation, but only those with these key characteristics can move beyond localised experiments and contribute to broader societal shifts.

Social Dynamics of Domestic Precycling: The Influence of Intragroup Processes on Packaging Waste Prevention during a HomeLab

Klara Wenzel¹, Elisabeth Suessbauer¹, Gerhard Reese²

¹Technische Universität Berlin, Germany; ²Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Germany

The enormous amount of packaging waste is one of the greatest challenges facing humanity. To address this crisis, the prevention and reduction of packaging waste through behavioral and systemic change (a.k.a. precycling) has been set as a global goal. In this study, we employed a multi-method approach to shed light on group processes that unfold during a living lab in private homes (called HomeLabs), aiming to promote domestic precycling. First, we analyzed data from questionnaires (n=69 participants) and from packaging diaries (n=38 households) to identify relationships between group processes, precycling behavior and waste production. We show that household social cohesion (HSC) plays a significant role in precycling goal intention, with the cooperation dimension also influencing precycling behavior. In contrast, the disagreement dimension (e.g., goal disagreement among group members) plays no significant role in precycling. Based on this, we analyzed qualitative interviews from 16 households to deepen our understanding of the interplay of intra-group interaction and roles with goal setting and precycling, showing that disagreement can be interpreted as an indication of an uneven distribution responsibilities within the group. Furthermore, we identified five types of precycling champions who influence precycling in household groups by actively stimulating social dynamics, such as through incentives, and by playing a mitigating role in conflict situations. Our results illustrate that cooperation toward a group goal and having group members take responsibility impacts the success of precycling initiatives. These results emphasize that pro-environmental behavior change should be contextualized within the immediate social environment such as the private homes. Based on our results, we offer practical implications on how to promote precycling in interventions for a successful transition to a low-waste society.

The long-term effects of Living Labs in times of crises: Empirical evidence from The Netherlands and Finland

Veronique Vasseur¹, Kaisa Matschoss², Julia Backhaus³, Senja Laakso⁴

¹Maastricht University; ²University of Helsinki; ³RWTH Aachen University; ⁴Tampere University

Problem definition

Living labs have emerged in the 2000s as experiments, in which various actors collectively learn new ways of doing and co-produce knowledge on ways to transform practices. The challenge is that these living labs are often temporary and research on the long-term impacts of these initiatives has been scarce. We also do not know, how living labs can support the adaptive capacity of people during crises. The exceptional circumstances during the Covid-19 pandemics starting in 2019 radically altered people's everyday habits and routines because of being homebound for prolonged periods of time (Fornara et al., 2022). More recently, the energy crisis in Europe, peaking in early 2022 and continuing through the following winter, forced many households to save energy at unprecedented pace. This paper presents results from a follow-up study conducted for households in Finland and The Netherlands, who took part in Living Labs in 2018 that focused on changing practices of heating and doing laundry in European homes. In this study, we examine whether the changes in practices during the living lab helped the participating households in adapting to the two crises. Our research questions are 1) How effective are longitudinal living labs over the years to ensure reductions in residential energy consumption for Dutch and Finnish households? 2) How did the living labs support household resilience during Covid-19 pandemic and energy crisis?

Method

Quantitative and qualitative data were collected before, at the end, and 3 months after the living labs. Average changes in reported temperatures indicated that reductions are possible. In 2022-2023, we conducted a further follow-up survey in The Netherlands and Finland. It focused on the long-term effects of the living labs in terms of the relations between the learnings and experiences from the living labs and households' energy consumption during the two major disruptions since the implementation of the living labs in 2018: the Covid-19 pandemic and the energy crisis of 2022-2023. We examine quantitatively and qualitatively how practices about doing laundry and heating have changed.

Results

The results show that the changes in practices adopted by the participating households have been persistent in several cases. Participating in the living labs brought the households novel understanding of and skills related to energy consumption, and these were considered helpful also during the pandemic and the energy crisis. Especially, the living labs had taught the participants various ways to live in colder temperatures without having to compromise their comfort. Similarly, the households had learned adaptive practices to avoid laundry and novel ways to think about cleanliness, which supported energy saving also on a longer term.

Significance to mainstreaming sustainable consumption

Sociological research has shown that fundamental changes for consumption patterns require transforming everyday practices, which include consumption of energy and other resources as part of the practice. Our paper examines persistent changes in household practices, that can contribute towards sustainable consumption in the long run and in exceptional circumstances, which can help mainstream sustainable practices in everyday life.

Thinking labs supporting sustainable, 1.5° lifestyles: multiple roles, multiple stakeholders

Edina Vadovics

GreenDependent Institute, Hungary

Problem definition

Thinking labs can be defined as “‘islands of experimentation’ for applying innovative methods to address public problems” (McGann et al. 2018, 250). As such, they have potential to play a variety of roles in supporting sustainable, 1.5° lifestyles at a time when the tools applied in public policy making seem to have failed to achieve substantial enough change in the move towards the 1.5°C target of the Paris Agreement. In this contribution we reflect on the different roles thinking labs could play in creating policies and solutions to support sustainable, 1.5° lifestyles as well as creating acceptance for these lifestyles.

Method

To reflect on the various roles thinking labs could play, we consider the different types of thinking labs organised in the framework of the EU 1.5° Lifestyles research project. In the project thinking labs were carried out in five countries both with single and multi-stakeholder groups, in both cases with several objectives. Single stakeholder groups consisted of citizens, and thinking labs were held with three different objectives. First, to study the acceptance of 1.5° lifestyle options, then to reflect on potential rebound effects, and finally to envisioning 1.5° societies including policies leading to them. Multi-stakeholder groups consisted of experts representing both different fields (e.g. business, policy-making, research, media, civil society), and different sustainable lifestyle domains (e.g. nutrition, energy, mobility). Thinking labs were held first to understand and overcome key structural barriers to 1.5° lifestyles, and then to explore innovative strategies for reaching them.

In our analysis we consider both the intended and unintended outcomes of the thinking labs based on the reports the consortium prepared, and our notes as organisers and facilitators. While we draw general conclusions, we focus specifically on Hungary, where the current, increasingly undemocratic political and policy context creates conditions where democratic processes and methods like thinking labs could have added potential benefits.

Results

In the case of our project we found the thinking labs to be valuable research tools. In terms of reaching the originally defined objectives of the labs, with the particular designs used, they were most successful with the single stakeholder (citizen) group, particularly the labs investigating the acceptance of 1.5° lifestyle options and rebound effects.

However, in each case several unintended effects of the labs were identified, both by participants and organizers. For example, in the case of single stakeholder labs, citizens highlighted the positive impact of the labs in providing space to reflect on their current lifestyles as well as creating a sense of community of like-minded people. In the case of multi-stakeholder labs participants mentioned the role of the labs in helping them understand the reasoning and thinking of experts working in other fields.

Significance to mainstreaming sustainable consumption

We conclude that if integrated into policy making, thinking labs could play several important roles. They could support the collaborative creation of impactful policies, on the one hand, by involving the target group in the process, and on the other, by drawing on and joining multiple fields of expertise.

Challenges and opportunities of mainstreaming mobility experiments

Luca Nitschke, Jutta Deffner

ISOE-Institute for social-ecological research, Germany

Problem definition

The reconfiguration of mobility practices away from the private car is a complex matter. So far, climate-friendly, multimodal transport behaviour is not yet widespread among the population in Germany and other (western) countries - even where infrastructure and services appear to be relatively well developed. The consumption of distance remains within the realm of dominant automobility. Following practice theoretical considerations, part of the problem is that for transformative measures to be impactful, the elements of practices – meanings, competences and materialities – need to be addressed simultaneously, which is not the case with most of current transport measures and policy.

Method

This contribution first gives an insight into the results of two real-world experiments in different regions in Germany (Rhine-Main area and Dortmund/Osnabrück district). The participants could test alternatives to conventional private cars for their commute and their everyday mobility over a period of several months: E-bikes, E-cargo bikes, E-cars or public transport. In addition, the participants were actively supported in developing skills for their new mobility routines through mobility counselling, fact sheets and community exchange. The aim was to enable participants to familiarise themselves with sustainable mobility practices, break up the established mobility routines and embed the new practices into their everyday lives.

Results

The real-world experiments made clear that with the trial and experience of new practices new attributions of meaning emerge, e.g. commute time as leisure time or recreational activity, joy of driving with an E-(cargo-)bike. Also new competences are developed, e.g. dealing with weather conditions, competences for multimodal mobility. Furthermore, potentials and obstacles in this process like everyday life organisation, health improvements, malfunctioning infrastructures became apparent. The changes observed in the course of the experiments however show that learning processes and change dynamics can be effectively triggered by experimental settings, wherefore it is worthwhile to think about how such experiments can become a tool for fostering sustainable mobility on a larger scale.

Significance to mainstreaming sustainable consumption

In an ongoing research project, mobility experiments are to be scaled up and disseminated as an effective transformative measure for municipalities and later on companies at a regional level. Experimental settings are specifically suitable for mainstreaming sustainable mobility practices because it motivates and challenges people to change their routines without an immediate necessity for big life decisions. Experiments thus offer participants a step-wise but thorough exploration of sustainable mobility practices over a longer period of time, thereby fostering the integration into everyday routines and ideally the uptake of new practices. In the second part of the presentation, we explore the challenges and opportunities of the transfer of mobility experiments from research into mobility management practice. These include not only questions of scalability of participatory offers as well as organizational and financial aspects, but also questions of how regional actors can take up the topic of skills transfer and symbolic meanings and how future multipliers and change agents can be involved in the development and implementation of transformative experiments.

Co-evaluating Sustainability Implications of Innovation Projects based on the Interactive SDG-Check

Katja Möltgen, Justus von Geibler, Annalena Präger, Julia Brandt

Wuppertal Institute, Research Division Sustainable Production and Consumption, Germany

Problem definition

Within the transition towards sustainable consumption we are facing multiple interconnected problems, including so-called “wicked problems” which are complex and multi-faceted and call for interdisciplinary approaches to address them successfully. Especially when sustainability objectives for the solutions are set, engaging interdisciplinary perspectives of a team in an efficient co-evaluation is challenging. Based on results from applied sustainability research and the United Nations' 2015 Sustainable Development Goals (SDGs), we suggest an interactive online tool the “SDG-Check” to help interdisciplinary teams co-evaluate potential sustainability implications of innovation projects such as product innovations or new business models. We present the development of the internet-based tool and illustrate experiences made from its application.

Method

The development and evaluation of the SDG-Check has been based on the Living Lab approach enabling collaboration and iterative prototyping loops, covering the following three main steps:

1. Co-design of requirements
2. Co-creation for tool development
3. Co-evaluation of results

We derived the requirements from results of prior projects in the field of sustainable production and consumption and we formulated mandatory functions in a co-design workshop. The SDG-Check should be applicable basically to any innovation idea or project aiming for alignment with the SDGs. Crucial functions are the high usability for individuals and teams, a project-specific selection of relevant SDGs and visualizations of the individual and collective results to support related discussions. The evaluation of the tool in the following test phase should focus on user experience (UX) including usability, and learnings from tool application.

Results

For the prototyping of the SDG-Check a number of requirements have been set. The primary user should be a project lead being able to create an account to store and manage a collection of projects. Evaluation requests can be sent to team members, as secondary users. The SDG-Check itself can be applied by the team members at two levels. The first level “quick check” is a shorter assessment for the relevance or irrelevance of SDGs regarding the project. The second level “detailed check” is an evaluation of all relevant subgoals, covering risks and opportunities.

As a result, all team members receive a report about their evaluation results with a statistical analysis and a clustering of their perspective. The project lead can access statistics that cover all submitted SDG-Checks. The results aim to support a structure for a follow-up team discussion. The SDG-Check has been positively evaluated in field testing. Hereby, the focus has been set on UX with a focus on usability and lessons learned from the tool application.

Significance to mainstreaming sustainable consumption

The SDG-Check is an opportunity to integrate sustainability thinking effectively in early stages of product and business model development. Due to the strong connection between production and consumption, sustainable product innovations and new business models can enable and support sustainable consumption opportunities. Furthermore, the SDG-Check allows to enhance the sharing of sustainability knowledge in teams and to support the sustainability literacy of the team members.

2:00p
m -
3:45p
m

Embedding sustainable consumption within just transitions to low carbon lifestyles

Location: **Sångsalen**

Session Chair: **Elisabeth Dütschke**

Dwelling on Power: Investigating Interlinkages of Energy/Cooling Poverty and Housing Inequality through a Political Economy Lens

Anne Kantel, Iska Brunzema, Hannah Janssen, Sabine Preuss, Maria Stadler

Fraunhofer Institute for Systems and Innovation Research (ISI), Germany

Energy and cooling poverty refers to people's inadequate resources for domestic energy services to either keep their homes adequately warm or cool, with various negative consequences for their health, well-being and productivity. This presentation addresses energy and cooling poverty in the context of housing inequalities, with a particular focus on how vulnerable communities in the city of Mannheim, Germany, are affected by and respond to inadequate housing conditions that contribute to a living environment of extreme heat in the summer months and extreme cold in the winter months. The presentation builds on the growing literature on energy poverty and indoor cooling, draws insights from empirical data collected through qualitative interviews and focus groups in the autumn of 2024, and interprets these findings through a political economy lens that highlights the role of existing power structures and policies in understanding the linkages between energy/cooling poverty and housing inequalities.

A multi-stakeholder solution to rural home renovation

Mara Florina Oprea

Institute for European Energy and Climate Policy, Netherlands, The

Although the concept of energy poverty and the importance of addressing it have recently gained attention at the EU level, rural energy poverty is understudied, leaving EU citizens living outside of urban populations exposed to the risks of energy poverty. As such, the session titled "*A multi-stakeholder solution to rural home renovation*" will provide a thorough analysis of the causes of rural energy poverty, the characteristics of rural areas, and the rural energy poverty drivers which expose homeowners to increased chances of experiencing energy poverty. This contextualisation will help to frame the problem of rural energy poverty within the EU, and will set the scene for the solutions which have been developed in the EU-funded RENOVERTY project. A new indicator developed within the project to identify transport poverty and transport's connection to energy poverty, particularity in rural areas, along with the results from a series of audits conducted in rural homes across 7 countries will also add to the contextualisation through real-life data which validates the presence of the phenomenon along with the need to address it. Following research and repeated collaboration with a range of stakeholders, trainings along with renovation roadmaps have been designed to speak to and address some of the challenges faced by rural homes experiencing energy poverty. The methodologies behind the development of both will be explained, with a focus on co-creation of solutions to decrease rural energy poverty and increase energy efficiency in residential homes. An overview of the trainings, designed for public authorities, energy agencies, Local Action Groups, energy experts, etc. will be presented, highlighting the impact that they can have on the stakeholders undertaking the trainings to learn energy poverty alleviation techniques, along with the target groups (rural citizens). Additionally, the rural Renovation Energy Efficiency Roadmaps (REERs) will be featured, showcasing their practical guidance and recommendations for citizens interested in undergoing energy efficient renovations as well as conceptual and validated pathways for stakeholders to help homeowners achieve higher energy ratings for their properties. Following the presentation of the RENOVERTY solutions, opportunities for exploitation and replication will be presented to help other public and private institutions reduce rural energy poverty and increase energy efficiency.

The role of social fragmentation in the acceptance of emission-reducing mobility policies in Germany - insights from two representative surveys

Josephine Tröger, Elisabeth Dütschke, Alina Mohr, Anne Kantel

Fraunhofer Institute for Systems and Innovation Research ISI

Mobility is still currently very CO₂-intensive. Changing individual and collective mobility practices represents a lever to reduce emissions. However, structural changes are needed to make these behavioral adjustments easier for individuals. Many policy measures aimed at substantially reducing emissions, however, are not widely supported by the general population or key societal stakeholders. In discussions about the "right" measures, value conflicts quickly become apparent and block transformation.

Recent research approaches therefore address the phenomena of societal fragmentation, which may hamper the ability to successfully advance important topics, such as climate protection in mobility through democratic decision-

making. Our research takes a closer look at whether and how societal fragmentation in particular societal areas or topics already contributes to the lack of acceptance of important mobility policies.

Two representative online surveys examined the acceptance of selected mobility policies currently under discussion in Germany. Additionally, important dimensions of social fragmentation were measured, i.e. the degree of social inequality, segregation of networks, and central values. Data was analysed to answer the following questions: How is perceived social inequality systematically related to the approval or rejection of different mobility policies? To what extent does network segregation play a role in the evaluation of currently discussed mobility policies, thereby preventing societal consensus? Can we observe polarization in key values and attitudes important for the transformation of mobility, which makes it difficult to find societal consensus?

The presentation provides insights into the research findings and discusses key takeaways.

Digital, sustainable and equitable? Implications from twin transitions on social justice in urban mobility

Maria Stadler, Andreas Hummler, Linda Widdel, Nof Afghani

Fraunhofer Institute for Systems and Innovation Research ISI, Germany

Twin transition processes promise to transform consumption systems towards more sustainable and digitalised systems. Therefore, there seems to be an increasing interest from policy makers in the development of policies that actively utilise and promote synergies between digital and green transformation processes in order to achieve more sustainable systems of consumption through the use of digital technologies (e.g. through promoting smart cities and infrastructures).

While the concept of twin transitions seems promising to contribute to the achievement of various policy goals, the unintended consequences of such twin transition processes are so far less understood - in particular, how twin transition processes might contribute to increasing social inequalities (e.g. between different social groups of different age, gender, abilities etc. or between different regional contexts such as urban vs. rural environments).

From a social justice perspective, the presentation addresses inequalities that might arise from twin transition processes in the specific case of urban mobility. Based on a systematic literature review, we identify different types of inequalities in relation to twin transition processes in the mobility sector. Furthermore, we use interviews with EU policies makers and a review of policy documents to analyse how policies relate to existing and potential inequalities and discuss possible policy interventions to tackle inequalities.

Estimating the potential of cycling: New methods for forecasting supply and demand in Germany

Dorien Duffner-Korbee, Claus Doll, Clemens Brauer

Fraunhofer Institute For Systems And Innovation Research Isi, Germany

In this study, we assess the potential of cycling in Germany on a regionally differentiated basis, considering the systematic implementation of the vision "Germany as a cycling nation." Traditional traffic forecasts typically estimate changes in transport habits based on travel times and costs, often underestimating the potential of cycling and walking due to numerous subjective factors. This study explicitly considers actual observed behavior patterns of road users in response to changes in their personal environment, mobility services, and regional differences. This comprehensive approach aims to quantify the potential contribution of cycling to sustainable consumption, low carbon lifestyles, and sustainable transitions in transport and climate protection, avoiding the limitations of conventional forecasting techniques.

The predictive model is based on a statistical approach in the form of a multinomial logistic regression. Unlike traditional models that focus on journey times and costs, this model incorporates the perceived cycling environment as a critical factor in transportation choices. This approach is particularly relevant for cycling, as people's willingness to cycle regularly depends significantly on their subjective perception of traffic safety and infrastructure quality. The statistical model developed in this study effectively represents these subjective factors but is less suited for depicting specific local conditions or financial, administrative, and regulatory constraints.

The vision "Germany as a cycling nation" is achieved in the model through three expansion stages. These modules pertain to cycling infrastructure, public transportation, and the bicycle-friendliness of municipalities, each highlighting different aspects of a comprehensive policy promoting sustainable consumption and low carbon lifestyles. For each of the three expansion stages, we analyzed how the share of cycling in Germany and the GHG emissions from traffic might develop by 2035 if all assumptions are met, i.e., if the policy measures are fully implemented.

The results show that, if all three modules are implemented, the share of cycling in Germany could rise to 45% by 2035. This represents a threefold increase compared to the expected development under the current political course, which predicts a 15% share of cycling. Furthermore, the results indicate that cycling conditions are a key factor in predicting cycling behavior. Germans would not behave differently from the Dutch if similar cycling conditions were created, as the potential for cycling identified is comparable to the current share of cycling in cities like Utrecht and Amsterdam. Therefore, the results present significant opportunities for promoting sustainable consumption and low carbon lifestyles. However, this also involves risks related to local conditions and regulatory constraints that must be managed to ensure a successful and sustainable transition.

Sufficiency Lifestyles - Analysis of Risks and Opportunities from a Gender Responsiveness Perspective

Elisabeth Dütschke¹, Meike Spitzner², Hannah Janssen¹, Lotte Nawothnig²

¹Fraunhofer ISI, Germany; ²Wuppertal Institute, Germany

Problem definition: This presentation examines sufficiency strategies in the context of socio-ecological transformation, focusing on risks and opportunities, based on gender responsiveness considerations as enshrined in the legal imperatives of gender mainstreaming. This approach is based on the concept of an "emancipative sufficiency" approach and thereby also responds to calls to guard against the respective impending 'feminisation of environmental responsibility'. Thus, our understanding of sufficiency implies providing households and caregivers in particular with the means, i.e. the resources and structures they need to manage their daily lives and care for themselves and others without exploiting themselves, the environment and other people. With this definition, the gender-responsive approach explicitly addresses the macro-micro divide in a non-gender-hierarchical way.

The paper therefore examines the challenges of developing sufficiency approaches in androcentrically organised societies. The latter are characterised, for example, by the rational, economic and political marginalisation of the care economy: caring activities and rationalities that meet basic needs such as food preparation, cleanliness or social support. Individual self-financing through market-dependent labour is demanded of each person, which requires a productive-efficient use of time - a concept that does not correspond to the rationales of the care economy and the timescapes (Barbara Adams, cf. Hofmeister/Spitzner 1999) of care work. This severely limits the ability of households and in turn the caregivers within households to maintain more sustainable, more sufficient lifestyles.

In this situation, sufficiency is identified both as a potential mechanism towards sustainability and as a strategy that poses further challenges, including the possibility that sufficiency measures may contribute to re-enforcing the unsustainable structures they seek to change. An example for this is if people engaging in more sustainable and often slower modes of transport are disadvantaged in terms of career options or long-term independent livelihood security.

Method and Outputs: The presentation further investigates these mechanisms firstly by exploring these potentially contradictory effects by analyzing recent survey data on sufficiency lifestyles from large scale representative surveys from four European countries (DE, DK, IT, LV) collected in 2022 (1500-2000 participants per country). Secondly, using the method of the gender impact assessment, developed for sustainable development of (netbound) infrastructure systems (Spitzner 2005) and refined for climate policy relevant measures (National Environment Agency Germany, UBA 2020), policy proposals for sufficiency e.g. from the EU green deal, the international energy Agency (IEA), the revision of the EU-EPBD-directive or similar, will be evaluated.

Significance to mainstreaming sustainable consumption: This will lead on to looking into potential action alliances, where institutions, professions or providers as actors in their self-understanding, by their interests or their further development, can support emancipative sufficiency that supports sustainable care economies and caregivers. Especially examples for emancipative sufficiency legislation will be presented.

Workshop: Creating Empathy for Sustainable Action Through Creative-Performative Methods – An Exploratory Workshop

Location: **Aula**

Session Chair: **Kim Jennifer Huber**

Session Chair: **Anica Luggen-Hölscher**

Many people are aware of strategies for using resources more sustainably—such as the "R" strategies and the Sustainable Development Goals, which provide clear targets for action. While knowledge about sustainable practices is widely available, research suggests that cognitive understanding alone is insufficient for driving behavioral change. Psychological studies indicate that emotional engagement is a crucial factor in transforming knowledge into action (Brosch & Steg, 2021). This raises important questions for transformation research: How can emotional understanding of sustainability challenges be fostered? And does emotional engagement enhance the likelihood of more sustainable behaviour? This workshop explores these questions by applying creative-performative methods to investigate whether and how such approaches might support sustainability literacy. Specifically, it examines whether embodied engagement with sustainability issues – through perspective-taking of different human and non-human actors within a production-consumption system – can create new ways of emotionally relating to these challenges. Building on discussions around the role of art and culture in societal transformation, as highlighted, for example, in the German Sustainability Strategy (DNS), the workshop invites participants to step into various roles within the life cycle of an everyday object. Using a method inspired by the concept of the Social Presencing Theater, participants will explore a specific product-consumption system, embodying perspectives ranging from producers and consumers to environmental elements such as water and soil. This approach aims to provide an experiential, relational understanding of interdependencies, impacts, and agency within sustainability transitions. Rather than focusing merely on knowledge transfer, the workshop explores whether such embodied experiences can foster systems thinking, ecological awareness, reflexivity, and ultimately empathy – key dimensions of sustainability literacy. The session concludes with an open discussion, encouraging shared reflections on whether and how performative engagement might influence the way participants relate to sustainability challenges on an emotional and relational level. By integrating aesthetic, embodied, and relational dimensions, this workshop seeks to offer new insights into the role of creative-performative methods in sustainability education. It invites participants to critically explore their own positions within sustainability challenges and consider how emotional engagement might shape their connection to their environment and agency within broader systems of change.

**2:00p
m -
3:45p
m**

Workshop: Digital Product Passports as the next sustainability revolution? Empowering consumers and increasing transparency within supply chains through innovative digital product labelling

Location: **201**

Session Chair: **Jonathan Sparkes**

Session Chair: **Jordon Lazell**

Session Chair: **Erik Stefan Jacobi**

Digital Product Passports provide a means of embedding digital information into consumer goods facilitated by intelligent 2D QR codes. Whilst such an idea has existed for many years, incoming EU product regulations to provide location-based recycling information to consumers by 2027 has led to a revitalised interest. Workable platforms can now provide consumers with reliable and verified product information via digital means. This workshop session presents research into a recent innovation by a global leader in the Digital Product Passport arena with the aim of exploring the wider societal implications. Buyerdock (<https://buyerdock.com/>) currently provides digital product information for more than 15 million products sold in 105 countries. This allows consumers access to information about a product's provenance, recyclability, nutrition, sustainability, and brand narrative, amongst other data, going far

**2:00p
m -
3:45p
m**

beyond the content traditionally delivered on product packaging. Research undertaken at the University of Essex has begun to explore the implications of this, from the potential changes to consumers' shopping behaviour, to the impact on the perceived safety, integrity, and value of products, to how brands can differentiate themselves and engage with consumers post purchase, and how a climate of greater manufacturing transparency may be created. In this workshop we seek to foster important discussions related to sustainable consumption and production regarding the adoption of Digital Product Passports. Following the presentation of the technology and research findings, the session will allow participants to test examples of Digital Product Passports. This will be followed by a thematic discussion on the perceived strengths, weaknesses, opportunities, and threats.

Making the Digital Product Passport work for Sustainable Consumption: Challenges and Policy Recommendations

Justus von Geibler, Toni Gnanko

Wuppertal Institute, Research Division Sustainable Production and Consumption, Germany

Problem definition

Digitalisation offers a wide range of opportunities to make consumption more sustainable for society as a whole and to support consumers in their purchasing decisions towards sustainable alternatives. The Digital Product Passport (DPP) is a key element in the implementation of the European Circular Economy Action Plan (CEAP). The DPP is to be introduced throughout Europe in accordance with the EU regulation on ecodesign for sustainable products.

The main functional potential of the DPP as a cross-product and standardised data set is to collect data from the entire product life cycle and make it accessible to various stakeholders, e.g. consumers when before a purchase decision. While the challenges for companies in using the DPP are frequently discussed, the challenges that potential applications of the DPP could pose for consumers in the context of sustainable consumption remain largely unclear. A related open question is what recommendations for action can be derived for policymakers in order to design the DPP in such a way that consumer interests are integrated and sustainable consumption decisions are supported.

Method

In order to explore the potential of the DPP and derive recommendations for action, four key steps were carried out as part of the application-oriented sustainability research:

1. Conceptualisation of digitally supported, sustainable consumption based on a literature review covering a competence model for sustainable consumption
2. Identification of challenges for consumers in potential DPP applications
3. Collection of measures as part of a roadmapping process based on two online workshops
4. Formulation of political recommendations based on three online workshops

Results

The research results show that the DPP, in combination with AI-supported data analyses, supporting decision designs and knowledge about sustainable consumption on the part of consumers, offers great potential for increasing sustainable consumption. However, a number of challenges need to be overcome before the DPP can be widely applied. These include technical challenges, challenges for manufacturers and retailers, and challenges for policy makers. Challenges for consumers include for example issues of data protection and lack of expertise in relation to product information. In order to realise the potential of DPP for sustainable consumption across Europe, action needs to be taken, in particular to improve data provision and availability, to promote DPP applications for sustainable consumption and to shape overarching policy frameworks. At the policy level, nine key recommendations were identified, including aligning the data architecture with circular economy and sustainability, focussing on applications at an early stage and developing structures for governance and financing.

Importance for mainstreaming sustainable consumption

By providing standardised and easy access to product information, the DPP can significantly increase the transparency of products and value chains so that consumers can be supported to make more sustainable purchasing decisions based on this information. The politically supported, user-centred design of the DPP for consumers is an essential step towards making an important contribution to the mainstreaming of sustainable consumption decisions.

Workshop: The critical role of infrastructures in shaping consumption patterns

Location: **133**

Session Chair: **Felix Creutzig**

**2:00p
m -
3:45p
m**

In this interactive session, we would like to explore the hypothesis that consumption patterns are strongly shaped by infrastructures, and, as a corollary, that infrastructure design is a key intervention towards more (or less) sustainable consumption patterns. The session will be partitioned into two parts, each starting with one or more short interventions, followed by facilitated discussions. In the first part, the general relevance of infrastructures will be explored. In the second part, the focus will shift to AI infrastructures, in terms of mediating consumption via targeted advertisement, increasing consumption via tailoring production, or decreasing consumption by providing service-based alternatives (think of car sharing instead of private car driving). We will end by aiming to identify interventions on the emerging AI infrastructure that help to shift patterns of consumption towards sustainability. Participants are invited to prepare their own short contribution to this discussion [contact Felix Creutzig: creutzig[.]@pik-potsdam; but participants can also just drop by]. If results appear interesting, a joint publication could be advanced.

**3:45p
m -
4:15p
m**

Coffee Break

Location: **Stora Sparbanksfoajén**

**4:15p
m -
6:00p
m**

Everyday life and societal transformations: Inequality, agency and power in consumer society

Location: **Stora Salen**

Session Chair: **Manisha Anantharaman**

Session Chair: **ULRIKKE WETHAL**

Session Chair: **Arve Hansen**

Everyday life and societal transformations: Inequality, agency and power in consumer society

Manisha Anantharaman¹, Ulrikke Wethal², Arve Hansen², Mary Greene³

¹Centre for the Sociology of Organisations, Sciences Po, France; ²Centre for Development and the Environment, University of Oslo, Norway; ³Wageningen University and Research (Netherlands)

Problem definition

The consumption patterns of households in affluent societies, and to an increasing extent in “emerging middle classes”, are at the core of global unsustainabilities. However, due to consumption’s deep embeddedness in social relations and economic systems, and in people’s aspirations towards and expectations of decent lives, both research and policy lack convincing approaches for tackling overconsumption. This paper argues for a new theoretical direction and research agenda on consumption and sustainability.

Method

We conduct a selective, critical review of three dominant approaches within the sociology of consumption: theories of practice; cultural theories of consumption; economic sociology analysis of markets. We show how each of these, while offering important tools and insights, by themselves have important blind spots. We build the case for establishing three main shortcomings within the field. We then move on to develop what we call an ‘undisciplined’ and critical approach to consumption, and outline what a new research agenda on “globally-connected” sustainable consumption could look like, illustrated by empirical insights from research projects in Vietnam, India, and Norway.

Results

The sustainable consumption field, has grown significantly in size and influence and brought important insights into how consumption patterns take shape and change (or not). However, we locate three main and considerable shortcomings of dominant approaches in the sociology of consumption. First, they only to a limited extent engage with the structuring effects on consumption by broader political-economic and economic-geographical structures, and lack cross-scalar analysis. Secondly and relatedly, they tend to lack deeper analysis of diverse forms of institutional power and the ways in which inequality is not just an outcome of, but also constitutive of consumption patterns, both in its symbolic and material elements. Finally, they are often highly Western-centric, failing to grasp the variegated and embedded forms consumer cultures take, providing context-thin and ahistorical accounts. By drawing on empirical data from research projects on consumption in Vietnam, India, and Norway we develop an ‘undisciplined’ and critical approach to consumption, outlining what a new research agenda on sustainable consumption could look like, and how new theoretical directions and alliances could contribute with vital insights towards mainstreaming sustainable consumption.

Significance to mainstreaming sustainable consumption

We propose to outline a theoretical framework for studying consumption developed through deep ethnographic engagement in non-Western as well as Western locales. This type of comparative thinking, we argue, will generate theoretical models that are more practicable across diverse contexts, and more attuned to power and inequality.

Re-enchanting sustainable consumption through embodied relationality: An ethnographic approach to the attitude-behaviour gap

roberta discetti¹, barbara tocco², matthew gorton³

¹Bournemouth University Business School, Bournemouth, United Kingdom; ²National Innovation Centre for Rural Enterprise, Newcastle University, Newcastle upon Tyne, United Kingdom; ³Newcastle University Business School and the National Innovation Centre for Rural Enterprise, Newcastle University, Newcastle upon Tyne, United Kingdom; and Corvinus University, Fővám tér 8, Budapest, 1093, Hungary.

Problem definition.

Sustainable consumption research has long been preoccupied with understanding the apparent gap between consumers’ ethical concerns and actual behaviours. Most research on the ‘attitude-behaviour gap’ aims at identifying the factors that determine it using linear, rational, and individual models. A complementary body of research aims instead at reframing the gap by highlighting uncertainties and competing ethical priorities of consumers’ lives. We argue that both sides of the debate lack an exploration of *embodied relational* processes shaping consumers’ experiences, namely an acknowledgment of the profound corporeal and interdependent nature of all consumption and ethical interactions. The aim of this paper is thus to explore the embodied relational nature of everyday ethical consumption and cast new light on the ‘attitude-behaviour gap’ by adopting embodiment theory drawn from feminist philosophical thought and practice theory.

Method.

We conducted a 1-year long ethnographic study with six families in North-East England, including participant observations, in-depth interviews, kitchen and walk-along tours in supermarkets and farmers markets, participants’ diaries, and food biographies, to explore in-depth the embodied aspects of ethical food consumption at the family level.

Results.

We identified three preliminary embodied practices in families’ ethical consumption: bypassing food sustainability labels; seeking sensorial familiarity; and calibrating attention and engagement. By doing so, we provide a nuanced understanding of everyday food consumption practices, underlining ethical consumption as an embodied and relational, rather than a reflexive and rational, phenomenon.

Significance to mainstreaming sustainable consumption.

The paper contributes to research and practice on sustainable consumption by offering a radical rethinking of the attitude-behaviour gap as a ‘*disenchanted*’ concept, namely detached from the embodied nature of all social action

and, as such, unable to understand its complex ethical dimensions. Further, based on our empirical findings, we propose three distinct future research avenues to 're-enchant' theory on sustainable consumption, namely reconnecting it to the embodied nature of all social action, and three connected policy intervention proposals to stimulate sustainable and ethical consumption from an embodied relationality perspective.

Varieties of Sufficiency: Empirical insights into the practices and representations associated with sufficiency among different social groups

Aurore Flipo

ENTPE, France

Sufficiency has often been described as a set of individual practices aiming at adopting less resource-intensive lifestyles (Alcott 2008), putting the focus on wellbeing rather than material wealth (Soper 2007) and resulting in a decrease in consumption levels (Fuchs et al. 2021). In this literature, sufficiency covers a set of specific practices in terms of housing, nutrition, mobility and general consumption (Sandberg 2021). These « lifestyles » are increasingly seen as a crucial lever for decarbonisation (Costa et al. 2021).

Households and grassroots initiatives have often been identified as potential sources for low-carbon lifestyles (Vita et al. 2019). However, quantitative studies have shown that individual carbon footprints are crucially determined by income, and that the least carbon intensive lifestyles are more likely to be found among low-income households (Duarte et al. 2021). This paradox has raised the issue of distributional justice and the need to provide a "fair consumption space for all" (Akenji et al. 2021).

Yet, while some authors have underlined the fact that sufficiency has always been part of low-income households lifestyles (Ariès 2015 ; Villalba 2016), few studies have dug into the actual social representations, practices and meanings that sufficiency uncovers in different segments of the society.

In this presentation based on the European project H2020 FULFILL (Fundamental Decarbonisation through Sufficiency by Lifestyle Changes), we seek to unwrap the diversity of practices and representations associated with sufficiency among different social groups. We base our analysis on a disaggregation of lifestyle on specific practices (Sandberg 2021) and grassroots communities associated with them. Four areas have been researched: housing (shared housing and tiny houses), material consumption (repair cafés, freecycling and low-tech labs), nutrition (short foot circuits, initiatives against food waste and community-supported agriculture), and ecovillages. 90 interviews have been conducted in five countries (Germany, Denmark, France, Italy, and Latvia) with the participants in 30 of such initiatives, to interrogate their practices, their motivations and their understandings of sufficiency. In addition, 50 interviews have been conducted with randomly selected individuals, drawn from a representative panel of the population of the respective countries, selected on their carbon footprint and their income level, and separated in two groups (lower income and higher income). Conducted during the winter 2022, these interviews have allowed us to investigate how households with different resource levels have coped with the energy crisis.

Our results show that the empirical dimensions of sufficiency appear to expand way beyond a mere continuum from "more" to "less", to include a diversity of narratives, motives and repertoires of action – that are not always connected with measurable carbon footprints. While participants from grassroots initiatives recognise themselves in the idea of lifestyle change and shift in consumption patterns, low-income individuals rather refer to ethics of self-regulation, social justice, and inherited habits of moderation. High-income individuals, on the other hand, are prone to frame their actions in terms of resource management, optimization, and individual responsibility. These results highlight the need to better take into consideration the cultural and social diversity for mainstreaming sustainable consumption.

"My wife has delegated it to me": A Gender Perspective on Energy Efficiency in the Household.

Cristina Ghita¹, Anders Nilsson², Cecilia Katzeff³, Britt Stikvoort⁴

¹Uppsala University, Sweden; ²Uppsala University, Sweden; ³KTH Royal Institute of Technology, Sweden; ⁴Uppsala University, Sweden

As the Swedish energy system is increasingly overburdened, new challenges arise in a society in which electrification is increasing at a significant pace. One important problem is that, despite enough energy being generated, the current infrastructure cannot deliver it at times when the population demands it the most. The capacity deficit arising at times of peak demand, often during the morning and evening hours, is a complex issue. One short term proposed solution is to incentivize households to reduce their electricity consumption during peak hours. Towards this end, certain distribution system operators (DSOs) have introduced demand-based electricity distribution tariffs, incentivizing shifts in consumption from peak to off-peak hours. Consumers can respond to such tariffs by engaging in manual shifting and reducing of their consumption at peak times, or by purchasing smart technology that optimizes energy consumption for them, according to external cues such as market prices or tariffs. Either way, households are incentivized to make a change towards sustainable consumption, be it through a purchasing decision or by changing routines.

In this study we equipped participant households with smart meters which provided them with real time energy consumption information. The households were part of an area in Sweden whose DSO imposed a capacity-based tariff, further incentivizing its users to reduce their power consumption. We conducted in-depth interviews in the homes of the participants with the aim of discussing the decision-making and changes connected to energy consumption in the household.

Results show that gender is a significant emerging theme, affecting decision-making and overall interest on energy issues. The majority of the participants share that most decisions regarding the household's energy flexibility, choice of electricity retail agreements, or energy-related technology installations are the responsibility of the men in the family,

while women are often described as either not involved at all, only in short discussions, or completely unaware. Furthermore, the mere participation to the present study appeared to be the main (and sometimes sole) decision of the men in the household. The resulting material reinforces stereotypical and traditional gender roles of men as technically-interested and savvy, and women as passive consumers of respective technology, which is especially noteworthy as both men and women tended to describe their roles accordingly. Such insights are surprising in a country consistently ranking high in gender equality reports, indicating that the intersection between gender and energy needs further attention. As energy mediates important aspects such as heating, cooking, communication, entertainment, or security, the person with a dominating power of decision can affect how everyday life unfolds in a shared household, resulting in a power relation unbalance.

The work contributes with a more nuanced perspective of energy consumption which shows that what, when, and how a household consumes (in terms of electricity itself but also ways for electrification) can be affected by gender roles. Furthermore, this work adds to the body of research focused on energy consumption as part of digital transformation, a process which we argue should not be hindered, but critically examined.

Opportunities to address carbon inequalities at the Swedish local level

Katarina Axelsson¹, Peter Robert Walke², Ansel Cheng-Wei Yu², André Karin¹

¹Stockholm Environment Institute, Sweden; ²Stockholm Environment Institute, Estonia

The IPCC estimates that lifestyle and behavioral changes, supported by policies, infrastructure, and technologies, could reduce global GHG emissions by 40-70% by 2050, highlighting significant untapped mitigation potential. Strong scientific evidence links household income to carbon footprints, with higher-income households responsible for larger emissions. Addressing these differences is essential, as all societal groups must shift toward more sustainable consumption patterns.

The growing field of carbon inequality research underscores the importance of society to transition toward more sustainable living while maintaining or improving quality of life. National policy measures can obscure the diverse impacts of climate actions, raising environmental justice concerns. An intersectional approach would result in more effective, inclusive, and equitable climate policies.

In Sweden, carbon footprints vary significantly across regions, driven primarily by income and geography. Municipalities, with their local knowledge and proximity to households, play a key role in this transition. They are well-positioned to tailor policies to households' specific needs and abilities, ensuring a fair and inclusive shift to sustainable lifestyles.

This paper aims to deepen our understanding of climate inequalities and to identify the socio-demographic variables most influential in shaping household consumption behavior. It seeks to provide insights into how policies can more effectively target and reduce carbon footprints while addressing issues of carbon inequality. The analysis is based on data from version 2.0 of the Consumption Compass tool which estimates carbon footprints at the postcode level in Sweden. The tool applies a downscaling approach, disaggregating Sweden's national carbon footprint to the local level by integrating the best available data on household expenditure, greenhouse gas emissions, energy use, and other relevant factors.

Initial results from version 1.0 of the tool reveal significant variations in household carbon footprints across postcodes in Sweden in 2019, with footprints ranging from 3.7 to 17.8 tonnes CO₂eq per capita, compared to the national average of 5.2 tonnes CO₂eq per capita for the same year (excluding public sector emissions and investments). The largest differences were observed in consumption categories such as flights and personal vehicles, while categories like food and electricity showed less variation. Strong positive correlations were found between income and total carbon footprint, while population density negatively correlated with personal vehicle emissions. Consumption connected to categories like clothing, restaurants, and flights showed a positive correlation with population density.

Building on these findings, the forthcoming analysis using version 2.0 of the tool delves deeper into additional socio-demographic factors such as education level, household size, and areas with higher immigrant populations. This expanded analysis will inform a broader range of variables influencing household carbon footprints, offering a better understanding of the consumption drivers.

The paper will contribute to the broader field of sustainable consumption and climate inequalities by identifying key drivers, barriers, and opportunities for reducing household emissions. Its findings are expected to inform policy development, prioritize areas for emission reductions, and offer insights into how to effectively communicate with the public to support a just and equitable transition to low-carbon lifestyles.

How to leverage green social transformations from the ground up? Insights into socialisation contexts to low-carbon lifestyles in France.

Paul Cukierman

Université Paris Cité, France

The French government's transition research agenda has traditionally been framed through a sociotechnical lens with sociocultural factors receiving comparatively little consideration. The few policy efforts that address non-technical dimensions have been predicated on class-blind assumptions of individual agency that obscure the various power relations hampering individual behavioural change. Recent ecological backlash like the Yellow Vest movement highlights the imperative to shift away from technocratic approaches and to heed the social conditions of acceptance of emerging low-carbon lifestyles.

While literature has long analysed the evolution and the distribution of pro-environmental values, the elementary units of social life - social interactions - underlying shifts in environmental norms have seldom been studied. The few studies that have addressed the drivers of low-carbon behaviours from an interactionist perspective typically isolate one contextual factor, such as the media (Shen et al., 2023), geography (Valentim, 2023) or social networks (Videras et al., 2012). Following Saujot et al. (2024), I contend that a more integrative approach is needed to better gauge how different contexts cumulatively shape behaviour.

Thus, my research seeks to position socialisation as central to understanding the propensity for individuals to adopt low-carbon lifestyles. I will more specifically investigate the role of three socialising contexts: social, spatial, and the media. I hypothesise that greater social exposure (H1), local exposure (H2) and media exposure (H3) to low-carbon practices are strong predictors of low-carbon lifestyles adoption, though these effects may vary across social groups (H4). These hypotheses will first be tested tapping into an original dataset *Socialisations and climate change*, collected in the summer of 2024 in partnership with the ELIPSS longitudinal panel (Sciences Po). This unique dataset integrates variables related to high impact low-carbon behaviours, social, media and spatial interactions. Additionally, I will build on qualitative materials from fieldwork that will be conducted in Grenoble in late 2024.

Preliminary results suggest that increased exposure to low-carbon lifestyles is positively correlated with the adoption of such lifestyles. However, the relationship is not always linear, with high-income earners, being more likely to engage in carbon-intensive practices, despite greater exposure to low-carbon lifestyles than the average. Further analyses are expected by April 2024.

These findings could support the case for more complex approaches to transition management by policymakers, emphasising the need for targeted, group-specific interventions.

Bibliography

- Enos, R. D. (2017). *The space between us: Social geography and politics*. Cambridge University Press.
- Saujot, M., Nasr, C., Brocard, C., Bet, M., Dubuisson-Quellier, S., & Plessz, M. (2024). «Quand on peut, on veut». Conditions sociales de réalisation de la transition: une approche par les modes de vie.
- Shen, J., Liang, H., Zafar, A. U., Shahzad, M., Akram, U., & Ashfaq, M. (2023). Influence by osmosis: Social media green communities and pro-environmental behavior. *Computers in Human Behavior*, 143, 107706.
- Valentim, A. (2023). Repeated exposure and protest outcomes: How Fridays for Future protests influenced voters.
- Videras, J., Owen, A. L., Conover, E., & Wu, S. (2012). The influence of social relationships on pro-environment behaviors. *Journal of Environmental Economics and Management*, 63(1), 35-50.

4:15p
m -
6:00p
m

Circular Consumption 2

Location: **Lilla Salen**

Session Chair: **Carl Johan Dalhammar**

Demand in the Circular Economy is not Driven by Supply - Empirical Evidence on the Impact of the German Packaging Act on Packaging-as-a-Service Systems

Robert Burkhardt

Technical University of Munich, Germany

Problem definition

Packaging-as-a-service (PaaS) systems provide reusable takeaway food containers, facilitating a model of temporary, non-ownership consumption for both food outlets and consumers. Despite their environmental potential, these models have seen limited uptake, with only 0.74% of takeaway food in Germany being served in reusable containers in 2022. Consequently, scholars argue that policy interventions are necessary to overcome this inertia and promote the circular economy transition. In response, the German government introduced the Packaging Act in 2023, mandating that food outlets provide reusable containers for takeaway food and beverages, thereby aiming to increase the usage of reusable food containers via PaaS systems. Existing literature underscores the importance of viable alternatives to single-use packaging, as the limited availability and accessibility of PaaS systems have been identified as barriers to switching from single-use packaging to reuse models. Empirical evidence on the effectiveness of the regulation remains scant. Thus, this research aims to thoroughly investigate the regulation's influence on both (a) food outlet adoption and (b) usage of PaaS systems.

Method

To measure the effect of the Packaging Act on outlet adoption, this study examines the participation of food outlets in the three largest PaaS systems in Germany: Recup, Vytal, and Relevo. This comprehensive panel dataset includes 25,981 participating outlets in total, providing a robust basis for analysis. To analyze the usage of PaaS systems, this study utilizes a comprehensive field dataset from Vytal, the world-leading digital-native reusable PaaS system from 550,000 registered users from 2019 to 2023. Each reusable container transaction is recorded with a unique user ID, outlet ID, outlet location, and transaction timestamp. The total panel dataset consists of 15 million container transactions.

To test the impact of the Packaging Act on the outlet adoption and usage of PaaS systems, this study employs a two-way fixed effects model with a difference-in-differences estimator.

Results

Preliminary estimates show the number of participating outlets increase significantly after the introduction of the new regulation. However, despite the increase in outlet adoption of PaaS systems, preliminary results indicate that the usage of those systems remains stagnant. The results provide evidence that an increase in supply of circular business model offerings does not inherently increase demand.

Significance to mainstreaming sustainable consumption

This paper provides field evidence of the impact of the Packaging Act on food outlet adoption and usage of PaaS systems. The findings suggest that increased availability of PaaS systems does not necessarily lead to higher usage. This contradicts qualitative studies, which suggest that limited availability of reuse models is a significant barrier to user adoption. Furthermore, the empirical approach, leveraging an extensive dataset from the globally leading PaaS system, overcomes methodological limitations of previous studies by providing longitudinal data over a substantial period and assessing actual behavior rather than self-reported intentions. These results contribute to a deeper understanding of the effectiveness of policy interventions in the diffusion of PaaS systems and promoting user adoption. The limited impact on consumer uptake suggests that additional measures are necessary to achieve broader user adoption of PaaS systems.

Key traits of circular public consumption: An organizing perspective

Hervé CORVELLEC, Jessika LUTH RICHTER

Lund University, Sweden

Problem definition: Despite representing a significant portion of the economy, public consumption—defined as the expenditure by public organizations—remains understudied. Many local governments are still not focussed on the climate impacts of consumption within cities, but focussing on public consumption is one key area in which cities can self-govern and lead by example to identify and reduce the negative environmental impacts from public consumption within cities.

Method: In this contribution, we examine the concept of public consumption through the qualitative case study of two projects designed to make it more circular to reduce its impact on climate. The first case study examines how the municipality approaches construction-related consumption, exploring its involvement as a developer, owner-occupier, owner-lessor, and property manager. The second case study examines the development of biochar production unit by the municipal waste management company for consumption by the municipality as a fertilizer and carbon capture device. Both projects are on-going in the city of Helsingborg in Sweden.

Results: Inspired by an action-net understanding of organizing—briefly a processual understanding of organising as the interactive knotting of actions— we focus on what public servants do to orient public consumption towards circularity. We leverage here the fact that circular consumption in these two cases is still in an early stage and therefore not yet fully structured to identify key specificities of public consumption. Instead, the challenges encountered, priorities established, and choices made reveal its specificities.

A first specificity is that the legal framework of public procurement strictly regulates public consumption. This legal framework defines the parameters for how public sector entities must interact with suppliers in the procurement of goods and services. Furthermore, public procurements are just one example of how public consumption is shaped by institutional contexts that vary across countries and over time.

A second specificity is that public consumption is political. Either that it consists of operational expenditures or of investments, public consumption is not only a means for in public organizations to operate. It serves as a means of aligning the activities of the public sector and their outcomes with the politically determined priorities. The political dimension of public consumption is deliberate and a constitutive element of it. However, as but the consumption is also an economic activity, public consumption ends involving a series of arbitrages between democratic rules and economic constraints, these constraints being also political.

Ultimately, a third specificity is the intersection of legal, economic, and political constraints, along with organizational considerations, has shaped the development of public consumption into a distinct managerial competency among public servants. Public consumption is in another way a spontaneous phenomenon. It is a carefully organized phenomenon, guided by principles that are unique to it and subjected to specific constraints.

Significance to mainstreaming sustainable consumption: Our study aims to identify some of its specifics of public consumption from an organizing perspective in order to further understand in what ways public consumption can become more circular to reduce negative environmental impacts and how cities self-govern in practice to do this.

Sustainable transitions and consumption in a circular economy: understanding the lock-ins and levers for change in the context of electronics consumption in Norway

Lucy Chamberlin, Tomas Moe Skjoldsvold

NTNU, Norway

Problem definition

The circular economy (CE) concept is promoted by businesses and governments as a response to the impending devastation wrought by climate change, overconsumption and the overwhelm of planetary boundaries (e.g. EU 2020[1]). However, there is still a lack of research addressing consumption in a CE and in particular insights from the sustainable transitions literature that use a sociotechnical lens to address the issue of change. Transition frameworks (e.g. Geels's Multi-Level Perspective) have largely focused on the emergence of niche innovations and businesses into mainstream regimes but somewhat neglected the role of consumption; whilst social practice theories (SPT), although addressing many aspects of consumption through time and place, remain less clear as to the active instigation of change.

Norway is one of the world's richest countries with a reputation as an environmental leader and the ambition to become a leader in the circular economy[2]. However, it also has very high levels of consumption, including some of the highest per capita consumption and disposal of personal electronics[3] globally, contributing to well documented problems of waste, pollution and resource depletion.

Method

In this study we review and explore literature at the intersection of CE consumption and sustainability transitions, highlighting research gaps as well as potential leverage points for systematic change in regimes and routines (e.g. Geels et al., 2015[4]; Keller et. al., 2022[5]). Without trying to merge or integrate MLP with SPT, we compare their usefulness when it comes to addressing consumption in a circular economy and identify potential leverage points for more systematic change. Taking the example of personal electronics consumption in Norway as a focus (and locus) for the study, we use preliminary empirical research conducted with 15 interviewees from business, NGO, local and central government and citizen groups to highlight lock-ins, uncover perceived barriers and create a framework for future action research.

Results

The results provide a foundational framework and suggest leverage points for normative change towards circular consumption. They also suggest avenues for further research into electronics consumption, particularly with respect to participatory and action-based programmes.

Significance to mainstreaming sustainable consumption

The findings feed into current and future work by the eLife[6] project, involving a transdisciplinary collaboration of participants from across Norway working to address social transitions as part of a CE for electronics consumption. The action-based nature of the project (including Transitions Management[7] partners) seeks to take a more pragmatic approach towards mainstreaming sustainable consumption in the electronics sector.

[1] https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

[2] https://www.regjeringen.no/contentassets/a116f209e493471bb26c81cf645152a3/kld_strategi_sirkularokonomi_sam_mendrag_eng_0507.pdf

[3] <https://www.statista.com/statistics/499945/per-capita-ewaste-generation-worldwide-by-major-country/>

[4] <https://www.sciencedirect.com/science/article/pii/S0959378015000813#fig0005>

[5] <https://www.sciencedirect.com/science/article/abs/pii/S221042242200051X#tbl0001>

[6] <https://cicero.oslo.no/en/projects/elife-how-to-circulate-more-electronics>

[7] <https://www.sciencedirect.com/science/article/abs/pii/S0016328709001839>

The tri-dimensional role of sustainable secondhand clothing consumption in circular systems: a conceptual framework

Lauren Junestrand Leal, Bethan Alexander

London College of Fashion, University of the Arts London, United Kingdom

Problem definition

Sustainable fashion scholarship has advanced, yet the industry's unsustainability persists (Abbate et al., 2024; Mukendi et al., 2020; Niinimäki et al., 2020). Textile waste remains a key issue, exacerbated by unsustainable consumption (Birtwistle and Moore, 2007; Tang, 2023). Whilst circularity is seen as a model for circular transitions, its environmental impact reduction is debated, especially regarding clothing reuse (Corvellec et al., 2021; D'Itria and Aus, 2023; Sandin and Peters, 2018). Secondhand consumption (SHC) is booming (Herjanto et al., 2019) and remains crucial for achieving sustainability, given the role of the consumer in CE (Machado et al., 2019; Turunen and Gossen, 2024; Valor et al., 2022). There is a surge in scholarly calls challenging the crux of SHC, concerning when and how SHC consumption contributes to sustainability, which remains absent (Iran and Schrader, 2017; Moon, 2024; Sandberg, 2021). This study addresses this, proposing a conceptual framework to guide scholarly and practitioner avenues for further research.

Method

The research adopts a semi-systematic literature review methodology to explore key themes in sustainable consumption, circularity, circular fashion, secondhand consumption, textile waste management and retail models (Sinha et al., 2023). Drawing on Shevchenko et al's (2023) tri-dimensional model, we examine SHC across acquisition, use and end of life, to develop a consumption centric conceptual framework.

Results

Emerging from the literature review, we conceptualise:

Figure 1: "Tri-dimensional role of sustainable secondhand clothing consumption in circular systems framework" (Authors own).

The framework represents and examines the conditions under which SHC becomes sustainable within the three phases of circular consumption:

Acquisition

Whilst pro-environmental motivations and attitudes are favourable, these do not always translate into sustainable behaviours (Machado et al., 2019; Paras et al., 2018; Park and Lin, 2020). Ethical and anti-acquisition values can enhance the sustainability of SHC consumption, alongside slowed down consumption (Centobelli et al., 2022; Vesterinen and Syrjälä, 2022). It requires meeting replacement rates, avoiding unconsidered purchases and focuses on product quality and type (Farrant et al., 2010; Moon, 2023; Piippo et al., 2022).

User

Intensifying the use and extending the product lifetime is key to underutilisation avoidance (Sandin and Peters, 2018). Product care and maintenance, collaborative consumption, resale and redistribution and social recycling, are options for further maintaining textiles in the circular loop (Iran and Schrader, 2017; McQueen et al., 2022).

End of life

Robust waste management systems need to be established and used for timely and appropriate disposal of SHC goods, as solid infrastructures for the separate collection of textile waste and textile to textile recycling technologies are still in their infancy (Baloyi et al., 2023 Fortuna & Diyamandoglu, 2017; Öztürk & Şahin, 2023).

Significance to mainstreaming sustainable consumption

This study fills the scholarly lacuna on when SHC becomes sustainable through a literature review and conceptual framework, contributing to advancing theory and practice on circular transitions. It identifies critical factors that make SHC sustainable through a tri-dimensional lens, demonstrating how these interact to foster sustainability in circular systems. This study informs future research and practice and highlights pathways for advancing circular transitions.

The attitudes towards refurbished products and the problem of trademark infringement

ANNA TISCHNER¹, KATARZYNA STASIUK²

¹Institute of Applied Psychology Jagiellonian University, Poland; ²Department of Law, Jagiellonian University, Poland

Refurbishing is the process of restoring a used product to good condition by cleaning, replacing and/or repairing major components of the product and then bringing it back to the market. The practice is intended to reduce the carbon footprint and improve the level of reuse of resources, promoted in a number of pieces of legislation that implement the European Green Deal. For this legislation to be successful, however, it is necessary to convince consumers to buy refurbished products. Refurbished products are sold with the original manufacturer's trade mark. Although refurbishment is an overwhelmingly desirable practice, it may raise concerns for original product manufacturers who object to third parties offering products under their brand name if they are marginally identical to the products originally marketed. Consumer perceptions of the product's identity are relevant for trade mark infringement adjudication.

Our research had two objectives. The first was to find out what consumers know about refurbishment and what are their attitudes towards these products. The second was to learn how the amount of information delivered to consumers (including information about the origin of spare parts) affects their perception of the refurbished product's trademark.

In order to find out what Poles know about this practice, their attitudes towards refurbished products and the motives and barriers to their purchase, a quantitative survey was conducted on a representative Polish sample (N= 1270). Analysis of its results showed that awareness of refurbishing in Poland is low and few people buy refurbished products. Those who made such a purchase were mainly motivated by the lower price of these products, and the desire to care for the environment turned out to be a much less important motive for the purchase. The most common barrier to the decision to buy refurbished products was the desire to own new products, as well as a lack of confidence in the quality of 'refurbishments'. To test the second aim we used experimental design where respondents were presented with the different information about the parts that were replaced in the repaired laptop (original parts vs non original parts, vs no information about the producer of the parts that were used for refurbishing). The results of the experiment showed that information about the scale of intervention and the spare parts influenced the evaluation of refurbished products.

Consequently, information may serve as a way to promote this environmentally desirable practice and to avoid most of the undesirable effects that trade mark law cares about.

Policy gaps and opportunities for scaling of circular economy initiatives in Norway

Katarina Hodal, Lina Ingeborgrud, Håkon Normann

NIFU, Norway

Problem definition

In sustainability transitions literature, emphasis has long been on accelerating and diffusing new technologies and industries and phasing out environmentally harmful practices. More recently, limiting overall consumption has gained attention. One approach is extending material lifespan through reuse, which is central to a circular economy.

The Norwegian government recently launched an Action Plan for a circular economy and is currently investigating the possibilities for a national mission on the circular economy. A motivation for these efforts is that Norway's Circularity Metric is 2.4%, meaning that of all the materials consumed in the country, over 97% are not cycled back into the economy.

To make the economy more circular requires coordinated efforts, particularly in public policy. This paper examines whether and how Norwegian policy goals, strategies, and instruments support a transition to a circular economy, focusing on construction materials and textiles. The construction industry is a significant emitter and reducing virgin material use is critical. Similarly, the clothing industry's ecological impact is substantial.

Method

Using qualitative methods, our data includes policy document analysis at local and national levels, semi-structured interviews with policy makers and actors in reuse initiatives, policy workshops, and observations of online events and study tours. To explore policy efforts in practice, we analyse two case studies: *Sirkulær Ressursentral* in Oslo, among Europe's largest reuse centrals for construction materials, and a shopping mall near Oslo, consisting of reuse and repair shops.

We draw on literature on how experiments scale-up and go beyond their original initiatives (Turnheim et al. 2018), innovation policy (Edler & Fagerberg, 2017), policy mixes (Rogge & Reichardt, 2016), and policy coordination (Weber & Rohracher, 2012).

Results

Expected results include identifying key policy gaps and opportunities that either hinder or facilitate the scaling of circular economy initiatives, particularly in the construction and textile sectors. Significance to mainstreaming sustainable consumption

Understanding barriers and opportunities for scaling various circular initiatives is a vital aspect of mainstreaming sustainable consumption into everyday practices.

This work is part of the TransScale project, funded under the *Driving urban transitions European partnership* from 2024-2026. The project focuses on scaling circular and sharing economy initiatives in Riga, Oslo, Copenhagen and Poznan, aiming to enhance cities' capacities in these areas.

References

- Edler, J., & Fagerberg, J. (2017). Innovation policy: what, why, and how. *Oxford Review of Economic Policy*, 33(1), 2-23.
- Rogge, K. S., & Reichardt, K. (2016). Policy mixes for sustainability transitions: An extended concept and framework for analysis. *Research Policy*, 45(8), 1620-1635.
- Turnheim, B., Kivimaa, P., & Berkhout, F. (2018). Beyond experiments: innovation in climate governance. *Innovating climate governance: Moving beyond experiments*, 1-26.
- Weber, K. M., & Rohracher, H. (2012). Legitimizing research, technology and innovation policies for transformative change: Combining insights from innovation systems and multi-level perspective in a comprehensive 'failures' framework. *Research Policy*, 41(6), 1037-1047.

4:15p
m -
6:00p
m

Using case-studies to explore the complexity of implementing reuse, repair, recycling, and other approaches to reducing consumption

Location: **Nya Fest**

Session Chair: **Jack McCarthy**

Translating case studies with value for reducing consumption in a Circular Economy: a methodological framework

Jack McCarthy

Rediscovery Centre, Ireland

Problem definition

The concept of a circular economy has become prominent in the policies and programmes of the European Union (EU). However, as noted by, for instance, Reich et al. (2023), the transition to a circular economy will require a systemic change to the economy including in relation to "resource excavation, materials criticality, labour, supply chains, product prices, innovation, waste management".

Given the complexity of this challenge, we assert that a key research task is to identify and investigate existing successful examples of circular economy policy implementation and explore the potential to identify and translate insights into new contexts. The key question for this paper then is - how can we translate successful cases to other contexts for the purpose of reducing overall material consumption?

Method

This paper develops a methodological approach that draws on two main strands of recent research. First, conceptually it draws on criteria identified by Ababio et al.'s (2022) framework of barriers to a circular economy, including the following dimensions,

- Theoretical understandings of a circular economy;
- Social and cultural;
- Political and legislative;
- Financial and economic;
- Technological.

Second, it pairs these dimensions with a process tracing methodological approach to case-study analysis (Bartlett and Vavrus, 2017; Collier, 2011). Process tracing is an approach that seeks to build temporal sequences of observations from the available evidence to make descriptive inferences about a given phenomenon, typically utilising both quantitative and qualitative data (Collier, 2011; McCarthy et al. 2018).

Results

This paper presents a methodological design for tracing the empirical processes through which circular economy policy initiatives are enacted. It argues that important insights can thereby be generated about the barriers and enablers associated with translating successful consumption reduction initiatives from one context to another. This paper lays a methodological foundation for further proposed work to explore the five criteria outlined above through empirical fieldwork scheduled to take place during 2025.

Significance for mainstreaming sustainable consumption

The proposed methodology will enable identification of the adaptations needed to translate effective consumption reduction initiatives from one context to another. This will support more effective development of associated policies that learn from existing initiatives, rather than starting afresh on each occasion.

References

- Ababio, B. K., & Lu, W. (2023). Barriers and enablers of circular economy in construction: a multi-system perspective towards the development of a practical framework. *Construction management and economics*, 41(1), 3-21.
- Bartlett, L., & Vavrus, F. (2017). Comparative case studies: An innovative approach. *Nordic journal of comparative and international education (NJCIE)*, 1(1).
- Collier, D. (2011). Understanding process tracing. *PS: political science & politics*, 44(4), 823-830.
- McCarthy, J, Bonnin, C. & Meredith, D. (2018). Disciplining the state: the role of alliances in contesting multi-level agri-environmental governance. *Land Use Policy*, 76. Pp. 317-328.
- Reich, R. H., Vermeyen, V., Alaerts, L., & Van Acker, K. (2023). How to measure a circular economy: A holistic method compiling policy monitors. *Resources, Conservation and Recycling*, 188, 106707.
-

The Twin Lock-in of Technology and E-Waste: Repairing the Dark Side of Norwegian Home Electronics

Karen Haugs Langvik

CICERO Center for International Climate Research, University of Oslo

Short abstract

By transitioning from a linear to a circular approach for electronic household devices, Norway has the potential to significantly reduce annual emissions, energy demand, and use of scarce minerals. This paper explores the case of Restarters, an organization that arranges repair cafes focusing on electronic devices, and their needs and challenges related to repairing and reusing electronics in Norwegian society. The main findings are a structural lock-in and point to several areas for change.

Long abstract

Problem definition

Norwegians are the second-largest consumers of electronic devices and the largest electronic waste generators per capita. Since electronic waste is simultaneously the quickest-growing category of waste in the world, this poses a major environmental problem, impacting climate change, mineral resource scarcity, and cumulative energy demand. The issues also present significant social problems throughout the life cycle of digital devices.

Significance to mainstreaming sustainable consumption

The Norwegian consumption pattern must become more circular than it is today, posing complex problems on an individual, municipality, state, and international level. Today, the consumption of electronics exists in a lock-in, where citizens are stuck in behaviors and routines of consumption due to psychological, social, and structural reasons. There are high barriers and little incentives to change this pattern.

Method

To grasp the complexity of modern electronic lock-ins, the analysis is based on continuous ethnographic fieldwork and 30 expert interviews with people active in or affiliated with a small organization called Restarters. Restarters organize repair cafes nationwide and promote the repair of electronics. This case pulls Norwegians' needs and challenges related to repairing and reusing electronics under the loupe. It also contributes to a broader discussion of how small environmental initiatives navigate different structures, struggle to contribute to larger upscales of system change, and ultimately try to break free of the current societal lock-in.

Results

Findings show that Norwegian society is advanced in technology, consumer guarantees, and wage levels, but these exact user-friendly mechanisms also hinder the sustainable possibility of repair. The practices of repair are tightly connected with the local culture of consumption and the available resources of time and economy. A lack of transparency, knowledge, access, awareness, and predictable regulations and policies are also important factors for the feasibility of repairing and reusing.

The project is part of the Norwegian Research Council-funded E-life project at CICERO, the Center for Climate Research. The larger project looks at several other cases and ultimately compares and discusses the possibility of change with a theoretical background in praxis theory.

Grassroots Innovation through Library of Things in the UK Sharing Economy

Christopher John Walsh

University of Manchester, United Kingdom

Grassroots organisations play a crucial role in the broader transition towards a zero-carbon society by offering alternative models of productivity and growth. These organisations foster the adoption of sustainable lifestyles and are especially valuable in addressing sectors that are difficult to decarbonize. Despite their significance, many grassroots initiatives are often short-lived, facing challenges from competing technological and online-based solutions. The local focus of grassroots organisations provides unique advantages, but their long-term impact remains a critical issue. This

study examines how grassroots organisations can achieve sustained influence and explores the steps necessary to ensure their longevity. Using case studies of multiple "Library of Things" (LoT) organisations in Northern England, this research analyses the key factors contributing to their success and continued operation. The findings provide insights into each stage of organisational development, highlighting the path to achieving climax community stability – where the organisation is deeply integrated and supported within the localised community. The study aims to inform and support decision-making for individuals and groups who are either considering or in the early stages of launching their own grassroots initiatives. By understanding the dynamics that have allowed some organisations to thrive in hard to abate sectors, this research offers valuable lessons for ensuring the long-term viability of grassroots movements in the pursuit of a zero-carbon future.

Status quo and potential of reuse in the Austrian furniture sector

Elisabeth Schmied, Gudrun Obersteiner

University of Natural Resources and Life Sciences, Vienna, Austria (BOKU University)

Background

With the EU Waste Framework Directive (WFD, 2008/98/EC), reuse activities have increasingly come into the focus of relevant stakeholders. In the product category of furniture, reuse has been a long-established practice, but little data is currently available on the quantities of reused furniture or the paths that used furniture takes.

As part of a study commissioned by the Austrian Ministry for Climate Action, the status quo and potential of furniture reuse in Austria were surveyed for the first time. The study focused not only on the volume of reused furniture but also explored possibilities for optimization.

Methodology

To generate data on the available options for furniture return for reuse, as well as the acquisition of reused furniture in Austria, research was conducted on both stationary second hand shops and online second-hand furniture markets. Initial projections were made based on this data. Additionally, in cooperation with a market research institute, a nationwide representative survey was conducted. The survey examined the number of reused furniture items owned or passed on by households, as well as the type of furniture, the method of transfer, and the origin of the reused furniture. Parallel to the analyses in Austria, the current situation at the European level was determined through literature research.

Results

The surveys of stationary, charitable, and traditional second-hand goods dealers revealed an average of 2.1 re-use businesses that (also) trade in used furniture per 100,000 inhabitants. Over 40% of the businesses researched were socially and economically active companies, for which quantifiable data on traded goods could have been collected through the activities of the Re-Use Austria association. For further estimates, the focus was subsequently placed on these businesses.

In addition to stationary trade, online sales and redistribution platforms have become significant providers in the furniture sector in recent years. Initial estimates of online traded volumes could be made based on data provided by Austria's largest online market provider, willhaben.at. In the years 2019 to 2021, between 1.1 million and 1.6 million used furniture listings were registered on willhaben.at each year. According to the information provided by willhaben.at on the average transaction rate and a valid average weight, around 10k to 14k tons of used furniture were transferred via willhaben.at in the period under review.

The representative survey at household provided insights into the practices and amounts regarding reused furniture in Austrian households. The detailed results and the generated optimization possibilities will be shown in the paper.

Significance

The reuse of furniture directly contributes to circular economy. By extending the lifecycle of products, it reduces waste, conserves resources, and minimizes the demand for new goods. This aligns with global sustainability goals by reducing the carbon footprint associated with the production, transportation, and disposal of new furniture. The widespread availability of re-use businesses (second hand shops, online platforms) makes sustainable consumption more accessible to the general public. This helps normalize reusing as part of mainstream consumer behavior, rather than viewing second-hand goods as niche or inferior.

Household product divestment: Complementary views and associated intervention opportunities

Karin Nilsson, Oskar Rexfelt, Helena Strömberg

Chalmers University of Technology, Sweden

Problem definition

Consumers play a key role in the transition to a circular economy, being responsible for much of the work involved in circular economy practices. This includes extending product lifespans, promoting reuse, and ensuring that the value of a product is recovered once it becomes obsolete beyond reuse. However, active product lifetimes are often unnecessarily short, with many items quickly being set aside and left unused in storage indefinitely, limiting their potential for reuse in other households.

Understanding the challenges households encounter when divesting products can help us design more effective interventions that support households in circulating items, ensuring the reuse of otherwise unused resources.

Method

An exploratory study aimed at understanding which unused products are retained in Swedish households and why they have not been divested was conducted. Twenty households participated in the study, which comprised a sensitizing activity, interview and tour of the household storages. The analysis followed a thematic analysis structure, revealing various reasons for retaining specific products. Additionally, Social Practice theory was used as an analysis framework, providing a holistic understanding of household practices supporting or preventing recirculation of unused products.

Results

The study revealed that households retain a variety of unused products, some deemed valuable while others were unwanted. The person-product relationship was a central factor influencing retention, but also the anticipated work of divesting specific products, and the consumers' desire to do the right thing with a product – they preferred retaining items over divesting them in a non-optimal way. Additionally, it became evident that other everyday practices like cleaning conflict with managing products in the households, complicating circular practices like divestment.

The person-product perspective and the broader household practice perspective are interconnected, with households shifting fluidly between them. As unused products accumulate, they transform from distinct items into an overwhelming, unmanageable mass, particularly when relocated into storage during routine cleaning. When households later attempt to declutter these spaces and engage with the stored items, the products once again become specific, as their associated narratives and values resurface.

Interventions should target both perspectives. From the household perspective, practices for managing products could be reconfigured, for instance by shifting images about how to perform decluttering from the overwhelming task of doing it all at once to a continuous process. Or by expanding existing in-home recycling structures to also support divestment, like creating dedicated recirculation bins. Interventions addressing the product perspective should support decision-making around divestment, facilitating detachment from the emotional and symbolic values tied to specific unused items, while easing the sense of guilt or hesitation often associated with letting go. For both perspectives, interventions relieving real and perceived divestment work are crucial.

Significance to mainstreaming sustainable consumption

Divestment of unused products is needed to increase their utilization. Understanding divestment challenges both as a part of practices making up everyday life as well as through person-product relationships opens for a broader range of design interventions that can support household's divestment, and by extension contribute to the circular economy.

Consume Less to Grow More: The Curious Case of Sufficiency in Quebec's Energy Transition

Anders Hayden

Dalhousie University, Canada

Problem definition

Advocates of "strong sustainable consumption" and supporters of post-growth economic approaches have long emphasized the concept of sufficiency. Sufficiency involves ensuring that essential needs are met while avoiding consumption considered to be excessive; among high-income consumers it implies limiting demand and reducing absolute levels of consumption. Sufficiency has faced considerable obstacles in the political mainstream, as governments and major political parties have favoured "green growth" emphasizing a shift to greener technologies and greater efficiency rather than less consumption. It is thus striking to see the Quebec government's recent turn toward "sobriété" as a key element of its climate change and energy transition policies. (Following the IPCC, I translate "sobriété" as "sufficiency.") In the 2024 update to its Plan for a Green Economy, Quebec's climate strategy put particular emphasis on energy sufficiency, with a goal of doubling annual energy savings through reducing consumption when possible as well as improved efficiency. The 2024 implementation plan highlighted energy sufficiency as the first of three main elements in the energy transition, followed by efficiency and conversion from fossil fuels to a renewable energy system. This presentation will address the following questions: Why has sufficiency emerged as a major theme in Quebec energy and climate policy? How does the emphasis on sufficiency relate to Quebec's continued emphasis on green growth that links decarbonization to continued industrial expansion? What lessons can be learned from the Quebec experience about the opportunities, challenges, and contradictions related to mainstreaming the concept of sufficiency and sustainable consumption more generally?

Method

These questions are answered through analysis of documents that indicate the government's stated rationale and other factors behind the turn toward sufficiency, including climate policy and energy legislation documents, speeches and media releases by government ministers, statements in the Quebec National Assembly, statements from Hydro-Quebec (the province's powerful publicly owned electricity supplier), reports from environmental NGOs, and media articles. Document analysis is supplemented by semi-structured interviews with individuals with expertise relevant to understanding Quebec's growing emphasis on sufficiency, including representatives from Hydro-Quebec and environmental NGOs, and energy policy spokespeople from major Quebec political parties.

Results

Provisional results of the research indicate that the main factor behind growing emphasis on sufficiency is Quebec's recent shift from a position of energy surplus to energy deficit. Long known for abundant, low-cost hydroelectricity, Quebec now finds itself with inadequate electricity supplies to pursue its decarbonization and economic development objectives. The call for Quebecers to reduce their energy consumption is thus driven largely by the need to free up electricity supply to enable the electrification of transportation and industrial processes and, notably, the addition of new industrial facilities.

Significance to mainstreaming sustainable consumption

While the situation in Quebec creates opportunities to promote more sustainable consumption practices, from reducing heating levels in winter to promoting public and active transit, an emphasis on consuming less so Quebec's "green" industrial economy can grow more provides an unstable foundation for a sufficiency-oriented approach to sustainable consumption and risks generating public cynicism.

4:15p
m -
6:00p
m

Strong Sustainability: exploring the hows

Location: **Gustafscenen**

Session Chair: **Tullia Jack**

Session Chair: **Marius Korsnes**

Session Chair: **Carolyn V. Zorell**

Session Chair: **Line Valdorff Madsen**

Democratising strong sustainability: Evidence from applying the Doughnut Economics framework in Surrey

Elena Dawkins, Angela Druckman, Theofanis Exadaktylos

University of Surrey, United Kingdom

Problem definition

Engaging citizens in sustainability issues is often challenging. Many feel disconnected from the complexity of social and environmental issues, distant from the policy process, or unsure how to participate in decision-making. A lack of communication, unclear solutions and inability to see how small actions contribute to the bigger picture can all prevent meaningful engagement with sustainability policies and actions.

Local deliberative processes have been proposed to encourage active citizen participation in sustainability efforts, with small-scale citizen workshops playing a key role in driving broader messages (Wright-Arora et al., 2024). This paper explores two questions: (1) How effective are these activities in driving citizen engagement? (2) How can institutional and governance actors use them to develop better, more inclusive decision-making processes?

The Doughnut Economics framework is proposed as a way to help citizens engage with their local surroundings and understand how they can contribute to successful implementation of sustainability actions (Raworth, 2017). This paper addresses the above questions by analysing the application of the Doughnut Economics framework, using the county of Surrey in the UK as a test case.

Method

This paper draws on the results of a Doughnut Economics workshop held in June 2024 with representatives from local community groups, alongside frame analysis of discursive themes, and post-workshop interviews with participants. It explores the cognitive outreach of Doughnut Economics as a model, and the way that results from such activities can be used by institutional actors to co-design, co-create and rethink about processes of deliberation and citizen engagement; and, critically assesses such practices in the way they can truly democratise strong sustainability.

Results

Our findings suggest that Doughnut Economics is a framework that was easy for participants to understand and engage with, without prior knowledge and exposure. Participants suggested specific activities, identified actors who would be best positioned to make decisions and implement actions, and reflected on mechanisms and pathways to sustainability engagement and inclusive practices.

Significance to mainstreaming sustainable consumption

Working with the Doughnut Economics framework creates the conditions for participants to bring the issues closer to home, while looking at issues in holistic way connecting both the social and environmental elements alongside global and local concerns, and reflect on current practices and future actions, allowing for concrete suggestions that policymakers can use to facilitate sustainable consumption, and relate back to the citizens. At the same time, the framework has its limitations in the direction of the conversations between participants, the hesitation to speak about 'economics', and how the link with systems thinking can happen in practice.

The roles of social science expertise for transformative change

Karin Gustafsson

Örebro University, Sweden

Problem definition

As the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) assert the urgent need for transformative change, arguments have been made for the importance of social science expertise. The reason for this is that transforming society, including consumption patterns, requires knowledge about how society works and can be changed. However, this form of expertise, as well as the questions of norms and values that are attached to transformative change, have historically not been included in these expert organizations and in their knowledge assessments. It is therefore of crucial importance to explore the conditions, barriers, and opportunities for social scientific expertise on climate change and biodiversity loss.

Method

The research problem is explored and explained through a systematic interview study of social-scientific experts in IPCC and IPBES, all involved in developing policy advice for transformative change, including mainstreaming sustainable consumption. The interviewed social science experts participated in IPCC's AR6 and in IPBES's

Transformative change assessment. Their roles in these assessments were either Coordinating Lead Author or Lead Author.

Results

The paper identifies and explains how different forms of epistemic infrastructure (its material and social aspects) shape the production of expertise (including what kind of advice it develops). The paper also analyzes the boundary objects constructed that allow diverse expertise to interact with each other and coordinate their work to transform scientific knowledge to policy-relevant advice needed to mainstream sustainable consumption.

Significance to mainstreaming sustainable consumption

Transformative change includes changes at multiple levels, both societal and individual. To change today's unsustainable norms of mass consumption to enable a mainstreaming of sustainable consumption patterns requires transformative learning at all these levels. Previous research acknowledges the processual, interactional, long-term, and cumbersome character of transformative learning, as well as the societal and personal conflicts involved in such transformation. The learning aspect of transformative change emphasizes the need for social science expertise, and the importance of this paper's knowledge contributions in explaining conditions, barriers, and opportunities for developing social scientific expertise for transformative change.

The benefits of less: The effect of sufficiency gain framing on sufficiency behavior

Manuel Suter¹, Simon Rabaa², Andrea Essl³

¹Lund University, Sweden; ²ESCP Business School, Germany; ³University of Bern, Switzerland

Problem Definition

Consumption of goods and services is a major driver of environmental degradation. While current sustainability efforts focus largely on improving efficiency—reducing resource use and emissions per product unit—rebound effects often undermine these gains, failing to achieve the absolute reductions necessary to stay within planetary boundaries. Consequently, there is a growing recognition that changing consumption patterns toward sufficiency, which emphasizes reducing overall consumption, may offer a more effective approach to mitigating environmental impacts. A major obstacle to the widespread adoption of sufficiency-oriented behaviors may be that the concept contradicts people's deeply internalized "more is better" mentality.

Method

This study investigates whether communicating the benefits of sufficiency—framed in terms of advantages to nature, society, or the individual—can foster sufficiency behavior. We conducted a between-subjects online experiment with 1,317 participants from the United States. Participants were randomly assigned to one of three experimental conditions or a control group. The experimental conditions involved reading a text that highlighted the benefits of sufficiency for nature, society, or the individual. The control group received a neutral text. The primary outcome measure was an incentivized decision task, where participants could choose to either keep a \$1.50 Amazon voucher or donate part or all of it to an organization promoting sufficiency projects. This task was designed to measure actual sufficiency behavior, providing a trade-off between a personal consumption option and the promotion of sufficiency. Secondary outcome measures included support for sufficiency policies and intentions to engage in green behaviors.

Results

The results indicate that framing sufficiency benefits in terms of individual well-being led to a significantly higher amount of the Amazon voucher being waived compared to the control group. This effect was particularly pronounced among participants with a liberal political orientation, higher income (above \$60,000), and higher education (bachelor's degree or higher). Exploratory analyses using sampling weights to enhance representativeness revealed that both the individual and societal benefit frames significantly increased sufficiency behavior compared to the control, while the nature benefit frame did not have a significant impact. None of the treatments had a significant effect on policy support for sufficiency or green behavioral intentions.

Significance to Mainstreaming Sustainable Consumption

By demonstrating that individual-oriented sufficiency gain messages can effectively encourage sufficiency behavior, this research provides a valuable insight for policymakers and organizations aiming to foster sustainable consumption patterns. The effectiveness of individual gain frames suggests that campaigns emphasizing personal well-being, such as increased free time and improved mental health, could be particularly effective in promoting sufficiency behaviors, especially among higher-income and more educated individuals. Second, the study introduces a novel incentivized task to measure actual sufficiency behavior, addressing a gap in the literature where previous studies have relied heavily on self-reports. This methodological contribution offers a robust tool for future practice-relevant sufficiency research and policy evaluations.

Why the Sustainability Craze? Comparing the Mainstreaming of Sustainable Consumption in Switzerland and Japan

Patrick Schenk¹, Makiko Hashinaga², Jörg Rössel³

¹University of Lucerne, Switzerland; ²Sapporo Gakuin University, Japan; ³University of Zurich, Switzerland

Problem Definition: The level of sustainable consumption varies greatly between countries and individuals. Yet, research systematically analyzing motivational differences for sustainable consumption across dissimilar socio-cultural contexts is still a desideratum (Schenk et al. 2016; Minton et al. 2018; Mota-Gutierrez et al. 2024; Barrida et al. 2023).

We compare sustainable consumption in Switzerland and Japan and ask: “Do the motivational underpinnings of sustainable consumption differ in the Swiss and Japanese contexts?”

We depart from an extended version of the Theory of Planned Behavior (Ajzen 2012), including attitude towards ethical consumption, injunctive social norms, perceived behavioral control, and self-identity as an ethical consumer as covariates (Schenk et al. 2018). On the context-level, we focus on cultural differences, with Japan being a rather collectivistic and Switzerland an individualistic culture (Triandis 2018; Hashinaga et al. 2023). In a more collectivistic culture, emphasizing harmony and group goals, injunctive social norms should be more strongly correlated with sustainable consumption than in an individualistic culture.

Switzerland and Japan are especially relevant cases for explaining the mainstreaming of sustainable consumption. Switzerland is a highly prominent and successful example of mainstreaming, with sustainable alternatives being widely available in supermarkets, reaching some of the highest market shares worldwide (Schenk 2018). Sustainable consumption in Japan, in contrast, shows very low but growing awareness (Hashinaga 2022). Given these features, the absence of research comparing the two countries is surprising (Beciu et al. 2024). A better understanding of the interaction between context-level factors (i.e., culture) and individual-level factors (i.e., motivations, constraints, norms) is essential to disentangle the mechanisms behind the country-level differences in sustainable consumption (Hedström 2005; Schenk et al. 2024).

Method: We use data from a self-administered, standardized online survey conducted with the general populations of Switzerland and Japan in December 2023, using quota sampling. We obtained 1012 responses in Switzerland and 1000 responses in Japan. We analyze OLS-regressions with various controls (gender, income, education, size of municipality, etc.).

Results: Based on an exploratory factor analysis, we identified two types of sustainable consumption behaviors: trendy-ethical (fair trade, organic, etc.) and traditional-ecological (recycling, repairing products, etc.). As expected, Switzerland exhibits a substantially higher prevalence in sustainable consumption for both types. Preliminary findings show that self-identity and attitudes are highly significant positive covariates. As hypothesized, injunctive norms are a significant covariate in Japan only. Perceived behavioral control exhibits a puzzling pattern. While it is a positive and significant covariate in most cases, it yields a highly significant negative effect for traditional-ecological sustainable consumption in Japan.

Significance to mainstreaming sustainable consumption: Understanding the individual drivers behind the vast country differences in sustainable consumption is of utmost importance for effective mainstreaming on a global scale. Switzerland represents a model case for overcoming the niche position of sustainable consumption. Our results show: In Switzerland and Japan, self-identity and perceived behavioral control are crucial levers. In Japan, interventions should additionally target injunctive norms to promote trendy-ethical and traditional-ecological consumption.

Communication professional metadiscourse as a challenge to the communicative making of environmental transformation

Malte Rödl, Lars Hallgren, Emily Montgomerie, Ann Grubbström

Swedish University of Agricultural Sciences, Sweden

Problem

Consumption societies and the professionalisation of communication activities emerged in close connection since the beginning of the twentieth century. More recently, however, communication professionals are also considered central in shifting consumer culture towards more sustainability. They are supposed to engage citizens in environmental transformations while using the same communication toolkits as with marketing and PR specialists that aim to influence consumers; an overlap that exists not least because of educational journeys, scholarly fields, and professional mobilities. So whilst individual motivations might differ, these tasks—fostering consumer culture as well as unmaking it—share a professional metadiscourse, with which we refer to the language used to talk about communication and which in turn affects mental models of communication. This metadiscourse prefigures communication professionals' agency concerning how communication is seen and understood and how communication problems are conceptualised. In this contribution we explore how this communication professional metadiscourse impacts and potentially impairs societal efforts towards sustainability transformations?

Method:

We conducted ten focus groups with two to six participants who work in Swedish municipalities with sustainable consumption campaigns, including among others campaigns on recycling, public transport, or fashion. Based on this data, we analyse the metadiscourse available to communication professionals along three basic metadiscursive frames (Craig, 2019), and explore their implications on sustainable transformation.

Results:

The conduit metaphor frame is most prominent in the metadiscourse and emphasises the transmission of messages towards passive consumers, whereby messages can be changed in a belief that this would lead to the desired sustainability transformations. The also frequent communicative action frame highlights the agency of the communication professional including their work and actions and ignores the existence of others. The conversation frame suggests in principle that active-reflexive citizens are met for co-construction of meaning. However, in the metadiscourse this often developed into a reversal of the conduit metaphor where the communication professionals claim to understand the messages of their constituents, or as a focus on listening as communicative action. Both are then turned back into communication campaigns.

Significance to mainstreaming sustainable consumption:

Significance to mainstreaming sustainable consumption: Based on our research and the extant literature on sustainable consumption, we argue that the metadiscourse available to communication professionals is not suitable to work towards the significant changes needed for sustainability transformation. While dedicated to understand and support citizen's everyday attempts for or struggles

with sustainable livelihoods, the metadiscourse available to our participants rendered sustainability transformation in similar terms as advertising agencies or PR bureaus would promote increased consumption: as a matter of attitudes, aspirations, or desires of otherwise passive, powerless consumers that can be influenced by sending the "right" messages and by being a "skilled" communication professional. We suggest that communication professionals working with sustainability transformations need additional metadiscourse—including other ways of talking and thinking about social change within (consumer) culture—that lend equal agency to citizens.

References:

Craig, R. T. (2019). Models of communication in and as metadiscourse. In *Models of communication* (pp. 11-33). Routledge.

Why is it so difficult to talk about unsustainable consumption? Or is it?

Magnus Boström, Åsa Callmer

Örebro University, Sweden

This paper discusses theoretically and empirically one important vector for social change and specifically the mainstreaming of sustainable consumption: **conversations in everyday social life**.

It is difficult to conceive of social change, specifically political change, without conversations. Politics presupposes political debate (conversations), at least via our political representatives. But citizens and inhabitants of societies can also engage in conversations. They can influence others by what they are doing and saying. They can exercise their right and possibility to influence by voicing their concerns. Still, in many issues, people perceive they should mind their own business and not teach others what to think and do. Unsustainable patterns and levels of consumption is one such issue, and talking about it can be extra sensitive in a culture that celebrates mass consumption. The fact that the average citizen in a country like Sweden has fundamentally unsustainable ecological and climate footprints is not something that normally triggers many everyday discussions.

This paper discusses this challenge and relates it to theoretical discussions around concepts such as discursive political consumerism, social influencing, consumerism, and sufficiency. Based on the theoretical discussion, three types of barriers – blocking the potential of conversations about and the mainstreaming of sustainable consumption – are hypothesized.

First, ideologies/norms around the sovereign consumer: a blocker informing us not to interfere with others about their private lives in general, and specifically not about their consumer choices. Consumer choice is apolitical, purely private.

Second, ideologies/normalities/norms around mass consumption and economic growth. As citizens, we are socialized into thinking that consumption is something good and normal for welfare society. We should continue our consumption habits in order to keep the economic wheels spinning.

The third barrier is social-relational: People may not bring up topics they consider politically sensitive due to fears of being perceived as annoying or shaming.

This paper elaborates on the rigidity of these barriers, but also discusses the extent to which it is possible to overcome them by engaging in conversations with others about the matter. The paper draws on **qualitative interview data** with people in Sweden who are actively trying to reduce their consumption in general and/or in specific areas.

The data confirms the hypothesized difficulties to converse about the matter, particularly with people outside one's immediate social circles. But the data also shows some openings. Based on empirical findings, we discuss openings on two levels. First, the paper shows how some people develop individual strategies to engage in everyday conversations in different social networks, and how they perceive that they have influenced others (and have been influenced by others) through conversations. These strategies involve influencing without shaming, cautious provocations, sowing seeds, choosing one's battles, using humor, and being a source of inspiration. Second, based on the findings, the paper discusses and theorizes the role of larger social/cultural contexts/situations/communities for facilitating conversations, which in turn can positively induce social change, including the **mainstreaming of sustainable consumption**.

4:15p
m -
6:00p
m

Achieving Sustainable Transport

Location: **Sångsalen**

Session Chair: **Mia Hesselgren**

Exploring conditions for sustainable mobility practices through future prototyping in living lab research

Mia Hesselgren

KTH Royal Institute of Technology, Sweden

Understanding how to deal with the complexities of change is becoming increasingly important to support sustainable mobility transitions. To build knowledge of the required changes, one way is to explore prototypes of what could be more sustainable alternatives in the future. Building and testing small-scale future prototypes and learning from such doings in living labs is a useful way to learn how to tackle complex problems.

In a living lab set up in a suburban area outside Stockholm, Sweden, prototypes of sustainable mobility services were designed and implemented in 2023. The specific area was selected since it provided a rich illustration of a typical mobility situation for many suburbs in metropolitan regions in Sweden, which are middle-class neighbourhoods where car ownership is high, and many citizens have a highly mobile lifestyle.

A mobility service system with shared bikes available to book on a digital platform was tested. This prototype was tested within existing structures to learn about the challenges that must be overcome to create new pathways to a

more sustainable future. Hence, the future prototype was developed to illuminate current structural challenges rather than serving the citizens with well-functioning mobility solutions. The system was developed with a focus on exploring sharing resources. The households participating in the living lab all lived close as neighbours to the selected park, where a bike shed was built for storing and charging the shared bikes. The system also included access to a shared workspace and shared bike solutions: electric cargo bikes, electric bikes, bike leasing options, and electric scooters. Furthermore, an on-demand shuttle service was added, where those working as colleagues in the area could book a shared ride from the commuter train station, ensuring they would be on time for work.

Design methods were used to explore the future prototype and to identify the challenges citizens face when engaging in sustainable mobility. First, an iterative approach was used to test the small-scale prototypes. Second, the design methods were collaborative, meaning building knowledge together with those involved in providing and using the services. Third, the design methods included a systems thinking approach exploring the technical solutions as part of socio-technical systems, meaning how technologies are integrated with people in their social settings.

Using design methods in living labs facilitates experimentation in everyday life. However, to do so successfully, it is important to have a learning focus rather than aiming for testing optimal solutions. Such learning focus includes supporting the living lab partners in their learning. Furthermore, it is important to allow for living lab research to be longitudinal since it takes time for new practices or habits to form.

Issues of climate change and complexities of sustainability transitions are abstract and hard to understand. Experimenting with small-scale future prototyping makes translating some of these abstract issues into concrete ones possible. We argue that using this type of living lab research can contribute to understanding what conditions are needed and how to design these for citizens to be able to engage in sustainable mobility.

Shared mobility as a way out of unsustainable mobility? Insight from a digital ethnography.'

Mirjam Mock

Vienna University of Economics and Business, Austria

Problem definition

Practitioners and scholars attribute significant potential to the sharing economy to address the severe environmental issues caused by overconsumption. They posit that many resources can be saved if 'use instead of ownership' becomes normalised. Mobility is often cited as a prime example of the positive impact of the sharing economy, with the highest growth and product diversification of sharing models seen in this domain. While other sharing initiatives, such as libraries of things, remain niche, carsharing has penetrated the mainstream. However, published research reveals a more ambivalent situation, pointing out that the most prevalent form of carsharing—business-to-consumer free-floating carsharing—is not environmentally friendly. In contrast, other forms, such as station-based carsharing or cargo bike sharing, have shown positive environmental impacts, yet their prevalence remains low. Thus, the question arises why some shared mobility practices proliferate while others do not.

Method

The study I would like to present is theoretically grounded in practice theories and empirically based on an ethnographic methodology. At its core are 22 digital mobility diaries, created by respondents living in Austria who documented their mobility practices over three weeks. They highlighted their experiences with various shared mobility options and private car ownership by uploading pictures, videos, and text notes to a dedicated smartphone application.

Findings

Private car travel, free-floating carsharing and fully or mostly digital station-based carsharing emerged as well-functioning whereas cargo bike-sharing, electric carsharing without a charging station and multimodal mobility emerged as difficult. The widespread adoption of free-floating carsharing can be explained by the fact that users often also use private cars and thus benefit from the 'system of automobility'. Then, the question remains as to why SB forms of shared mobility do not proliferate. This is somewhat surprising, given that we found that they work well for the most part. We conclude that this issue is not a failure of the shared mobility practices but that the reason lies outside the actual practices— for instance in a poorly developed multimodal mobility system. To understand how sustainable shared mobility practices could proliferate more widely, it might be more important to reflect on car-centred temporal and spatial (infra)structures rather than on how to improve innovative specific shared mobility practices. Therefore, it might be essential to foster an exnovation of the 'system of automobility', next to supporting the innovation of mobility practices. Other key findings reveal how certain sequences of practices—such as bringing children to school, commuting to work, taking children to leisure activities, and shopping—seem to be incompatible with shared mobility but compatible with individual car use. This is problematised by arguing that specific spatial and temporal infrastructures, which can be modified, create the need for such sequences in the first place.

Significance to mainstreaming sustainable consumption

This study analyses how innovative mobility practices transition into the mainstream, examining the factors that support or hinder this process. It importantly highlights that the de-mainstreaming (exnovation) of unsustainable mobility practices will be necessary to create space for sustainable shared mobility innovations.

Consumption practices and Environmental Outcomes in the Sharing Economy: A Cross-Country Study of Bike-Sharing in Japan and Norway

Christian Clemm¹, Tatsuki Watanabe¹, Yusuke Kishita¹, Torvald Tangeland², Live Tørstad Bøyum²

¹The University of Tokyo, Japan; ²Oslo Metropolitan University, Norway

Problem definition: The sharing economy holds the promise of reducing environmental impacts of consumption through the use of fewer and more efficient products. Business-to-consumer sharing economy business (SEB) such as car-sharing, bike-sharing, or power tool rental can displace individually owned products with access-based usage of shared products. Additionally, shared products tend to be more efficient during their usage than traditional alternatives, such as low-emission electric vehicles and high-end power tools designed for longevity. However, whether the environmental potential of SEB materializes in practice has been questioned. Studies have shown that depending on a number of conditions, rebound and backfire effects may negate environmental benefits. A key determinant is how people engage with emerging SEB. Prior studies on the environmental effects of SEB have not sufficiently accounted for heterogeneity and regional specificities that determine usage of SEB and, by extension, product life cycles and their environmental impacts. This gap is addressed in this contribution.

Method: We develop a method for assessing the environmental impacts of SEB by integrating a choice model with product life cycle simulation in a multi-agent system. Based on random utility theory, data from two surveys, one in Japan and one in Norway, is used to identify predictors and quantify consumer choice in a number of use case scenarios. Bike-sharing services (BSS) operated in Japan and Norway are employed as case studies to demonstrate the method, enabling cross-regional and cross-cultural comparison of consumption practice and measuring the effectiveness of interventions aimed to induce desirable behavioral changes, including measures on business-, policy- and infrastructural level.

Results: The analysis of consumer behavior in the context of bike-sharing in Japan and Norway reveals significant differences, particularly in usage volume due to differing climatic conditions. Consumer choice modeling reveals BSS users' substitution patterns for private cars and public transport, including rebound and backfire effects from regrettable substitution and additional, induced consumption. Estimating the relative weight of factors like travel cost, time, preferences and social practices reveals key differences between populations and consumer segments in both countries. Repeated choice experiments in varying scenarios quantify the effectiveness of interventions designed to induce desirable consumption patterns, identifying barriers, opportunities, and environmental outcomes. Specifically, we describe which interventions can induce a shift towards environmentally preferable practices in urban transport, focusing on bike-sharing services in both regions.

Significance to mainstreaming sustainable consumption: Data-driven approaches are needed to assess systems that enable sustainable consumption practices to gain better understanding of the chain of effects between individual elements and to enable the design of interventions that are effective in the local context. Consumer heterogeneity needs to be addressed to better understand the responsiveness of target populations to interventions, dependent on a set of regional specificities, including local preferences, available services, alternatives, and infrastructure. The findings are of interest to business providers and policymakers.

Circular Economy Strategies in Vehicles: Projections for Material Consumption through Vehicle Use and Maintenance

Luja von Köckritz^{1,2}, Frederike Arp^{1,2}, Sebastiaan Deetman³, Oreane Edelenbosch^{1,2}, Roel Brouwer⁴, Raoul Schram⁴, Christine Staiger⁴, Detlef van Vuuren^{1,2}

¹Copernicus Institute of Sustainable Development, Utrecht University, Utrecht, the Netherlands; ²PBL Netherlands Environmental Assessment Agency, The Hague, The Netherlands; ³Institute of Environmental Sciences (CML), Leiden University, Leiden, The Netherlands; ⁴Information and Technology Services, Utrecht University, Utrecht, The Netherlands

Problem definition

Reducing primary materials through circular economy practices can help mitigate GHG emissions, however, the transport sector faces significant challenges in managing material demand throughout the vehicle lifecycle. While circular strategies like lifetime extension and reuse can reduce resource consumption in vehicle production, they also lead to increased material demand for maintenance and repairs over the vehicle's lifetime. Increased maintenance is a highly impactful behavior that might save resource consumption and subsequently reduce GHG emissions from vehicle production. However, longer lifecycles for vehicles might also lead to more in-use emissions offsetting the emissions saved through lifetime extension. Current models assessing climate mitigation pathways do not fully capture these dynamics, particularly the trade-offs between material savings in production and the additional materials needed for maintenance. This paper addresses this gap by presenting a simulation model that integrates material use across the production, use, and maintenance phases for cars, trucks, airplanes, and ships.

Method

The research introduces a dynamic stock-based material model IMAGE Materials linked to the IMAGE Integrated Assessment Model (IAM), simulating year-by-year material and energy consumption across the lifecycle of various vehicle types. By tracking materials used in both production and maintenance, the model indicates the impacts of circular economy strategies such as vehicle lifetime extension and reuse specific to vehicle types and drivetrain technologies. Besides maintenance strategies, other circularity measures are incorporated such as lightweighting, demand shifts, and material-specific recycling rates. Furthermore, IMAGE Materials is a novel model linking detailed material simulations to an IAM allowing yearly interaction with other model components such as energy or industry modeling making it future-proof for in-simulation integration with the IAM.

Expected Results

Preliminary results indicate that maintenance activities contribute 15-20% of additional material demand over a vehicle's lifetime. This figure is expected to vary based on regional vehicle stock characteristics, with older, saturated markets like Japan and Europe requiring more maintenance materials than rapidly growing markets such as China. The model will quantify the material savings achieved through circular strategies and the resulting increases in material

demand for maintenance and other circularity measures, offering insights into how these trade-offs affect the sustainability of circular economy practices in the transport sector.

Significance to mainstreaming sustainable consumption

With a comprehensive simulation of material use for various vehicle types, this study contributes to mainstreaming sustainable consumption by quantifying the material impacts of circular economy strategies in the transport sector. Integrating maintenance into lifecycle modeling within IAMs is a key advancement, offering a more holistic view of material sustainability. The results will inform policymakers and industry stakeholders about the balance between resource efficiency and the practical material demands of maintaining a vehicle fleet. In the future, this open-source model will be adapted to other sectors such as buildings, infrastructure, furniture and appliances, supporting broader adoption of circular economy strategies and helping to drive sustainable consumption at a global scale.

Policy Analysis of Intercontinental Air Travel

Jörgen Larsson

Chalmers, Sweden

Problem Definition

Long-distance air travel is recognized as one of the most unsustainable forms of consumption. Although intra-EU flights are incorporated into the EU Emissions Trading System (ETS), meaning that, barring new policy shifts, air travel within the EU is projected to become fossil-free by around 2040, this does not currently apply to flights to and from destinations outside the EU. Such regulatory disparities are expected to increase airfares to tourist destinations within the EU, such as Greece, while non-EU destinations like Turkey may not see similar fare adjustments. This study assesses the climate impact of these policies and the potential job losses in the EU's tourist sector, as well as to examine potential policy options for intercontinental flights.

Methodology and Preliminary Results

The initial phase of the analysis involves mapping current tourism patterns and their climate footprint. Preliminary findings suggest that over 50% of air travel emissions by Swedish citizens are associated with travel to intercontinental flights (results for the whole EU is not yet finished). Anticipated increases in airfares due to EU climate policy are derived from a comprehensive literature review and interviews with industry experts. A survey is currently being designed to include tourists from several EU countries in a discrete choice analysis to estimate how price changes might affect their choice of destination.

The subsequent phase examines how EU climate policy might be modified to mitigate job losses and reduce emissions from air travel to non-EU destinations. The currently most promising policy avenues include:

- Inclusion of Intercontinental Flights in the EU Emissions Trading Scheme
The EU's previous attempt to include these in 2012 was met with strong opposition from countries like the US and China. This analysis will assess whether the conditions for such inclusion have improved.
- Implementation of an EU-wide 'Climate Toll' on Incoming Flights
This could extend the current EU scheme for Carbon Border Adjustments (CBAM), which currently is being implemented for goods like cement and steel.
- National Air Passenger Taxes on Intercontinental Flights
The EU could suggest appropriate tax levels, but implementation would be decided at the national level.

Significance to Mainstreaming Sustainable Consumption

Achieving reductions in air travel emissions can be achieved through normative changes and enhancements in flight-free vacation alternatives. However, to align with the 2-degree climate targets, comprehensive public policies are essential. Currently, intercontinental air travel remains a significant "blind spot" in climate policy, underscoring the need for targeted interventions.

Closer destinations and travelling on the ground: Introducing a community challenge promoting sufficiency principles among frequent flyers

Francesca Cellina, Pasquale Granato, Linda Soma, Leonardo Ventimiglia

University of applied sciences and arts of Southern Switzerland (SUPSI), Switzerland

In an increasingly accelerated world, where air travel has become the norm, holidays represent a huge generator of carbon emissions. However, due to their discretionary nature, many carbon-intensive trips to far-away holiday destinations could be replaced by closer destinations, that can be reached on the ground by public transport. This is especially true for frequent flyers. Are there ways to satisfy their desire for discovering new places, cultures, and experiences, at a fraction of current carbon emissions?

We tackle this "sufficiency challenge" within the Treeps Living Lab initiative, launched in the Italian-speaking part of Switzerland by the local university and the living lab of the city of Lugano (70'000 inhabitants). Treeps targets lovers of travelling, used to short-break flying, and engages them in a community of travellers ("the Treepers") supported by a mobile app, which uses behaviour change techniques to reduce their flying frequency.

Co-designed in a small but diverse team engaging researchers, living lab managers, and target users, Treeps is grounded in the Model of Action Phases, which theorises individual behaviour change as a process along four phases, ranging from "pre-decision" (the typical frequent flyer condition) to "post-action" (the Treeper condition). For each phase, Treeps includes features activating socio-psychological factors that support progress to the next phase,

specifically leveraging social norms and community-related factors. It gives suggestions for destinations to be explored, collects experiences from its users, shares them within the Treeps community through an Instagram account actively managed to stimulate social interactions, and provides feedback on individual and community trip performances and carbon emissions.

The set of Treeps destinations (either European destinations that can be reached via a daily/overnight train travel from Switzerland or regional destinations that can be reached via sub-urban public transport without overnight stays) was collected in a participatory workshop engaging the staff of the local university, to better reflect interests and experiences of real-life people. Every week, an in-app ChatBot tool tries to raise each user's interest in such Treeps destinations and, while interacting in an informal and natural way, like a conversation with a real person, asks for feedback on the activities the user performed in the previous week-end. If any low-carbon trips took place, Treeps also asks for pictures and an accompanying sentence showing appreciation for the experience. The collected material is then published in the Treeps home page and in the related Instagram account, to which all Treeps users are automatically connected, on which the whole community is stimulated to share likes, comments, opinions, or additional experiences, to help create positive social norms about the Treeps experiences.

At the conference we will present the process and contents of the Treeps sufficiency challenge. Later, Treeps will be experimented in real life by voluntary Lugano citizens, again in a Living Lab setting. Future research will report on a randomized controlled trial allowing us to thoroughly estimate its short- and long-term impact on carbon emissions and to better understand the role of social norms and community-based processes in shaping sustainable leisure travel behaviour.

Workshop: Theories and perspectives on change

Location: **Aula**

Session Chair: **Sara Skarp**

Session Chair: **Asa Svenfelt**

Session Chair: **Göran Finnveden**

What is a sustainable society? And how do we get there? These are the fundamental questions underlying most research on sustainable consumption. They are, however, not possible to answer without theoretical assumptions about how change happens, how we make it happen, how we may shape the process to be more inclusive and just, as well as toward what we change. All research is informed by such assumptions, both implicitly and explicitly. There is furthermore a cornucopia of theories and perspectives, which lead us to ask different questions, see different things, and provide different answers. While it is likely neither possible nor desirable to create a master or grand theory of change, having more conversations about such theories and perspectives can only serve to develop, enrich, and inform our research for the better. In this curated session, we aim to spark such conversation, to support further cross-fertilisation and innovation. The session will take its starting point in the work of the session leaders to compile and cultivate the Living Encyclopaedia of Change. This is an informal, collaborative, and ongoing short-entry encyclopaedia, which is aimed to introduce theories and perspectives, showcase the breadth with which sustainability researchers work, as well as provide further reading suggestions. After presenting the work with the encyclopaedia, the session will invite a selected number of researchers and/or thinkers, who have made some kind of contribution to theories of, and perspectives on, sustainable consumption, to each give a talk on a variety of entry points into these conversations. The session will then open up for a Q&A and general discussion. In addition, we will invite new entries to the encyclopaedia, or updates to existing ones, following the session and during the entire conference.

**4:15p
m -
6:00p
m**

Workshop: Pathways to transformative sustainability: Exploring demand reduction and systemic change for radically sustainable lifestyles

Location: **201**

Session Chair: **Halliki Kreinin**

Session Chair: **Oksana Mont**

Session Chair: **Michael Lettenmeier**

Session Chair: **Maren Tornow**

Session Chair: **Edina Vadovics**

Session Chair: **Lena Domröse**

This interactive session will explore the complexities of achieving transformative change to current lifestyles via addressing the questions of demand reduction and systemic change. Drawing on insights from the EU 1.5° Lifestyles project, participants will engage in discussions across several thematic areas to diagnose key problems and explore solutions, including how to challenge societal norms, redefine political responsibilities and pave the way for transformative action and radical sustainability.

**4:15p
m -
6:00p
m**

SCORAI Network Meeting

Location: **Stora Salen**

Session Chair: **Marlyne Sahakian**

Session Chair: **Sylvia Lorek**

Session Chair: **Edina Vadovics**

Session Chair: **Georgina Guillen**

**6:00p
m -
6:45p
m**

Evening Mingle

Location: **Kulturen**

**7:00p
m**

Date: Thursday, 10/Apr/2025

8:00am - 9:45am

Sufficiency business models: Fashion sector case studies

Location: **Stora Salen**

Session Chair: **Rhiannon Pugh**

Session Chair: **Samantha Sharpe**

Session Chair: **Monique Louise Retamal**

Session Chair: **Mariangela Lavanga**

Careful clothing consumption

Annelise de Jong^{1,2}, Maja Dahlbom¹, Liv Fjellander¹

¹IVL Swedish Environmental Research Institute, Sweden; ²KTH Royal Institute of Technology

Problem definition

Sustainable consumption is broadly recognized as one of the major contributors to reach the Sustainable Development Goals and quantitative measures to reach the goals that are set by European member states. The new EU legislation on separate collection of used textiles from 2025 is an important incentive for the transition in the textile industry, both in terms of people's habits and choices when discarding textiles, but also for the recycling companies which likely will have more material to buy and use in their processes. Additionally, in 2023 the Commission presented a revision of the Waste Framework Directive which included a proposal of an Extended Producer Responsibility (EPR) on textiles. The vision of the EPR states, amongst other things, that textile products should be repairable and recyclable, be of high quality and made of recycled fibres to a great extent. We have explored the usage of second-hand clothing in several projects as well as the fibre-to-fibre recycling in Europe, and will report in this paper on the interest of people to shift their clothing habits into more sustainable ones and the potential for fibre-to-fibre recycling in Europe.

Method

We will report on two projects on textiles, focusing on increased potential for reuse and recycling in Sweden. We applied a mixed method approach in the projects, combining qualitative and quantitative methods. Qualitative methods were used to identify driving forces, opportunities as well as barriers for consumers to increase the use of second-hand clothing, by means of surveys, interviews and desktop research. Quantitative methods were used for assessing what the potential of increased collection and recycling of textiles in Europe would look like, and also identify the strengths and barriers for the fibre-to-fibre recycling.

Results

- Collection of textiles will increase in Europe due to new legislation which will potentially provide more material for the recyclers and secondhand market.

- Driving forces and barriers for people to choose secondhand clothing: most mentioned driving forces are environment and economy, and fashion/design aspects. Barriers mentioned are difficulties in the accessibility of secondhand products, as well as pricing.
- There is a huge potential for increasing post-consumer textile waste by increasing the material flow to collection points instead of waste.
- Although collection rates will increase, the sorting process is a bottleneck, and most recyclers have specific prerequisites (for example 95% white cotton).
- Fibre-to-fibre recycling (i.e. not PET-bottle recycling) in Europe have potential to scale up, but depend on inbound material (often a specific fibre type) and customers willing to buy their product (i.e. fibre)

Significance to mainstreaming sustainable consumption

The study touches upon a central issue in sustainable consumption that addresses the accessibility to more sustainable textiles. It also identifies the potential for increased demand of used textiles as well as potential for increased collection and recycling of textiles.

The effectiveness of green demarketing appeals, which emphasise the personal benefits, in influencing purchasing behaviour towards greater sufficiency

Sophie Wieser¹, Birgit Stoltenberg², Markus Beckmann³

¹Technische Hochschule Nürnberg Georg Simon Ohm, Nuremberg, Germany; ²Nuremberg Institute for Market Decisions, Nuremberg, Germany; ³School of Business and Economics, Friedrich-Alexander University of Erlangen-Nürnberg, Nuremberg, Germany

Problem definition

The rise of online shopping platforms offering cheap clothing has had a significant impact on global consumer behaviour, with fast-fashion giants such as Shein growing rapidly. This phenomenon, driven by low prices and frequent new collections, encourages over-consumption and a throwaway culture. The fast fashion industry has significant negative environmental impacts, including significant carbon emissions, high water consumption and large amounts of textile waste. Furthermore, the use of toxic chemicals in production poses potential health risks.

One way to reduce the environmental impact of the fashion industry is to adopt a marketing approach that encourages reduced consumption. Green demarketing encourages consumers to buy fewer items to benefit the environment, especially in online environments (Frick et al., 2021). Arguments for green demarketing from a brand perspective include improved brand reputation, stronger customer loyalty and meeting the growing consumer demand for sustainability (White et al. 2019; Zhang et al. 2021). Genuine sustainability initiatives make accusations of greenwashing redundant (Shao et al., 2023). For consumers, green demarketing can lead to personal benefits such as financial savings and improved quality of life (Gossen & Heinrich, 2021). In addition, the approach contributes to broader environmental goals that benefit society as a whole.

Method

How effective are green demarketing appeals that highlight personal benefits? In an online experimental study, we tested whether green demarketing appeals can influence purchase decisions towards sufficiency. In the study, a sample of 400 English women were asked to complete a shopping task in a simulated shopping environment. The control group received no appeal, while the experimental groups each received one of three appeals (between-subjects design). The hedonic appeal focused on the emotional satisfaction derived from owning durable items. The utilitarian appeal emphasised financial savings and personal well-being. The social appeal emphasised collective responsibility for sustainability. Efficiency was measured by the number of items purchased per group compared to the control group. Sufficiency consciousness and awareness of social norms related to sustainable consumption were assessed.

Results

Although previous studies suggest that green demarketing can be effective in changing consumer behaviour, in our study the appeals used did not significantly reduce consumption. One possible reason could be that the target group did not have strong sustainable attitudes. The results also showed counterintuitive findings, such as the negative influence of social norm awareness on consumption reduction. While impulse buying usually leads to spontaneous purchases, this study found it to be associated with lower consumption, illustrating the complexity of this consumer behaviour.

Significance to mainstreaming sustainable consumption

The study is valuable in highlighting the complex phenomenon of green demarketing appeals in the current (online) shopping environment, urging companies to refine these strategies to better resonate with target audiences and drive meaningful behavioural change towards mainstreaming sustainable consumption. It calls for further research to refine these appeals and to examine their effectiveness in different contexts, as well as to better understand the unexpected results in relation to social norms and impulsive behaviour.

Leveraging Proximity for Sufficiency: Localized Circular Economy Strategies in New York City's Fashion Industry

Younghyun Kim, Mariangela Lavanga

Erasmus University Rotterdam, Netherlands, The

Problem statement:

As the need to address overproduction, overconsumption, and resource depletion in the fashion industry becomes more pressing, sufficiency-oriented circular business models are gaining traction. In particular, localizing circular strategies in fashion holds significant potential to promote short-loop, high-R strategies such as refuse, rethink, reduce, and reuse, thereby mainstreaming sufficiency goals. Localizing circular economy efforts in fashion also offers a valuable opportunity to explore ways to strengthen connections along the value chain, including consumers. This paper examines how fashion designers and entrepreneurs experiment with shortening and localizing supply chains in line with circular economy strategies that focus on rethink, reduce, and reuse. Specifically, we ask how fashion designers and entrepreneurs leverage geographical and organized proximity with their business partners and consumers to advance sufficiency-based circular strategies.

Method:

Our analysis draws on 13 cases of designers and entrepreneurs in New York City, examining how their proximity and relational dynamics shape localization strategies in rethink, reduce, and reuse. Data was collected through semi-structured interviews between 2020 and 2023 and analyzed using the economic geography framework of proximity relations. This framework allows us to examine the micro-dynamics of proximity coordination and how designers and entrepreneurs leverage geographical and organized proximities to advance sufficiency goals.

Findings:

The findings highlight the critical role of proximity coordination—both geographical and organized—in implementing sufficiency-based circular business strategies, including small-batch, made-to-order production, repair services, and local business partnerships that support regional economies. In this process, designers and entrepreneurs collaborate closely with local manufacturers and material suppliers, engage directly with consumers, and build networks with fellow designers. These efforts result in the emergence of (1) new production networks and sourcing routines that prioritize residual materials and upcycling, (2) new market channels where designers interact directly with consumers through physical retail events, pop-ups, and digital platforms, and (3) communities of practice (CoPs)

where designers and consumers share knowledge, learn collaboratively, and support each other's sufficiency and sustainability goals.

Significance:

This study underscores the potential of localization in mainstreaming sufficiency-oriented circular strategies and calls for further research into how proximity coordination fosters more sustainable production and consumption patterns. By understanding how local networks, community-building, and collaborative learning contribute to sufficiency-based circular economy strategies, this research provides valuable insights into transitioning the fashion industry toward more sustainable business practices that are nuanced to local contexts and inclusive of micro and small businesses.

Developing Key Indicators for Assessing Sufficiency Strategy Integration in Circular Fashion Business Models

Beatriz Garcia-Ortega, Javier Galan-Cubillo, María Rosario Perello-Marin, Blanca de-Miguel-Molina

Universitat Politècnica de València, Spain

Problem Definition:

Current sustainability efforts in the fashion industry, mainly focused on circular economy practices, often overlook the root causes of overconsumption and its environmental and social impacts. While circular strategies like efficiency improvements and recycling are valuable, they neglect the crucial aspect of sufficiency and the principles of strong sustainability. This research addresses a significant theoretical and practical gap: the lack of comprehensive key indicators for fashion businesses to assess and incorporate sufficiency-based strategies into their circular business models. These indicators go beyond traditional sustainability metrics and serve as a guide to help fashion companies advance in this area.

Method:

The research employs a multi-stage, mixed-method approach to develop and validate key indicators for sufficiency strategy integration:

1. Systematic literature review to identify existing sufficiency principles and their applications in fashion.
2. Qualitative interviews with sustainability experts, fashion leaders, sufficiency-focused businesses, and policymakers.
3. Case study analysis of fashion companies implementing sufficiency-oriented models.
4. Development of an initial set of indicators synthesized from the literature, interviews, and case studies.
5. Refinement and validation through a Delphi method with experts from academia, industry, and policy sectors.

Results:

The primary output is a set of key indicators for assessing sufficiency strategies in circular fashion business models, addressing:

1. Product longevity and durability
 2. Availability and uptake of repair and maintenance services
 3. Consumption reduction strategies (e.g., capsule collections, versatile designs)
 4. Alternative ownership models (e.g., rental, leasing)
 5. Consumer education on sufficiency
 6. Supply chain optimization for reduced overproduction
- Additionally, the study offers guidelines for implementing and measuring these indicators within existing circular economy frameworks.

Significance to Mainstreaming Sustainable Consumption:

This research contributes significantly to mainstreaming sustainable consumption by:

1. Providing a practical tool for fashion businesses to assess and improve sufficiency strategies.
2. Standardizing how sufficiency efforts are evaluated across the industry, promoting competition and innovation.
3. Challenging the growth-oriented paradigm and promoting business models that prioritize well-being within planetary boundaries.
4. Helping policymakers develop regulations addressing both production and consumption.
5. Encouraging shifts in consumer behaviour through clear sufficiency-oriented business strategy metrics, influencing purchasing decisions and brand loyalty.

In conclusion, by developing key indicators for sufficiency strategy integration, this research equips fashion businesses with essential resources to measure, adopt, and enhance sufficiency-oriented practices within circular business models. Additionally, these indicators assist other stakeholders in evaluating and contributing to sufficiency practices, facilitating the transition toward business models less dependent on consumerism and more aligned with sustainable consumption patterns.

The 'Wellbeing Wardrobe' as a tool to promote just transitions in the fashion and textile industry

Rhiannon Pugh¹, Taylor Brydges², Samantha Sharpe², Mariangela Lavanga³, Monique Retamal²

¹Centre for Innovation Research, Lund University; ²University of Technology Sydney; ³Erasmus University Rotterdam

In this paper we discuss the pressing need for a just transition in one of our most environmentally and socially problematic contemporary industries: the fashion and textiles industry. We detail the current injustices in the industry, from both environmental and socio-economic standpoints, and then move on to providing some suggestions as to how these entrenched problems with the industry could be addressed. Specifically, we identify five key action areas that could take us towards a just transition for the fashion and textiles industry: establishing limits, developing new indicators, promoting fairness, implementing just modes of governance, and creating new exchange systems. We propose policy interventions in each of these five action areas and discuss how they could practically be put into practice. In doing so, we develop a novel theoretical concept for a more just version of the global fashion industry: the 'Wellbeing Wardrobe', which draws on wellbeing economics and de-growth thinking applied to the contemporary fashion industry.

8:00am - 9:45am

Framing Tensions & Visions of Sustainable Consumption

Location: **Lilla Salen**

Session Chair: **Mikael Klintman**

Session Chair: **Sara Skarp**

The Unnatural Divide: Framing and Resolving the Ultra-Processed Protein Paradox

Mikael Klintman

Lund University, Sweden

Problem definition

As society undergoes rapid scientific and technological advancements, a growing divide has emerged between what is considered 'natural' and 'artificial'. This binary distinction plays a central role in public debates about products, lifestyles, and practices. However, social, cultural, and environmental sciences reveal that 'naturalness' is far from straightforward. It is a 'fuzzy concept', with meanings that shift depending on context and objectives.

The terms 'natural' and 'non-natural' are especially prominent in the food sector. Previous research has shown how various actors—policymakers, environmental organisations, and the media—frame food products and production processes as 'natural', 'organic', 'ecological', or 'GMO-free'. Some environmental scientists argue that naturalness should focus on ecological benefits, while others prioritise human health. However, these definitions do not always address broader sustainability challenges.

This paper focuses on a particularly contentious issue: plant-based, processed, and 'ultra-processed' proteins. These products, designed to play a vital role in the aspired, global 'protein shift', face criticism from both the meat industry and segments of the environmental movement. The debate surrounding their 'unnaturalness' highlights a significant knowledge gap regarding how these products are framed within sustainability discussions.

The paper aims to explore how framings of naturalness, unnaturalness, and artificiality are used in debates about plant-based protein processing. It examines whether ultra-processed plant-based products can be framed as unnatural yet superior to alternatives like organic meat, which often benefits from naturalness-focused marketing.

The analysis draws on three theoretical perspectives. First is the 'naturalistic fallacy', which critiques the assumption that natural products are inherently better. Second, the sociological view examines how those who define 'naturalness' in public discourse gain significant power, often in ways that conflict with environmental or health priorities. Third, the paper distinguishes between disagreements (disputes within a shared frame) and controversies (disputes between separate frames), offering a lens for resolving debates over plant-based proteins.

Method

The paper empirically examines media debates and reports involving Swedish and European industry organisations such as the European Livestock Association and the European Vegetarian Union. It also investigates how health and nutrition research frames plant protein processing, highlighting areas of agreement and conflict. Furthermore, political disputes over the marketing and labelling of plant proteins are explored to understand how they shape consumer perceptions.

Tentative Results

Preliminary findings suggest that the distinction between disagreements and controversies helps understand debates over ultra-processed plant proteins. This distinction offers potential pathways for resolution, including more straightforward policies, refined marketing regulations, or more informed public debates on food processing and sustainability. Tentatively, framing ultra-processed plant-based

products as both unnatural and better than animal-based alternatives could shift consumer behaviour toward more sustainable choices.

Significance to Mainstreaming Sustainable Consumption

The debates over naturalness and artificiality extend beyond protein consumption. These discussions are crucial to mainstreaming sustainable production and consumption. By clarifying the proxies underlying these debates, this paper seeks to contribute to social science discussions on sustainability and offer insights into framing food products to encourage more sustainable consumer choices.

Social Perceptions and Lifestyles in the Face of the Climate Emergency: a Qualitative Study in Spain

Carlos Jesús Fernández Rodríguez

Universidad Autónoma de Madrid, Spain

Problem definition

In contemporary societies, there is a growing concern about future consumption patterns and the adaptation to new habits and lifestyles in the context of global warming and the climate emergency. This concern has led to the development of numerous proposals from the political sphere, as reflected in documents from the UN, the EU, and other supranational bodies, which emphasize the need to shift the current trend and promote a "green transition." However, to what extent does this concern impact citizens' perceptions and the potential change in their consumption practices? This is a relevant question considering that, despite the apparent scientific consensus on the matter, dissenting voices associated with climate change denialism have emerged, potentially influencing social perceptions of climate change. Additionally, previous research has shown that it is difficult for citizens to break away from highly socially legitimized consumerist lifestyles in Southern European countries like Spain, a society with strong income differences where consumption has been linked to modernization and higher quality of living.

Method

In this presentation we will share some preliminary results from a study on lifestyles and social perceptions on climate change which we are currently conducting in Spain using focus groups. We are organizing twelve focus groups in different parts of the country, both in urban and rural settings. The participants belong to different social backgrounds in terms of economic and cultural capital.

Results

Once the focus group interviews are being organized at the moment it is not possible yet to provide an advance of the results yet. In the light of previous scholarly research it is likely that the discourses and practices about sustainable consumption will be contradictory, and highly reflective of class position and political values.

Significance to mainstreaming sustainable consumption

The contribution will shed new light on the reception of sustainable consumption discourses among Spanish citizens in a challenging scenario such as political polarization or climate change denialism, etc. This will help scholars to discuss the current limitations and constraints that mainstreaming sustainable consumption might be facing.

Framing sustainability and change in Swedish sustainable tourism initiatives: A journey or a destination?

Sara Skarp, Mikael Klintman

Lund University, Sweden

Tourism has been identified as a sector with significant current and future sustainability impacts and issues, stemming from aviation, consumption in situ, as well as increased pressure on local social life, physical infrastructure, natural areas, and more. Attempts at creating a more sustainable and fair tourism and travel sector have a relatively long-standing history, with various initiatives and organisations working to promote and enable more responsible tourism management and practices. Examples include international tourism organisations, accreditation and certifications schemes, as well as more 'promise-based' initiatives and campaigns. Though diverse, what many of these initiatives have in common is their role in defining and framing *what is* sustainable tourism as well as how change is created and by whom, ultimately with implications for the future make-up of the tourism sector, including its ecological and social sustainability footprint. This paper thus sets out to understand how sustainable tourism, and specifically change, is operationalised and framed in initiatives that work to promote and/or facilitate more sustainable forms of consumption in the tourism and travel sector. It utilises two Swedish initiatives as cases: Hållbarhetsklivet ('The Sustainability Step'), which is Western Sweden's Tourist Board's internal strategy as well as outward-facing voluntary initiative for the regional tourism sector; and Nature's Best, a sustainability label for Swedish nature tourism companies. Through interviews and document analysis, the frames developed and employed by both organisations are studied, in order to understand and make visible how sustainable tourism is defined and implemented. Preliminary results indicate that Hållbarhetsklivet is efficient in gathering support and members through their inclusivity, simplicity, and open-ended change frames, but lack the goal

orientation that Nature's Best shows through their emphasis on support, education, and strict sustainability definition. Simultaneously, Nature's Best appears to begin using frames similar to those utilised by Hållbarhetsklivet, for example claims that sustainability and change need to be simplified. These developments are discussed in light of greenwashing claims, current and future troublesome tourism trends, as well as their potential impacts on the future of sustainable tourism in Sweden, and beyond.

Sustainable Consumption and Minimalist Family Practices: Navigating and Negotiating a Social and Ecological Sustainable Everyday Life

Jenny Alsarve, Helen Peterson, Lisa Elliot

Örebro University, Sweden

Problem definition

This paper examines how families in Sweden adopting a minimalist lifestyle navigate and negotiate the challenges and opportunities of sustainable consumption in everyday life. Minimalism, characterized by intentional living with fewer material possessions, is not necessarily a response to primarily environmental concerns. However, minimalism *can* align with ecological sustainability and lead to reduced environmental impact if framed as a response to mass consumption and by promoting more conscious consumption patterns.

The aim of this paper is to examine how the main motives behind a minimalist lifestyle are framed, and how minimalist practices in favor of more sustainable consumption, such as intentionally reduced consumption are framed as beneficial for a more sustainable family life.

Method

The study thus focuses on the intersection of family dynamics and minimalist lifestyles and explores if and how the minimalist family lifestyle is motivated by social and/or ecological sustainability. Drawing on qualitative semi-structured interviews with Swedish families who embrace minimalism, the paper investigates the motives and driving forces behind the choice to live a minimalist family life, and in addition, how these motives can shift over time. Families are defined as one or two adults who are living with children under the age of 18, or two adults who are in a cohabiting or living apart together (LAT) relationship. The study also identifies key challenges with a minimalist lifestyle, requiring negotiations within the family but also beyond.

Results

The challenges a minimalist family can face, and need to navigate, involve tensions between family ideals and practical needs; managing other family members' priorities; different expectations concerning family celebrations and holidays, and addressing societal pressures related to consumer culture.

The findings suggest that there are several motives behind the minimalist lifestyle, with ecological sustainability not always being the main motive. The results draw attention to how minimalist practices and ideals may actually conflict with an ecologically sustainable lifestyle. The minimalist notion that we need to free ourselves from material things can potentially lead to new consumption practices characterized by short-term thinking, and 'just-in-time' purchases." The study however also highlights how families *can* reconcile sustainable consumption with everyday demands and how more ecological sustainable practices can potentially contribute to more socially sustainable practices.

Significance to mainstreaming sustainable consumption

The paper therefore offers important insights into the social and environmental implications of minimalist living and how it can contribute to mainstreaming sustainable consumption within families.

Mainstreaming Sustainable Investment: The Impact of Moral vs. Financial Framing Under Different Levels of Visibility

Sarah Niess^{1,2}, Ramona Teuber^{1,3}, Wencke Gwozdz²

¹ISOE – Institute for Social-Ecological Research, Germany; ²Faculty of Agricultural Sciences, Nutritional Sciences and Environmental Management, Justus Liebig University, Giessen, Germany;

³Center for International Development and Environmental Research (ZEU), Giessen, Germany

Problem definition

By directing their capital towards socially responsible businesses, consumer investors can shape the transition towards a sustainable and just economy. However, consumers often perceive sustainable investments to be less profitable, which is a major barrier for sustainable investing to become mainstream. The question therefore arises as to whether financial rather than moral arguments should be given greater prominence when promoting sustainable investment.

A key consideration for choosing the most effective information framing lies with the visibility of the behaviour. Research in the field of sustainable consumption and pro-social behaviour suggests moral behaviours can be leveraged in public to signal a pro-social image, but the signalling value is diluted when people behave morally due to selfish reasons, such as financial motives. Therefore, previous research suggests that the public observability is decisive whether moral or financial motives should

be communicated to promote sustainable behaviours. Meanwhile, financial motives are central to the financial context and have long been considered as the only valid motive for investment in traditional financial theory.

Method

This contribution examines whether sustainable investments should be promoted through self-interested motives of financial gain or a moral framing under varying visibility. We therefore conducted three consecutive online experiments with a 2 (information framing: moral vs. financial) x 2 (visibility: private vs. public) between-subjects design. Participants were recruited through the platform 'Prolific'. As a measure for sustainable investment preference, participants had to allocate a hypothetical budget between a sustainable fund and a conventional fund.

Results

In Study 1, we find that a moral framing compared to a financial framing increases sustainable investment allocation in public but not in private. Aiming to replicate and generalize these findings within a broader sample by framing the second study more generally on investment decision-making, we find a reversed ordinal interaction. The moral framing leads to higher sustainable investment in private, but not in public. Study 3 explores a potential self-selection effect between study framings to explain the differing results of the proceeding studies. Investors that are interested in sustainable investing react to the information framing, while those who are not interested are not susceptible to social and informational cues. The results indicate that the effectiveness of information framing is contingent on the visibility and inherent interest in sustainable investments of the target audience.

Significance to mainstreaming sustainable consumption

Mainstreaming sustainable investment requires an understanding of how to overcome key barriers, such as negative performance perceptions, through effective interventions. The results of this study suggest that financial advisors and financial institutions should tailor their communication strategies to the visibility of investment choice and target group. Individuals that are inherently interested in sustainable investment should be approached with moral and not financial arguments for sustainable investments, especially in public. Financial arguments could even crowd out intrinsically motivated investors. This is specifically relevant for financial advisors that are required in the EU since 2022 to ask their clients about their preference of including ESG criteria into their investment choices.

Design Framing for System Breakdown: Exnovation strategies for unsustainable consumption patterns

Anna-Louisa Peeters, Jotte de Koning, Jaap Daalhuizen

Delft University of Technology, Netherlands, The

Problem definition

Sustainability transitions involve fundamental societal shifts toward more just, sustainable, and resilient production and consumption patterns (Markard et al., 2012; Pel et al., 2020). Most research to date has emphasized technological innovation as the primary resource driving these transitions (Köhler et al., 2019). However, effective change also necessitates the deliberate breakdown of existing practices, structures, and cultures (Hebinck et al., 2022), also known as 'exnovation' (David, 2017; Graaf et al., 2021; Noëth et al., 2023). Emerging evidence underscores that facilitating systemic decline and phase-outs of unsustainable practices, can create space for more desirable alternatives (Bogner et al., 2024; Coops et al., 2024; Shove, 2012). Our study bridges transition studies and design research by identifying design frames that can foster systemic breakdown. A design frame is defined as a *deliberate strategy for intervention* (Prendeville et al., 2022). Design frames connect a societal-behavioral problem (e.g. consumers only know how to prepare meals with meat as the 'centerpiece') with a concrete solution direction (e.g. offer practical guidance for plant-based cooking) (Peeters et al., 2024). Design framing strategically guides the development of behavioral interventions (Dorst & Cross, 2001), which have lasting structuring effects on society (Prendeville et al., 2022). Complementing research on *innovation* for *sustainable* consumption patterns, our study sheds light on how we might minimize *unsustainable* consumption patterns through *exnovation*.

Method

We are currently conducting ±20 semi-structured expert interviews with design and transition professionals experienced with system breakdown. Participants are from academia and industry, spanning the domains of food and agriculture, energy, mobility, healthcare, and public service. Following a thematic analysis of the interviews, we will identify design frames that promote system breakdown. Each design frame will comprise a distinct behavioral change mechanism and approaches the transition from a unique systemic perspective. To ensure the validity of our findings, we adhere to the Delphi method (Linstone & Turoff, 1975); we will present the emerging design frames to the interview participants for feedback, allowing us to address potential biases and refine the frames into a final, robust set.

Results

Our study is currently in progress, with data collection and analysis expected to conclude by the end of 2024. The SCORAI 2025 conference audience will be the first to access our findings, which will include a comprehensive set of design frames presented in a standardized format. These frames will be illustrated with examples from diverse transition contexts, demonstrating their applicability and effectiveness in fostering system breakdown. We anticipate that these design frames will provide novel

strategies for designers and policymakers aiming to facilitate sustainable consumption through exnovation.

Significance to mainstreaming sustainable consumption

This study will deliver actionable intervention strategies that facilitate the moderation and phase-out of unsustainable consumption practices. By centering the resistance to behavior change, our approach creates the necessary space for sustainable consumption to become mainstream. The design frames developed through our research offer practical starting points for designers and policymakers to implement exnovation strategies effectively, thereby accelerating sustainability transitions and contributing to broader environmental and social sustainability goals.

8:00am - 9:45am

Governing a fair consumption space – how could we implement a more fair food environment?

Location: **Nya Fest**

Session Chair: **Melanie Speck**

Session Chair: **Julia Heinz**

Session Chair: **Murielle Frerk**

Eco-taxes and sustainability information on the menu: The combined influence of fiscal and informational cues on meat selection

Katharina Rieck, Birgit Teußer

FERNFH Distance-learning University of Applied Sciences, Austria

Problem definition

The environmental impacts of meat consumption, particularly its contribution to greenhouse gas emissions, pose a significant challenge in the fight against climate change. In Austria, as in many other industrialized nations, meat consumption is far above recommended levels, making it an important target for sustainable consumption interventions. Eco-taxes have been used in various countries to discourage environmentally harmful behaviors by increasing the cost of unsustainable choices. However, the success of such taxes often depends on their prominence to consumers. Additionally, the salience of sustainability information—how clearly it is communicated—plays a crucial role in shaping consumer awareness and decision-making. Despite their potential, the combined effects of eco-taxes and salient sustainability cues in influencing dining choices remain largely underexplored, particularly in restaurant contexts where real-time decisions are made.

Method

This research explores the impact of an eco-tax on meat consumption in restaurants and how the visibility of sustainability information influences consumer decisions. This study used a 2x2 online experiment where Austrian consumers were presented with a restaurant menu. The experiment manipulated the visibility of an eco-tax on meat and the presence of sustainability information to assess their combined and individual impacts. Austrian respondents aged 18 or older selected a three-course meal from a menu. The primary focus was to determine whether the introduction of an eco-tax, either alone or combined with salient sustainability information, would reduce the selection of meat-based dishes.

Results

Preliminary findings from the first wave of 125 participants suggest that the salience of an eco-tax alone does not significantly reduce meat selection. In some cases, it even led to higher meat consumption, potentially due to psychological reactance. However, salient sustainability information shows a slight tendency to reduce meat selection. The combination of both measures—an eco-tax and sustainability information—did not yield statistically significant effects. These findings highlight the complexity of using fiscal and informational interventions to influence sustainable consumption.

Significance to mainstreaming sustainable consumption

The results of this study contribute to the ongoing discourse on how to mainstream sustainable consumption, particularly through policy measures like eco-taxes. The observed tendency for reactance when confronted with eco-taxes suggests that such measures alone may not be sufficient to encourage significant behavioral changes. However, the positive impact of sustainability information indicates that integrating educational strategies with fiscal policies could be more effective. As this is a preliminary analysis, further data collection – which can be presented at the time of the conference – is planned to strengthen the findings and ensure more robust results. These findings can provide valuable insights for policymakers and restaurant operators on how to design more effective interventions that promote sustainable food choices, potentially informing future strategies to reduce meat consumption and mitigate its environmental impact.

Unpacking the Role of Social Norms in Sustainable Consumption: Insights from the CHORIZO Project on Preventing Food Waste in Cities

Chantal den Broeder¹, Isabeau Coopmans², Leah Lazer³, Nestor Gisasola-Maiztegi³

¹VLTN, Antwerp, Belgium; ²Flanders Research Institute for Agriculture, Fisheries and Food (ILVO), Flanders, Belgium; ³ICLEI, Freiburg im Breisgau, Germany

Problem
Food waste contributes to economic inefficiencies, environmental degradation, and social inequalities. Despite numerous initiatives to reduce food loss and waste (FLW), understanding of the behavioural drivers of food waste generation remains incomplete (Box-Steffensmeier et al., 2022). The CHORIZO project addresses this gap by focusing on how social norms—socially enforced rules and expectations—influence FLW behaviours in the context of urban areas. Understanding how social norms might enhance or hinder city-level food waste prevention initiatives is crucial for overcoming barriers to sustainable consumption at the local level across the EU.

Method:
The CHORIZO project employed various methodological approaches across four work packages. Primary data collection included desk-based research to compile an inventory of FLW initiatives from EU member states, and the development of six case studies, based on interviews and surveys. This presentation takes these methods as a foundation and primarily focuses on findings from interviews with local authorities about the challenges they face in combating food waste, and how they can leverage social norms successfully.

Results:
This presentation will highlight key challenges municipalities face in addressing food waste, including infrastructural, regulatory, and behavioural barriers. We will explore strategies to overcome these challenges, emphasizing the role of social norms in influencing stakeholder behaviours, promoting collaboration among actors, and enhancing the long-term sustainability of interventions. Relevant social norms that emerged from the CHORIZO project's research include:

- **Socio-Economic Status Associations:** People's food purchasing, preparation, and consumption behaviors are associated with their perceived socio-economic status.
- **Sub-optimal Food Quality:** Food with an unusual appearance is often avoided, leading to waste.
- **Portion Size and Food Affluence:** Portion size reflects social norms around acceptable consumption, even when portions may be excessive.
- **Good Provider Identity:** The desire to be a good parent or host leads to over-provisioning of food.
- **Family Influence:** Older generations promote finishing all food, based on past experiences of scarcity.
- **Environmental Awareness:** Concern about the environmental impact of waste.
- **Challenging Gender Norms:** Traditional gendered eating practices (ie. portion size) are being questioned, focusing more on personal preferences and reducing waste.

Significance to Mainstreaming Sustainable Consumption:
The findings from the CHORIZO project have significant implications for moving towards zero food waste. By illuminating the role of social norms in food waste in cities, it provides a foundation for developing more targeted, effective interventions that can scale across sectors and contexts. The insights gained from this project are valuable for policymakers and government staff at all levels, researchers, and practitioners aiming to design interventions that use social norms to promote sustainable consumption.

Expanding the Meaning of Care for Sustainable Food Consumption

Laura Blanco-Murcia, Juan Moreno-Cruz

University of Waterloo, Canada

Problem
Care has been seen as crucial to sustainable consumption, given its potential to reshape our relationship with humans and more-than-humans (Lorek et al., 2023; Moriggi et al., 2020; Pope Francis, 2015). Narratives of care can set the stage for moving towards sustainable consumption (Blanco-Murcia & Moreno-Cruz, Forthcoming). However, the meaning of care varies among people and cultures, assuming different scopes, involving diverse expectations around actors, and acknowledging different levels of connection among them. Here, we explore the role of care in food consumption and the possibilities for expanding its meaning to include the more-than-human world, thus increasing the chances for a change in diets.

Method
We used a qualitative methodology that combines storybooks and life story interviews, to deeply explore the narratives around food and care in 30 adults from Colombia.

Results
Results show how stories have moved from a family-oriented notion of care related to *providing enough food* (food quantity) to a notion that is focused on *individual health and wellbeing* (food quality). We find that exposure to media and other information sources has increased the knowledge about the environmental issues related to food. This knowledge has permeated the meaning of care, making it more inclusive of the human and more-than-human world, more aware of the interconnections related to food production, and more aware of the need for respecting self-expression. However, this

awareness has not represented a change in habits for most. Only some participants show their care concerns through changes in their animal-based food consumption. These changes emerge from their relationships with companion animals, their intention to reduce the suffering behind food, and a higher sensitivity to the well-being of others, leading to an expanded meaning of care.

Significance to mainstreaming sustainable consumption

Our findings suggest that the expansion of care that involves changes in food consumption habits is linked to recognizing the commonalities with other beings, daring to unsilence uncomfortable emotions, persisting and being disciplined with alternative diets, and taking the risk of standing up to the closest social group.

Opportunities and barriers for a transition to sustainable eating - from the perspective of households in Sweden

Vishal Parekh¹, Asa Svenfelt²

¹KTH Royal Institute of Technology, Sweden; ²Linköping University, Sweden

Problem definition

A transition to sustainable eating practices in Sweden was studied. A premise of the study was that a transition to more sustainable ways of eating requires changes on several levels: in terms of infrastructure and material conditions, and skills and knowledge, which can set better preconditions for changes in social and cultural norms. Therefore, understanding how structural factors can enable or hinder sustainable eating practices can be a way of lifting focus and responsibility from the individual level and discussing measures and policy that municipalities, governments, authorities, businesses and CSOs could use to support household transitions. The aim of the project is to explore policy-relevant barriers and enablers for a transition to sustainable eating from the perspective of households in Sweden. To achieve the aim, the following questions have guided the research: What barriers and enablers arise when households try to achieve targets for sustainable eating? How can identified barriers and enablers be understood in the form of measures and changes at the societal level?

Method

We used a social practice theory approach to understand and support food transitions in Swedish households and designed an intervention inspired by the Energise project (<https://energise-project.eu/>). The 14 households in the study chose and tried to achieve one or several of five targets for sustainable eating: Eating (1) for a reduced climate impact, (2) for a varied agricultural landscape, (3) less food with low energy density and nutritional value (like soft drinks and sweets), (4) less red meat and charcuterie, and (5) more fruit, vegetables and legumes. The research approach was qualitative and data from the households was gathered through surveys, diaries, and interviews.

Results

The results illustrate primarily how different authorities, companies and civil society can support a transition to more sustainable eating in Sweden. Through the perspective of the households, we have enhanced our understanding of the obstacles and opportunities households encounter when they try to change their eating practices. These relate to the daily life of the household members, e.g. shopping, preparation, cooking and the meals. These are all placed in a surrounding context that presents mainly challenges, but also enablers. We also present results regarding agency and responsibility, in the perspectives of the households as well as desirable actions from politics, society, shops, agriculture and producers.

Significance to mainstreaming sustainable consumption

The benefits of this research will be the knowledge generated on obstacles and possibilities for transitions to sustainable consumption. The knowledge will not be focused on individuals or behavioral change, but on what hinders and enables transition in the structures, norms, skills or materials that surround the households. The Swedish Food Agency and Public Health Agency were at

the time of the study developing a proposal for national goals and areas of action for sustainable and healthy food consumption. This research can be directly helpful in their work with the goals and provide knowledge on what kind of policy measures could help enable sustainable eating.

Who's got the power? A case study of grain legumes in Sweden's food system

Mary Scheuermann¹, Jacob Hileman², Line Gordon¹, Lisen Schultz¹

¹Stockholm Resilience Centre, Stockholm University, Sweden; ²West Virginia University

Problem definition

Different research streams use various terms to describe actors with presumptive power due to certain characteristics – incumbents (e.g., Kungl, 2024), keystone actors (Hileman et al., 2020; Österblom et al., 2015), regime actors (e.g., Geels & Schot, 2007), leading/dominant firms (Gereffi et al., 2005; Sturgeon, 2008). The European Union has implicitly defined these actors as well in the criteria for corporate sustainability due diligence reporting requirements (Directive (EU) 2024/1760 on Corporate

Sustainability Due Diligence, 2024). Some characteristics are shared across most of these research streams, including political power, economic power, and profit orientation. Yet it is unclear whether using these characteristics is a useful way to identify actors that have different types of power in a regional business ecosystem. Taking a social-ecological perspective, this paper examines the criteria for key/powerful actors set forth by earlier researchers in the context of the grain legume system as part of food system transformation in Sweden.

Method

This paper seeks to answer the questions: What does it mean to be a key actor in a regional system? How can these actors help or hinder food system transformation? To do so, the relationships between four types of power [power to (Parsons, 1954; Partzsch, 2017); power over – visible (Gaventa, 2006; Lukes, 2021; Parsons, 1954); power over – hidden (Gaventa, 2006; Lukes, 2021); and power with (Morrison et al., 2019; Partzsch, 2017; Vallet et al., 2020)] and food system transformation are identified in the literature. Next, results from semi-structured interviews with grain legume value chain actors in Sweden elicit how actors perceive their and others' influence over specific actions with transformative potential. Lastly, the types of power are operationalized using social network analysis measures and interview results to identify which actors have what type of power in this system, and how these can support transformation.

Results

Initial results reveal that many actors hold multiple types of power, but some types of power are more concentrated in certain types of actors. Expected additional results include identification of specific actors with types of power that are linked to particular elements of food system transformation, as well as how the network analysis results compare to the characteristics of key/powerful actors identified across research streams. The results of this study can inform conceptualizations of key/powerful actors in regional systems when looking across disciplinary fields of study.

Significance to mainstreaming sustainable consumption

Scholars and consensus bodies have highlighted the need for dietary shifts as critical to food system transformation in support of climate change adaptation (IPCC, 2022). Increasing plant proteins in average Nordic diets, including grain legumes, and reducing red meat consumption is critical to these dietary shifts (Wood et al., 2019). While changes to food patterns inherently involve individual behaviors, systemic interventions involving value chain actors can make those changes easier and more feasible (European Commission, 2018; Ferreira et al., 2021). Identifying actors with different types of power may help to identify how actors have the potential to facilitate or hinder food system transformation (Turnheim & Sovacool, 2020).

8:00am - 9:45am

Consumption-based climate and resource budgeting as a tool for socio-ecological planning

Location: **Gustafscenen**
Session Chair: **Pernilla Hagbert**
Session Chair: **Karin Bradley**
Session Chair: **Eskil Engström**

The Emergence of Consumption-based Greenhouse Gas Politics in Sweden – From Carbon Equality to Climate Benefits from Exports

Eskil Engström

KTH, Royal Institute of Technology

This article explores the politics of carbon calculations in Sweden's national policy process to introduce consumption-based GHG emissions accounting and climate targets. Consumption-based accounting (CBA) has attracted much academic and policy interest. CBA is being applied to identify imported GHG emissions embodied in trade and to assert that high-income countries have achieved *non*, *relative*, or *insufficient* rates of absolute decoupling between GHG emissions and GDP growth. However, less attention has been given to the actual policy process of instituting national accounts, climate targets and policy measures. This article draws upon expert interviews and policy document analysis from Sweden's national process to implement policy frameworks for calculating and reducing consumption-based GHG emissions. The results highlight how a coalition formed in Sweden that supported a CBA perspective, including civil society, left-wing political actors, and researchers, the latter of which could validate the scientific soundness of the approach. This coalition has pushed for extended Swedish responsibilities for embodied emissions, carbon equality and demand-side policies. However, cross-party political backing behind including CBA in the national climate policy framework could first form upon including a new measure and target for the climate benefits of Swedish exports, supported by right-wing and industrial actors. This politics of carbon calculations shows that seemingly radical climate policy proposals risk being co-opted and re-formulated. Moreover, the climate benefits of exports risk being used to legitimise a Swedish transition strategy that increases domestic GHG emissions. It is a counterfactual measurement, implicating that all exports from Swedish industry with a relatively higher climate performance may be counted as a climate benefit. Amid the proliferation of national net-zero emission commitments, presumed to underpin the international climate regime, this article contributes to comprehending how national expertise negotiates such targets' technical and political operationalisation. Furthermore, the article details how the introduction of climate policy measurements, targets and measures are interconnected and how CBA has been used to motivate and mainstream consumption-based policies.

Implications of combined territorial and consumption-based net-zero climate targets on allocating the remaining carbon budget

Johannes Morfeldt, Daniel J.A. Johansson

Physical Resource Theory, Chalmers University of Technology, Sweden

Problem

Swedish policymakers recently proposed to set a consumption-based net-zero greenhouse gas emissions target alongside the territorial net-zero target for 2045. The ambition level of national climate targets can be assessed by comparing the resulting cumulative carbon dioxide (CO₂) emissions with different equity principles for allocating the global remaining carbon budget. However, combined territorial and consumption-based targets call for an approach that accounts for both accounting frameworks simultaneously.

Carbon budget allocations across countries build on inherently value-laden assumptions, including the global carbon budget, how to approach the issue of differentiated responsibility and capability, and how the territorial and consumption-based perspectives should be weighed together. This research highlights the consequences of such ethical and political choices and their implications for national climate targets.

Method

The research builds on several methods developed in previous studies – equity principles for allocating the global remaining carbon budget (e.g., Robiou du Pont et al. 2016), and shared consumer and producer responsibility for emissions embodied in trade (e.g., Jakob et al. 2021 and Lenzen et al. 2007). The quantifications apply publicly available data from global and national scenarios analyses by the IPCC (2022) and the Swedish EPA (2021), respectively, and historical CO₂ emission data from the Global Carbon Project (2022).

Results

Preliminary results show that current Swedish territorial climate targets are in line with an equal per capita allocation of the global carbon budget and historic responsibility starting in the mid-1990s. This assumes holding the global mean temperature increase to no more than 1.5 °C with a probability of 50%, with a carbon budget based on IPCC (2022). Suppose the proposed target for consumption-based emissions would be adopted alone. In that case, an earlier year is needed – net-zero by 2039 – for an equal per capita allocation of the global carbon budget and an even earlier year if historic responsibility is considered. The difference is explained by Sweden's higher consumption-based emissions compared to territorial (7 tons per capita compared to 4 tons). Further, consumption-based emissions have not decreased as much since the 1990s in relative terms. The implication of adopting combined territorial and consumption-based net-zero targets depends on the weight assigned to the country's responsibility for emissions related to exports versus imports. Such a weighting factor can, for example, be based on the shared responsibility for trade-related emissions by estimating how trade has economically benefited the country, which implies a responsibility of 33% for emissions related to imports and 67% for emissions related to exports for Sweden (Jakob et al. 2021). In that case, reaching combined net-zero by 2046 would be in line with an equal per capita allocation of the carbon budget, whereas considering historic responsibility would require an earlier net-zero year. However, this is just one of several methods for weighing the territorial and consumption-based approaches together.

Significance to mainstreaming sustainable consumption

Complementary consumption-based climate targets may increase the motivation for policies that target demand-side measures. This research contributes with insights into the ambition level of such targets.

From income to impact: Exploring consumer heterogeneity and carbon footprints

Jonas Nässén, David Andersson

Physical Resource Theory, Chalmers University of Technology, Sweden

Problem definition

Marginal consumption, as opposed to average consumption, can be defined as the spending pattern of an increase in disposable income or total expenditures. Previous research has shown that the carbon intensity (kg CO₂e per monetary unit) of marginal consumption is typically only slightly lower than for average consumption, as revealed by income and expenditure elasticities of carbon footprint. A review of 49 studies found that the median elasticity of carbon footprint with respect to total expenditure was 0.86 (0.68-1.14), i.e. that an increase in total expenditures by 1% was associated with an increase in carbon footprint by 0.86%. A sample of studies that instead used income elasticity show slightly lower results with a median of 0.56 (0.31-1.04), which can be expected as high-income households save a larger share of their disposable income as opposed to low-income households who may even spend above disposable income (Pottier 2022). Capturing marginal consumption in a single elasticity, however, may hide important heterogeneity in consumer behavior. Different groups of consumers may react differently to an increase in disposable income which bears relevance to the construction of more fine-grained scenarios of consumption and carbon footprints. This study attempts to uncover this heterogeneity by analyzing transaction data from a large sample of Swedish consumers

with additional information on environmental attitudes and beliefs, and sociodemographic variables such as education level and urban/rural residency.

Method

This study analyzes a randomly selected sample of 4,100 single-adult households in Sweden. Carbon footprint data was estimated using a carbon calculator app that tracks consumption via financial transactions, allowing for a detailed analysis of spending behavior and environmental impact. Participants also completed a survey capturing variables like environmental self-identity and frugality (i.e., restraint in acquiring possessions and resourcefulness, following Pepper et al., 2009). Registry data on sociodemographic factors such as education level and urban/rural residency is also included.

Expected results

The data set was collected during early summer 2024 and will be made available for analysis in October. We hypothesize that environmental self-identity and self-stated frugality will have negative moderating effects on the relationship between income and carbon footprint.

Significance to mainstreaming sustainable consumption

This research will provide concrete insights into the behavioral drivers behind low-carbon lifestyles. These findings will offer a foundation for future scenario analyses on the systemic impacts of green consumption pathways, thereby also supporting policymakers in promoting sustainable consumption.

References

- Pottier, A. (2022). Expenditure elasticity and income elasticity of GHG emissions: A survey of literature on household carbon footprint. *Ecological Economics*, 192, 107251.
- Pepper, M., Jackson, T., & Uzzell, D. (2009). An examination of the values that motivate socially conscious and frugal consumer behaviours. *International journal of consumer studies*, 33(2), 126-136.

Building a map of consumption-based emissions at the sub-municipal level

Peter Walke¹, Katarina Axelsson², Ansel Cheng-Wei Yu¹, Karin André²

¹Stockholm Environment Institute Tallinn, Estonia; ²Stockholm Environment Institute HQ, Sweden

Problem definition

High levels of consumption in developed countries are a key driver of continued high levels of greenhouse gas emissions. As such, accurate determination of consumption-based emissions is crucial for designing policy interventions towards limiting warming in a socially equitable and just fashion. While national consumption-based footprints, for example through the environmentally extended input-output (EIO) approach, have gained increasing prominence in both research and civil society, understanding how they are distributed at high spatial resolution is less developed. Efforts to achieve this are hindered by difficulties in obtaining sufficient and verifiable data at the required local scales. This is a crucial step, since patterns of consumption can be highly influenced by socioeconomic, sociodemographic and geographic factors, as well as the broader framework of technologies and infrastructure at both the local and national level. Understanding emissions at a high-spatial scale will allow these factors to be unravelled, as well as describing the distribution of emissions across spatial scales and potentially allowing for targeted policy interventions most appropriate for a specific area.

Method

Sweden has historically been at the forefront of promoting consumption-based emission accounting and publishes national figures annually. Herein, we describe recent work to downscale and distribute this official household consumption-based footprint at around the postcode level and across over 100 categories of consumption through our consumption compass 2.0 project. The model to obtain the local emission profiles incorporates a wide range of large datasets, including lifestyle segmentation surveys and related data on food and transport, as well as household budget surveys, alongside a range of Sweden's publicly available statistical datasets.

Results

This results in average emission profiles at the sub-municipal level for the whole of Sweden, emphasising the differences in both absolute emissions and the varying importance of different sectors across the country. In this way, individuals and researchers can uniquely understand local drivers and how these align with the broader context and features of the region. The results are presented in a free online map-based tool and across a time series starting in 2019, and are suitable for municipality officials, researchers and civil society.

Significance to mainstreaming sustainable consumption

This will illustrate the evolution of local emissions and the effects of external impacts, such as COVID-19. It also emphasises comparison between and across geographical scales. By providing the key quantitative data, it will allow local areas to design tailored, evidence-based policies and scenarios to reduce their household consumption-based emissions. Moreover, by describing the key steps in building the model and illustrating its use, we hope to advance the feasibility of conducting accurate local consumption-based footprints beyond Sweden, thereby accelerating the quantitative understanding of sustainable consumption more generally.

Identifying neighbourhoods' lifestyles: A segmentation analysis of household transaction-based carbon footprints in England and Wales

Jasmine J. Wells¹, Anna Trendl², Anne Owen¹, John Barrett¹, Norbert Jobst³, David Leake²

¹Sustainability Research Institute, University of Leeds, United Kingdom; ²Behavioural Science, Lloyds Banking Group, United Kingdom; ³Portfolio Analytics, Lloyds Banking Group, United Kingdom

Problem definition: Household consumption contributes 58 – 72% of global greenhouse gas emissions, primarily from supply chains of goods and services purchased. Decarbonisation requires reducing energy demand and decarbonising production, but climate policies often overlook consumption patterns.

Household behaviours and purchasing decisions vary widely due to personal preferences, geographic location, and socio-economic factors. Place-based policies, which account for local context, show promise in engaging communities, but a lack of up-to-date, local emissions data remains a challenge. Furthermore, effective policymaking requires understanding the variability among households at the local level. Due to these barriers, a knowledge gap persists regarding spatial differences in carbon footprints (CFs) and the extent to which choices or circumstances influence them.

This study addresses this gap by using geodemographic segmentation to analyse household CFs in neighbourhoods of England and Wales, estimated using financial transaction data (FTD). This approach can be used to support place-based mitigation strategies targeted towards different population segments. Unlike previous segmentation studies that rely on outdated or aggregated data, FTD is collected continuously allowing for estimation of CFs in real-time. Furthermore, a unique contribution of this work is the ability to map neighbourhoods of England and Wales which show potential for effective policy implementation.

Method: To identify neighbourhood lifestyles, we calculate the carbon footprints of 719,993 households based on their FTD, cluster households using a dimensionality reduction and clustering algorithm, describe the resultant typologies using pen-portraits, and finally, map the level of membership by typology at the geographic neighbourhood level.

Using publicly accessible Energy Performance of Building Data (EPBD), we illustrate how local governments can use this approach for targeted retrofitting by mapping neighbourhoods in England and Wales with high concentrations of energy-intensive archetypes and low-energy performance homes.

The robustness of the stochastic processes in the method is evaluated using a bootstrapping technique.

Results: Our dataset produced 10 distinctive household archetypes based on their CFs, socioeconomic and geographic characteristics. Examples include: 'Suburban Home Improvers', with high CFs from home energy, hardware, and gardening stores; 'Petrol-dependent Tenants', renters prevalent in coastal areas and near national parks; 'Taxis and Takeouts', young urban families reliant on fast food deliveries and taxis.

Significance to mainstreaming sustainable consumption: A segmentation approach using up-to-date data reflecting current consumption trends allows for the prioritisation of high-impact groups for tailored mitigation strategies. It can help distinguish between population segments whose CFs are shaped by structural barriers versus personal preferences, and between those with the financial capacity to implement changes and those less able.

Integrating Planetary Boundaries with Input-Output Analysis: A Systematic Literature Review

María Fernanda Godoy León, Alison Bankert, Diego Torralva Becerra, David Abson

Sustainable Resource Use, Social-Ecological Systems Institute (SESI), Leuphana University, Germany

In 2009, Rockström et al. introduced the **Planetary Boundaries (PB) framework**, identifying nine planetary systems and establishing their critical thresholds that delineate a "safe operating space" for humanity. The PB concept is inherently global, yet policies to manage these boundaries are developed and implemented locally within political borders. As a result, numerous attempts have been made to operationalize PB at sub-global scales, ranging from cities to continents.

Studies focused on the operationalization of PBs typically employ in addition Life Cycle Assessment (LCA) or **Input-Output Analysis (IOA)**. IOA is a top-down economic tool that helps understand the interrelationships between different sectors of an economy, particularly how they interact in the production and consumption of goods and services. Environmentally-Extended IOA (EEIOA) introduces environmental and material aspects of supply chains, and global Multi-Region Input-Output (MRIO) models have enabled connections between specific location of environmental impacts and the production and consumption of goods and services worldwide. By encompassing all sectors of an economy, IOA can assess indirect and induced effects, providing a more holistic view of environmental impacts compared to LCA, which might focus only on direct and upstream impacts of specific products. Given the significance of these frameworks, there is a growing body of research that integrates PBs with IOA. However, this research is dispersed across various studies and disciplines, necessitating a systematic synthesis to consolidate findings, identify gaps, and guide future research.

To address this need, we conducted a **systematic literature review** focusing on research that integrates the PB framework with IOA. Our aim was to answer several key questions, including: **What are the most common methodological approaches used in studies combining PB and IOA? How has IOA informed policy decisions related to living within PB?** We conducted a comprehensive search of relevant literature using Scopus and Web of Science, covering publications from 2009 to 2024. Articles were included if they operationalized PB and apply IOA in their assessments. Studies that only mentioned PB or employed alternative assessment methods, such as LCA, were excluded, as were articles focusing on policy targets like nationally determined contributions.

After applying our inclusion criteria, removing duplicates, and excluding articles published in languages other than English, we identified 54 research articles eligible for full analysis. Our review revealed four main methodological frameworks in the literature: footprint versus downscaled PB (53%), exceedance footprint (5%), scenario analysis (39%), and optimization modelling (3%). Climate change was the most frequently studied PB (23%), followed by land-system change (19%), freshwater use (17%), nitrogen flows (16%), and phosphorus flows (14%). Scenario analysis was used exclusively for climate change studies. Furthermore, 61% of the studies adopted a narrative of responsibility, 15% focused on human well-being, and 9% explored socio-economic aspects.

This literature review provides crucial insights into the current state of research at the intersection of PB and IOA, identifying key areas for future exploration. By addressing complex questions beyond the scope of individual studies, this synthesis significantly advances the integration of these frameworks into mainstream sustainable consumption policies and practices.

8:00am - 9:45am

Sustainability, Sufficiency and Consumption in the East: Could Asia lead the way?

Location: **Sångsalen**

Session Chair: **Marius Korsnes**

Session Chair: **Arve Hansen**

The embeddedness of animal foods in China's agri-food system: Connecting production and consumption

Marius Korsnes, Dongming Xu, Shuhua Chen, Wenjia Zhou, Tarjei Brekke, Yu Wang

NTNU, Norway

Problem Definition

This article studies the roles of meat and milk in contemporary urban food practices in China and their embeddedness into the agri-food system. Urban eating habits are evolving amidst broader lifestyle changes, but the various factors impacting these changes have not been studied systematically. Investigating the current roles of meat and milk in urban food practices, this paper explores how and why these roles have changed in response to shifting materials, meanings, and competencies, and in connection to systems of provision.

Methods

Methodologically, the paper is based on around 30 household interviews conducted in China between June and December 2024. The interviews were made with two- or three-generation families living together, to better capture dietary changes over time. There were also household visits, including visiting and taking pictures of kitchens and fridge-freezers. We have also conducted multi-sited participant observation focussing on the food-chain of pork, milk and salmon at various urban and rural sites in China.

Results

Eating in China is marked by an increase in dining out, fast food consumption, online food purchasing, and a shift from fresh to processed foods. The symbolic aspects of social status and position are intertwined with eating habits, shaped by nutritional advice from the government, including government guidelines emphasizing lean meat consumption and the frequent intake of milk or dairy products. Rapid production growth, technological advancements in processing and packaging, and a shift from small-scale to industrialised farming clearly shape China's surge in consumption of animal foods. Although urbanization and increased income correlate with heightened consumption of animal-based products, the underlying factors are complex, influenced by industrialisation trends, government policies favouring large-scale farms, and global implications such as the extensive cultivation of soybeans in North and South America to feed Chinese livestock.

Significance to Mainstreaming Sustainable Consumption

With a holistic perspective, this paper sheds light on how contemporary demand for animal-based foods is co-shaped by systems of provision in the context of China's evolving food practices. Understanding these dynamics is crucial for sustainable consumption, as contributes with a deeper understanding of the underlying factors contributing to increased animal food consumption.

Meat replacement in contemporary Asia: elaborating regional production-consumption complexes

Arve Hansen¹, Jonas House²

¹Centre for Development and the Environment, University of Oslo, Norway; ²KTH Royal Institute of Technology, Stockholm, Sweden

Problem definition

Replacing conventional meat with non-animal or lab-grown alternatives—‘meat replacers’—is regarded as a crucial step towards sustainable diets. This ‘protein transition’ is a major research area, a hotly debated political topic, and a new commodity frontier for investors. Asia hosts the fastest growing markets for meat-replacement products in the world, predicted to boom over the coming years. Alongside foreign investors and companies many Asian businesses are entering the competition, and products targeting Asian culinary cultures are developing rapidly. It is therefore surprising that the burgeoning academic literature on meat replacement rarely considers Asia, instead centring on affluent Western societies. This oversight is particularly remarkable given that Asia also has a long history of meat replacement that pre-dates the current generation of products by hundreds of years. This paper takes a first step in mapping meat replacement in contemporary Asia, considering its relation with historically established food practices. Zooming in on Eastern Asia (including Northeast and Southeast Asia), we explore what meat-replacement products are currently produced and sold, how meat is and has been replaced in past and present Eastern Asian food cultures, and how dynamics of meat replacer production and consumption relate in Eastern Asia relate to the broader, global protein transition.

Methods

We perform a digital mapping exercise of meat replacement in Eastern Asia in three steps. First, we map main trends in the regulation, production and political economy of meat replacers in the region; second, we zoom in on specific hotspots of activity; and third, we perform digital ethnography to dig deeper into products and practices of meat replacement through document analysis, blogs, newspaper articles and social media forums. While we also draw on past fieldwork on meat replacement in Vietnam, this exercise lays the ground for a subsequent stage of fieldwork and data collection.

Results

Empirically, we present a first systematic account of meat replacement products, practices and provisioning actors in Eastern Asian contexts. Theoretically, the paper represents a first step towards developing a holistic approach to study the consumption and non-consumption of meat-replacer products. Focusing on entire ‘production-consumption complexes’, we study how political-economic, cultural, social and material dimensions together shape how the spread and uptake of novel foods. Specifically, we study how distinct ‘edibility formations’ take shape across the regulation, production, supply and consumption of meat-replacer products.

Significance to mainstreaming sustainable consumption

Given food systems’ substantial impacts on planetary and public health, greater understanding of sustainable dietary change is essential. This paper’s makes a twofold contribution to these efforts. First, the paper expands the geographical reach of knowledge production on food system change. Asia’s growing importance in global meat replacement takes place alongside dramatic meat booms across Eastern Asia. With strong growth in meat demand also projected for the coming decades, an Asian protein transition could have crucial global sustainability impacts. Second, the paper contributes to ongoing debates about how novel foods become accepted and adopted as food, which is essential for a protein transition.

From eating for sustenance to eating for pleasure: Examining thoughts on sufficiency, demand and “everyday luxury” in Shanghai salmon consumption

Tarjei Brekke

NTNU Norwegian University of Science and Technology, Norway

Problem

Over its soon-to-be sixty-year history, Atlantic salmon (*Salmo salar*) farming has shifted global shipping lanes for seafood, transformed coastal communities and produced debates on the animal rights of fish (Lien 2015). For finfish, they are globally part of the fourth most farmed species group, the salmonids, in terms of volume at 4,2 million tonnes in 2022 (FAO 2024). Atlantic salmon is lauded in Norway for its high retention of macro- and micronutrients from feed compared to livestock, and is marketed globally as a healthy, high-quality seafood. While the Norwegian seafood business claims that Norwegian seafood is feeding the world sustainably, in the case of Shanghai in China, salmon seemingly remains an expensive “everyday luxury”, challenging the necessity of the salmon farming industry as a food producer.

Like many other industrialised animal products, the scale at which salmon is produced receives adverse attention due to its impact on fish stocks and supply lines for foodstuffs that could have otherwise gone to human consumption. Overfishing produces reduced availability of fishmeal and fish oil, the key ingredients ensuring the presence of the nutrients that salmon is famous for. Furthermore, in its immediate environment, the spread of sea lice facilitated by sea-cage salmon farming is responsible for the near extinction of both wild Atlantic salmon and sea trout (*Salmo trutta*). In the sea pens, the average death rate was around 15 percent in 2023 (Grefsrud et al. 2024). These detriments alone should be enough to reconsider the cost-versus-benefit of the industry from a sustainability point-of-view.

Yet at the same time, potentially reducing opportunities for salmon farmers to continue their expansion for the sake of sufficiency overlooks the symbolic value for Chinese citizens of access to expensive, imported seafood. In a culture where the idea of “face” (*mianzi*) remains strong and expensive purchases are a way of showing status and charitability to others, salmon occupies a price niche which remains accessible to many in the lower middle class. As a vehicle for the Chinese Dream, Atlantic salmon seems effective at proving to both young and old that the country has come far and that they have transitioned from the days of famine – the time when the main goal was to eat until full (*chi de bao*) to a time when one should eat for pleasure (*chi de hao*).

Method

Framed through the lenses of systems of provision (Bayliss and Fine 2020) and domestication and infrastructuring (Berker 2023; Karasti & Blomberg 2018), this presentation analyses the development of the demand for salmon in Shanghai from a systemic and constructionist angle. Drawing on interview data with 18 individuals from five months of fieldwork in the JiangZheHu-region of China (Jiangsu, Zhejiang and Shanghai), this paper examines interviewees’ thoughts on salmon consumption and whether China really needs salmon as a case on the role of luxuries under sufficiency as an organizing principle.

Results and relevance

This study indicates that dietary consumption limitations are undertaken out of concern for one’s health rather than concern for sustainable planetary stewardship.

On Sino-cultural veg*nisms: Moral consumption and ecological modernity in China and Taiwan

Gina Song Lopez

Lund University, Sweden

Growing awareness of the climate, health, and ethical issues connected to food production and consumption is leading to increasing interest in alternative, greener, and sustainable diets in the Sino-cultural sphere. While the region has a longstanding tradition of vegetarianism predominantly connected to Buddhist practices, the past decade has seen the emergence of new approaches to meatless diets. Contemporary veg*nisms (inclusive of different types of vegans and vegetarians) in China and Taiwan are increasingly engaged in plant-based food and lifestyle advocacy, a development characterized by the founding of vegan organizations, the rise of vegan fairs, and the proliferation of vegan restaurants and plant-based food products. At first glance, these developments appear to follow the global expansion of veganism as a trend. However, beyond shared cultural and historical legacies the Sino-cultural sphere is characterized by diverging socio-political contexts. Respectively, democratic and authoritarian, which in turn result in distinct civil society landscapes. Despite such differences, vegan advocacy is increasingly conspicuous across both contexts. As such, the cases of China and Taiwan offer unique comparative insight into the material and semiotic implications of localizing global vegan norms and practice. This paper comparatively examines Chinese and Taiwanese vegan advocacy by drawing from qualitative methodology based on participant observation in vegan events, interviews with vegan advocates, and discourse analysis focused on discussions surrounding vegan labelling. This study identifies the role of vegan advocates as moral entrepreneurs engaged in the construction of new moral markets which are closely aligned with distinct Chinese and Taiwanese visions of ecological modernity. In this process, elevating vegan food production and consumption as a pathway to toward sustainable futures with the potential to appeal to local publics.

Reviving sufficiency mindsets in society

Jagdeep Singh

Centre for Environmental and Climate Science, Lund University

In recent decades, the Industrial Revolution has replaced sufficiency with overconsumption. The prosumers, who produced and consumed the products they needed, have now become consumers. Unsustainable consumer behaviors, such as premature product discard, resource wastage, and lack of respect for the environment, can be linked to the social-psychological shifts in the mindsets of citizens that followed this revolution. This research explores three sufficiency-oriented concepts: ‘Mottainai,’ ‘Jugaad,’ and ‘Do-It-Yourself’ practices. Mottainai from Japan and Jugaad from India are old mindsets that existed long before the modern discussion on resource scarcity and climate change issues. **Mottainai** is a Japanese term that conveys a sense of regret over waste. With no exact translation, it roughly means “What a waste!” or “Waste not.” Jugaad is a Hindi term that refers to a creative or innovative solution, often improvised and resourceful, typically used to solve problems with limited resources. It’s a concept widely recognized in India and other parts of the Indian subcontinent. Do-It-Yourself practices at repair cafes, maker spaces, and open workshops have recently gained attention in several Western countries due to ongoing sustainability concerns. These encompass a wide range of activities where individuals create, repair, or modify items on their own, often to promote sustainability and self-sufficiency. With real-world examples of each concept, I highlight (1) how these concepts can contribute to sufficiency-oriented mindsets in society and (2) their broad sustainability implications.

Barriers to electric mobility adoption in India: Exploring hierarchies and interlinkages using ISM-MICMAC and DEMATEL approaches

Roma Kandpal, Gregory Trencher

Kyoto University, Japan

Problem definition:

The transition to electric mobility (EM) is vital for reducing greenhouse gas emissions and combating climate change. Moving consumption patterns and lifestyles toward sustainability extends beyond individual behaviour change; it demands systemic transformations within the structures that shape these behaviours. However, this transition faces numerous systemic barriers that hinder widespread adoption, particularly in emerging economies. Identifying and understanding these barriers, along with their interdependencies and hierarchies, is crucial for policymakers and stakeholders to develop effective strategies for accelerating electric vehicle (EV) adoption. This study aims to identify the most significant systemic barriers to adopting electric mobility options and propose strategies to overcome them. The research offers a novel, replicable analytical approach for research on adoption of electric mobility in emerging markets. Its recommendations aim to improve market development, contributing to broader goals of sustainable development, carbon reduction, and pathways toward 1.5-degree lifestyles.

Method:

A mixed-method approach is adopted, integrating insights from industry practitioners, government officials, and academic researchers to compile a comprehensive list of barriers, which includes technological, policy, economic, and social and behavioural factors. The study begins with a comprehensive literature review to identify systemic barriers to electric mobility. These findings are then validated and extended through expert surveys. To examine the structural relationships among key barriers to EM adoption in India, this research employs a combination of Interpretive Structural Modeling (ISM), Matrice d'Impacts Croisés-Multiplication Appliquée à un Classement (MICMAC), and Decision-Making Trial and Evaluation Laboratory (DEMATEL) methodologies.

Using ISM, interdependencies were identified, and a hierarchical structure was developed to categorize the barriers into driving and dependent categories. MICMAC analysis further examined their driving power and dependence, offering insights into their roles within the transition process. To strengthen the analysis, DEMATEL was used to explore the interrelationships amongst barriers, revealing cause-effect relationships and validating the ISM hierarchy. This combination provides a detailed understanding of feedback loops and interactions between barriers, enhancing the overall robustness of the findings.

Results:

The analysis indicates that technological limitations, such as inadequate battery technology and insufficient charging infrastructure, are primary driving barriers. Additionally, policy gaps at the sub-national level and high upfront costs are significant hindrances. Social acceptance and consumer awareness emerged as more dependent barriers, influenced by the resolution of economic and technological challenges.

Significance to mainstreaming sustainable consumption:

The ISM-MICMAC and DEMATEL analysis offers a unique perspective on how these barriers interrelate, demonstrating that addressing foundational barriers can trigger broader systemic changes. Policy recommendations emphasize a multi-stakeholder approach, highlighting the need for collaborative efforts to overcome key barriers and accelerate the electric mobility transition. This research contributes to the growing literature on sustainable transitions, offering actionable insights for policymakers focused on facilitating electric mobility adoption in developing regions. By addressing the systemic barriers to electric mobility, this study advances the discourse on sustainable consumption and production, supporting the global shift toward low-carbon mobility solutions.

Workshop: Community Transitions and Sustainable Consumption: Bridging the gap between Global South and North (Part 1)

Location: **Aula**

Session Chair: **Soumyajit Bhar**

Session Chair: **Kalpita Bhar Paul**

Humanity faces three interconnected challenges: environmental sustainability challenges, inter and intra-generational social justice challenges, and worsening psychological well-being in the era of extreme individualization normalized by the prevailing consumer culture. To address these, we propose recognizing the concept of 'community' as a potential driver for collective action, crucial for overcoming the impasse posed by these issues. Three different strands of literature—psychology of well-being, sustainable consumption, and social justice—highlight the role of community in addressing these challenges. Psychology of well-being studies reveal that relying solely on material means for basic needs like security, companionship, and freedom may offer short-term well-being but significantly compromise long-term well-being (Jackson, 2004; Jackson, 2005; Isham et al., 2022). Sustainable consumption literature advocates for sustainability transitions, emphasizing community-based approaches to decouple human needs from material possessions and sustain socio-environmental well-being (Khmara and Kronenberg, 2020). Therefore community-centered pathways can offer 'double-dividend': a sustainable world and long-term well-being (Jackson, 2005). Lastly, social justice literature demonstrates how community-oriented pathways to natural resource management can ensure collective action towards socially just and environmentally sustainable outcomes (Cochran and Ray, 2009; Narayan and Kamath, 2012). The concept of community remains diverse due to its varying definitions across contexts and periods. In the Global North,

8:00am - 9:45am

	intentional communities are emerging, driven by post-materialistic values e.g. pro-environmental values. These intentional communities are rewarding from an individual perspective as it allows community-participation based on personal choice and values. In contrast, traditional communities in the Global South, particularly in regions like India, witnessing fragmentation of community. There's a notable shift towards breaking-free of community lifestyles by embracing the material pathways provided by the globalized fossil fuel order. Traditional community structures are diminishing, as they tend to constrain individual freedoms through socio-cultural regressive norms. The expansion of negative liberty, manifested as freedom of consumer choice, is increasingly gaining socio-cultural acceptance and desirability. These shifts in individual values, and consequently in culture and societal priorities, have significant implications for the environment, social justice, and individual well-being. In an era marked by three interconnected challenges, fostering collective action for socio-ecological transformation towards a better world is imperative. Hence, documenting the shifts in community structure and ethos in the Global South becomes imperative, alongside evaluating the effectiveness of intentional communities in the Global North in fostering collective action towards embracing progressive values. By doing so, we aim to underscore the transformative potential of communities in promoting a sustainable and equitable future, thereby enhancing the well-being of their members. Some of the questions that we would like to explore are: 1. To what extent shared material reality become a critical foundation for the sustaining of community and its ethos? 2. As the large section of world population discarding traditional community-based living, how to achieve environmental sustainability and justice? 3. How can we effectively address social and environmental justice concerns while promoting community-based sustainability transition pathways originating from the Global North? 4. How far 'risk society' hinders the sustenance of communities and possibility of collective action across different spatial and temporal scale? Workshop: The Climate Puzzle – Experiences and ideas for further mainstreaming 1.5°-lifestyles Location: 201 Session Chair: Michael Lettenmeier The Climate Puzzle (www.climatepuzzle.fi) is a serious game that guides individuals and households in planning and implementing a lifestyle in line with the 1.5°-target of the Paris Agreement by - choosing a sufficient amount of low-carbon lifestyle options to live in line with the 1.5°-target by 2030, - assembling an individual climate plan on this basis, - reflecting the implementation of the lifestyle options chosen, - and reflecting (and potentially acting) on the structural change required to implement low-carb on lifestyle options. In the session, different versions of the Climate Puzzle are going to be demonstrated, including the version originating from the 1.5-Degree Lifestyle project (IGES et al. 2019) and the version developed in the EU1.5°Lifestyles project. These include country versions for Finland, Sweden, Germany, Spain, Hungary, and Latvia, as well as an English language version for Finland or similar low-carbon energy countries. After an introduction (15 min.), the participants will try out and test different versions of the Climate Puzzle on different tables in the room in a demonstration session (45-60 min.) . After the demonstration, a co-creation session (30-60 min.) will develop ideas on how mainstreaming 1.5°-lifestyles should be developed on the basis of the well-accepted Climate Puzzle in a way that would reach a much broader amount of users than with the physical Climate Puzzle in a workshop setting. Another topic to be discussed in the co-creation session is how to integrate other relevant environmental impacts (e.g., the overconsumption of natural resources or biodiversity loss) in this kind of games without jeopardizing the illustrative and understandable nature of the approach. The ideas will be rated during the workshop. They also will be recorded and reported and afterwards sent around to the participants of the workshop. Workshop: Triggering Positive Tipping Points Location: 133 Session Chair: Iain Black Session Chair: Carolyn V. Zorell The Global Tipping Points report, released at COP28, offers a comprehensive exploration of the current knowledge regarding tipping points in essential earth systems. While addressing concerning negative tipping points, the report also dedicates a section (Section 4) to examining the concept of positive tipping points (PTPs) in technology, the economy, and society. It argues that by triggering PTPs in these domains, we can match the scale, speed, and depth of action required to avoid the negative tipping points threatening critical earth systems. Tipping points are defined as occurrences "when change in part of a system becomes self-perpetuating beyond a threshold, leading to substantial, widespread, frequently abrupt and often irreversible impact" (Lenton et al., 2023, p. 41). Once a tipping point is reached, the system transitions to a new stable state. For instance, a 3°C increase in average global surface temperature could lead to the loss of self-perpetuating moisture, causing the Amazon rainforest to tip into a degraded forest or savanna state. Conversely, mandating the use of green ammonia in fertilizer manufacturing could trigger a PTP, leading to the economic viability of green hydrogen across various sectors. Tipping points provides a useful framework for understanding how systems undergo change, the small changes sometimes required to initiate tipping, and the unstoppable nature of change once a threshold is crossed. This insight is crucial for a global society that has yet to mount an adequate emergency response to the accelerating impacts of climate change, as delaying action may prove too late. SCORAI members are ideally placed to contribute to the overall task of advancing the existing understanding of PTP. Cognisant of the time available, the workshop aims to capture the emerging knowledge from the conference and, along with the participants' broader expertise, discuss how the report can be improved and be brought into action; both in terms of generating ideas for research on PTP and in terms of practical implementation. The report itself is an impressive document, synthesising research and expertise from many different traditions and literatures with many potential avenues to examine. Therefore, the workshop will be structured to allow appropriate boundaries to be drawn, according to the interest and expertise present. The output envisaged is a summary of the discussion and a review highlighting a research and publication agenda, which can be taken forward depending on the interest of the participants. To facilitate the workshop, starting points for areas and questions to discuss include: - The PTP takes a systems view, how do we change systems and nested subsystems? - The Global Tipping Points report uses AVOID, SHIFT, IMPROVE to provide a simple structure to guide responses. Is this appropriate when balancing academic rigour and guidance for practitioners? How can it be improved? - Are the conditions and feedbacks stated in the report appropriate, do they sufficiently capture the actions of bad faith actors and systems inertia? - What new advice can be added regarding Conditions and Feedback? And which ones could be amended?
8:00am - 9:45am	
8:00am - 9:45am	
9:45am - 10:15am	Coffee Break Location: Stora Sparbanksfoajén
10:15am - 11:30am	Keynote Tim Jackson - ‘This is an act of care’ – the art of living well on a finite planet Location: Stora Salen Session Chair: Marlyne Sahakian

In this talk, I want to explore the future of sustainable consumption through the lens of care – where care is understood not as a discrete sector of the economy nor even as an unassailable moral good but rather as a fundamental organising principle for organic life. Drawing on conceptions of progress which frame prosperity as health rather than as wealth I want to tease out the implications of this lens for our understanding of economic and social life. The health of the physical organism is a never-ending search for balance in a turbulent and often unpredictable world. Care can be construed as the set of restorative forces that bring the internal milieu of the organism back into balance when that environment is disturbed by changes in the external conditions. It can be understood to include not only our own attempts to care for ourselves and for others, but also the body's innate wisdom and the restorative power of nature itself. Using these biophysical insights I want to ask: what would it mean to place the principle of care at the heart of the economy? In principle, I argue, this lens provides a perspective which unites care for self, care for others and care for the planet. But it relies on a constant attention to balance which is systematically and routinely disturbed and sometimes undermined altogether by the dynamics of capitalism and by the constant search for 'growth at all costs'. It also finds itself challenged by contemporary debates about care for self which are difficult to reconcile with societal (or indeed planetary) health. The talk will illustrate these dynamics with reference to closely related case studies that include the food sector, the pharmaceutical sector, the finance sector and the arms industry. I will use the lens of care to explore the transition to sustainable consumption not as a rules-based set of guidelines about 'good' or 'bad' products and practices, but rather as a potentially dramatic shift in the structure and sectoral composition of society in which relational work – and in particular the labour of care – becomes the foundation for resilience, health, ecological sustainability and political security. Finally, I will hint at the policy implications of these ideas and draw out some of the implications for future research on sustainable consumption.

11:30am - 12:30pm

Lunch

Location: **Stora Sparbanksfoajén**

A Post-Growth Society - Pathways to Sustainable Wellbeing?

Location: **Stora Salen**

Session Chair: **Oksana Mont**

Session Chair: **Karin Bradley**

Session Chair: **Pernilla Hagbert**

Session Chair: **Åsa Svenfelt**

12:30pm - 2:15pm

Exploring growth-independent companies in the growth-obsessed world

Björn Schulz, Oksana Mont

Lund University, Sweden

Problem

In a world where economic success is typically defined by growth, there is increasing recognition that this growth-centric model often conflicts with environmental sustainability. Non-growing companies (NGCs) challenge this paradigm by deliberately choosing not to grow or expand in order to align their operations with long-term sustainability objectives. However, there is limited empirical research on how these companies operate, what drives their decision to forgo growth, and the challenges they face in a growth-obsessed market.

Method:

This research employs a multi-case study approach, focusing on nine small- and medium-sized enterprises (SMEs) from Germany, Switzerland, and Sweden. These firms, spanning industries such as furniture, textiles, and precision engineering, have adopted non-growth strategies. Data was collected through semi-structured interviews with key decision-makers, complemented by analysis of operational strategies, including production, supply chain management, and human resource policies. The study aimed to uncover internal motivations, external pressures, and the practical aspects of sustaining a business without pursuing growth.

Results:

The findings reveal that NGCs are driven primarily by a commitment to sustainability, craftsmanship, and niche market specialisation. Many firms adopt premium pricing models, allowing them to maintain financial stability while limiting production. However, significant challenges remain, such as labour shortages, market saturation, and regulatory barriers. Companies redefine growth by focusing on operational efficiency, product quality, and environmental stewardship rather than traditional expansion metrics. Despite the constraints, these companies manage to remain competitive by fostering strong relationships with customers and prioritising long-term viability.

Significance to Mainstreaming Sustainable Consumption:

This research highlights the potential for non-growth business models to play a critical role in mainstreaming sustainable consumption. By focusing on sufficiency, quality, and long-term resilience, NGCs provide a model for businesses to align with post-growth economic frameworks. These findings contribute to the understanding of how businesses can operate sustainably without relying on growth, suggesting that wider adoption of non-growth strategies could be an essential step towards achieving global sustainability goals. The study underscores the need for policy support to help scale these practices and integrate them into mainstream economic and business systems.

Narratives of post growth planning approaches in local governments

Åsa Svenfelt

Linköping University, Sweden

Problem

Local municipalities are crucial for achieving prosperity, social well-being, and environmental sustainability by converting goals into actionable strategies. However, planning tools in local

definition

governments often focus on growth. Post-growth planning, also known as degrowth, re-evaluates the reliance on economic growth, aiming to create liveable communities where pro-growth economic thinking loses prominence in planning and policymaking and well-being and more sustainable ways of life takes precedence. This paper explores post-growth approaches at local and regional levels, examining their origins, development, and challenges.

Method

The post-growth approaches in this paper are framed as new narratives of change. We explore these narratives in five European local governments, using qualitative interviews.

Results

The results show that these models are still new, with few noticeable impacts in the physical environment. However, they bring enthusiasm and help identify trends and inequalities, addressing a broader scope of sustainability aspects. Some regions have advanced further in integrating these initiatives into decision-making processes, and much can be learned from their experiences.

Significance to mainstreaming sustainable consumption

To move away from the fixation on consumption and economic growth, future narratives primarily based on growth need to be challenged and decolonized. Alternative narratives of change based on a different set of values and targets may guide actions towards alternative futures.

There is a Crack, a Crack in Everything; on facilitating post consumption between structures and citizenship.

Berit Therese Nilsen¹, Martin Inge Standal¹, Lucia Liste¹, Tanja Plasil¹, Gisle Solbu², Patric Wallin²

¹NTNU Samfunnsforskning AS, Norway; ²Norwegian University of Science and Technology (NTNU), Norway

Despite the alarming reports being released about the planet's limits being continually exceeded, our societies are organized to support a value regime and cemented structures around abundance and affluent consumption (Dubuisson-Quellier, 2022). Reducing consumption is consequently a huge challenge for economies that have come to rely on immense amounts of material- and energy flows. Being a citizen today is also tied up with consumerist expectations and economic growth beliefs (Wilhite, 2016), combined with consumption being an essential element in peoples' identity construction and group belonging (Wilén & Taipale, 2018). We therefore advocate to consider the individual and the structural perspectives in combination, as individual attitudes, identities and consumption on one side and social, political and cultural structures on the other, are interlinked and in combination, serve to restrict citizens' ability to reduce their consumption.

The research project Post CC is looking to further our understanding how socio-cultural conditions favouring wellbeing alternatives to consumption can be identified, conceptualised and promoted. To contribute to this overall aim, we conducted a survey among a representative sample of the Norwegian population (n1000) and analysed how individual levels of CO2 emissions relate to a set of questions reflecting avoid, shift or improve policies, bottom up or top down initiated. We then categorized the respondents in 'archetypes' depending on their CO2 emission level and responses to a group of questions. We followed up by conducting interviews with informants from the various groups of archetypes, to explore how identity factors and structural conditions in combination shape peoples' attitudes and behaviours, and where the cracks in contemporary consumption structures can be found to facilitate post-consumption citizenship.

Dubuisson-Quellier, S. (2022). How does affluent consumption come to consumers? A research agenda for exploring the foundations and lock-ins of affluent consumption. *Consumption and Society*, 1(1), 31-50.

Wilén, K., & Taipale, T. (2018). Strongly Sustainable Consumption and A Case of Mistaken Identity: A qualitative study on environmentally concerned individuals. In *Strongly Sustainable Societies* (pp. 209-228). Routledge.

Wilhite, H. (2016). *The political economy of low carbon transformation: Breaking the habits of capitalism*. Routledge.

Limiting fossil fuel advertising – an international overview of policy, arguments and actors

Hanna Eggestrand Vaughan, Karin Bradley

KTH Royal Institute of Technology, Sweden

Problem definition

The increasing recognition of the urgent need for climate action and reduced fossil fuel consumption has prompted various initiatives to curb the promotion of fossil fuels. Much like previous efforts to regulate advertising for tobacco, alcohol, and products targeting children, there is a growing movement towards restricting "fossil advertising"—a term encompassing advertisements for fossil fuel companies and fossil-intensive goods and services, such as automobiles and air travel. In recent years, several

countries and municipalities have implemented or proposed regulations to limit or even ban such advertising. In Sweden, for example, local governments have started considering restrictions on fossil advertising on public platforms such as municipal billboards and public transport.

Method

This project involves a literature review and document analysis to map the international landscape of policies limiting fossil advertising. The study also includes interviews with key stakeholders – non-governmental agencies engaged in the issue as well as public agencies. The study examines the actors involved in decision-making, the arguments used to justify the restrictions, and the specific design and scope of the implemented policies. This includes identifying the types of advertisements targeted, the platforms covered, and collaborations between stakeholders.

Results

The project results consist of a knowledge overview that highlights the various approaches to limiting fossil advertising across different countries and cities. The findings offer insights into the motivations and strategies behind these policies, the challenges encountered, and the potential impact on public awareness and practices. The insights will be a valuable resource for local and national authorities, policymakers, and non-governmental organisations involved in promoting sustainable consumption and reducing fossil fuel dependency.

Significance to mainstreaming sustainable consumption

By examining the emerging trend of fossil advertising restrictions, this project directly contributes to the broader discourse on sustainable consumption. Specifically, with the findings offering practical insights into how advertising regulations can serve as a policy tool for reducing the influence of fossil fuel industries on consumption practices, the study aids with the operationalisation of policy conducive to the more far-reaching reduce discourse on sustainable consumption. This knowledge is critical for shaping future policies aimed at fostering strong sustainable consumption patterns and reducing carbon emissions.

The European (Green?) Deal: a systematic analysis of environmental sustainability

Joan Hereu-Morales

UPC, Spain

Transitioning towards a sustainable society is at the core of public planning in the EU through the European Green Deal (EGD). However, is the EGD a master plan for actual sustainable development in the EU? This work aims to answer this question through an analysis of the environmental sustainability within the EGD's plans through the method of critical discourse analysis, and discussing the results with previous efforts for sustainable development in the EU and in the UN. The results of the analysis identify fundamental flaws in the environmental sustainability of the EGD, which seems to repeat mistakes of previous efforts for sustainability planning in the EU. This work concludes that economic growth is the predominant focus in public planning and that the EGD needs a review of various environmental aspects to be considered the master plan for a transition towards a sustainable EU. Furthermore, the work identifies the focus on economic growth as the main constraint in the design and development of public policies for a sustainable EU, especially concerning environmental aspects and strong sustainability. Overall, the dominion of neoliberal economics on public planning shows evident, and the door remains open for post-growth and degrowth considerations, as well as bottom-up approaches based on changes in consumer habits.

Understanding the synergies between circular economy practices and eco-social policies in Spain

Nadin Ozcelik¹, Marta Rey-García², Vanessa Mato-Santiso²

¹University of San Jorge - Cesuga, A Coruña, Spain; ²University of A Coruña, A Coruña, Spain

Problem definition

The synergies between circular economy (CE) and eco-social policies provide a comprehensive framework to promote the sustainability transitions of both production and consumption systems, hence ensures the achievement of EU's climate objectives, such as the Fit for 55 and EU Green Deal as well as improving social well-being and social equity. To design successful eco-social policies which promotes the CE transitions in production and consumption systems, it is essential to analyze the impacts of these policies across different countries, including the leverages and obstacles during their implementation, since each country has different socio-economic and political background (Richardson et al., 2019).

Method

Against to this background, our study aims to analyze the eco-social policies in Spain, which can be leverages to implement the CE practices but also, we examine the constraining factors which can slowdown the CE transitions. To that end, we first carried out a literature review on the eco-social policies considering its interrelation between CE practices, then we performed Delphi technique with

10 experts from different background with extensive knowledge and expertise on the labor market, social equality, healthcare and energy renovations.

Results

Our results show that in Spain (1) work time reduction policies imply redesigning working models in order to promote the energy efficiency; (2) to support the accessibility of housing across Spaniards the energy renovations of abandoned buildings would lead efficient resource management; (3) inclusive public programs, including education on energy use, to overcome energy poverty (4) Reskilling workers in CE practices promotes green jobs and social equity.

The leverages that would promote the implementation of these policies in Spain are (1) developing robust policy framework, providing regulatory flexibility; (2) fostering the communication between different stakeholders; (3) educating citizens and stakeholders about the welfare state. The obstacles are (1) lack of adequate and robust policy frameworks; (2) lack of alliances between different stakeholders; (3) excessive bureaucracy and resistance from public authorities.

Significance to mainstreaming sustainable consumption

In conclusion, the policymakers should develop robust frameworks that integrate circular economy and eco-social policies. This includes fostering collaboration among stakeholders, combining economic incentives with educational initiatives to raise awareness on sustainable consumption practices as well as addressing bureaucratic barriers would promote both consumers and decisionmakers to adopt CE practices. By leveraging these strategies, countries can achieve resource efficiency while improving social equity and well-being.

12:30pm - 2:15pm

The impact and potential of digitalization for sustainable consumption

Location: **Lilla Salen**

Session Chair: **Matthias Lehner**

Session Chair: **Göran Finnveden**

Convenience or Conscience? On-Demand Digital Services' Impact on Consumption

Felippa Amanta

University of Oxford, United Kingdom

Problem definition

Many digital services across consumption sectors are investing in faster delivery for customers. While digital services can potentially substitute energy-intensive personal car use for shopping trips, the logistics for fast delivery often lead to fragmentation and less consolidation resulting in greater inefficiencies. Further, the conveniences offered by these digital services may lead to rebound and induced consumption. The impact of these services on the environment depends on how consumers engage with them. This research explores how different households in the United Kingdom (UK) integrate on-demand digital services across mobility, food, and retail in their everyday life and unpacks the impacts of the services on household consumption behaviour.

Method

We used a mixed-method exploratory research design that included in-depth qualitative interviews followed by a nationally representative survey to test generalisability of findings. The qualitative interviews were conducted with 14 diverse households in Oxfordshire, UK, resulting in emerging themes around the consequences of on-demand digital services usage. The results of the interview were used to construct a survey questionnaire administered to 1,512 individuals in the UK. Statistical analyses were conducted to test correlations between digital usage and consumption behaviours.

Results

The qualitative interviews demonstrated the sociotechnical dynamic between households and on-demand digital services as they mutually shape each other. Households adapted on-demand digital services to their needs. They also reflected how on-demand digital services were increasing expectations, normalising new standards of conveniences, and inducing consumption. The speedy delivery has become normalised and expected for mobility and food, and increasingly for retail. This normalisation is sustained by social networks and the visibility of last-mile logistics for on-demand digital services (e.g., parcel delivery vans, food delivery scooters, ride-hailing cars). Households juxtaposed the normalisation of conveniences with social and environmental concerns as they raised the downsides of speed including labour conditions, waste, pollution, and energy consumption.

The survey results confirm the qualitative findings. We found statistically significant correlations between usage of on-demand digital services and expectations of delivery speed and impulse buying across mobility, food, and retail. The correlations are moderated by age, employment, and household area. The results suggest that on-demand digital services are changing consumption norms to different degrees across various household types.

Significance to mainstreaming sustainable consumption

Digital services are replacing personal car use and overtaking offline shops as the main purchase methods for food and retail. This research highlights how on-demand digital services are changing expectations of convenience and delivery speed. These ratcheting up of expectations could intensify ride-hailing operations and last-mile deliveries of food and retail. This new norm has massive resource implications for provisioning systems and logistics as they still depend on fossil fuel. Sustainable consumption research must take into account how digitalisation has changed the ways in which the goods and services are being marketed and delivered.

Work-life balance in the wake of the Covid-19 crisis: experiences, transformations and opportunities

Tom Erik Julsrud¹, Tanja Ellingsen²

¹CICERO Center for International Climate Research, Norway; ²University of Nordland, Norway

Problem definition:

Business travels is a significant contributor to commercial and non-commercial organizations global carbon emissions (Jones 2010; Müller 2023), and studies suggests that many of today's hyper-mobile flyers are businesspeople on the way to or from business meetings. Hence, the pressure on large businesses to take more responsibility to cut emissions from travel has grown, not only from policymakers concerned about the climate but also from subcontractors and the public.

Several studies have explored the detrimental effects of hyper-mobile work practices on family and social life (Greenhaus and Allen 2010; McDowall and Lindsay 2013; Munn 2013; Mäkelä et al. 2015). Spending much time away from home makes it more difficult to sustain social ties and good relationships with friends and families and there are higher risks of work-family conflicts (WFC). It is well documented that business travelers have a higher risk for burnout, stress and exhaustion (Carlson, Grzywachs and Zivnуска 2009; Liese et al. 1997; Rundle, Revenson and Friedman 2018; Striker et al. 1999).

However, the global COVID -19 pandemic caused a shock that transformed transport and communication behavior in many organizations which still reverberates and is poorly understood (Matson et al. 2022; Ranjbari et al. 2021). This paper raise the question of how the Covid-19 crisis influenced on the work practices and the perceived work-life balance of knowledge workers across different businesses.

Method:

This paper draws on qualitative interviews with 43 knowledge workers in public and private businesses, conducted 1-2 years after the pandemic, as well as a population survey exploring issues concerning how the pandemic affected employees work-life balance, not only during but also after the pandemic.

Results:

Many formerly hypermobile workers experienced low-carbon lifestyles during the pandemic, with much more time at home and in the local environment over a significant period. Their views and experiences are important for understanding how better work-life balance can be achieved and how pathways towards low-carbon futures with better well-being can be pursued. Further, despite various differences across type of businesses and demographic cohorts, in general the travel moratorium was experienced as beneficial for most employees work - life balance. The study contributes to ongoing academic interest on the impact of COVID-19 on work-life balance in knowledge organizations, and how organizational crises and external shocks represent windows of opportunity for radical changes in work and private life.

Significance to mainstreaming sustainable consumption:

The paper explore emerging changes in employees work and travel patters that can inform further transformation toward more responsible long-distance travels in organizations. Understanding how low-carbon mobility practices and lifestyles can be performed and stabilised in knowledge-intensive organizations is critical for mainstreaming sustainable mobility. The paper contribute to literature describing how acute crises can represent "critical junctures" (della Porta 2020; Johnstone and Schot 2023) for work routines in these and other businesses also after the pandemic. The paper give further evidence of how development of low-carbon mobility practices in organizations is related to changes in work-life balance, insights that are valuable for policy-makers and businesses.

Flexing for sustainability: Post-COVID home-working practices and their impact on energy consumption patterns.

Marina Topouzi, Hannah Budnitz, Emilie Vrain

Oxford University ECI, United Kingdom

The transition to net-zero emissions presents both challenges and opportunities for energy systems globally. With the ongoing prevalence of remote work post-COVID, those working from home (WFH) have the potential to shift their domestic energy consumption to non-peak hours, reducing and managing peak energy demand and facilitating the integration of renewable energy sources. However, there is limited evidence on the willingness of those who WFH to be flexible in their energy demand or the impact of WFH on grid balancing.

By exploring how individuals do or could adjust their energy use when WFH, this pilot study aims to identify opportunities for behavioural adaptations that can support the energy transition. These adaptations could help decarbonise both the commercial (working environment) and residential building sectors by alleviating peak energy demand and reducing reliance on non-renewable energy sources, thus preventing energy consumption from doubling across both sectors.

This pilot study is part of two UK projects: i-Doddle (Impacts of Digitalised Daily Life on climate change) and EDOL (Energy Demand Observatory and Laboratory). It uses a mixed-methods approach to investigate energy consumption patterns in a sample of 47 households, both WFH and non-WFH. The study is conducted in three consecutive phases:

1. Online survey: Examining working practices and appliance ownership to stratify the sample.
2. Appliance use diary: Participants log appliance usage and activity times over a one-week period.
3. Mini intervention: Participants are asked to explore their flexibility by shifting appliance usage to times between 9 a.m. and 5 p.m. over a one-week period.

Adaptation practices are categorised into high, moderate, and low flexibility, focusing on key activities such as cooking, laundering, heating, and miscellaneous appliance use. The pilot tested the effectiveness of these research methods to provide insights into the current and potential flexibility of participants who WFH. Specifically exploring their willingness to shift energy-intensive activities to non-peak hours, and whether this flexibility is specific to those who WFH. Additionally, the study identifies key barriers to behavioural change, such as personal and family commitments, work schedules, and a lack of awareness about peak demand periods.

For participants with smart meter data, the study also provides insights into energy use showing the effect of shifting practices to non-peak hours and exploring the potential to reduce peak energy consumption.

This research contributes to the broader goal of mainstreaming sustainable consumption as the methods and insights from this pilot study will inform a more robust quantification of the potential for demand-side flexibility and energy system optimisation in a larger sample of 2,000 households through the EDOL project. Identifying barriers to flexibility and where targeted policies and interventions can effectively promote sustainable consumption behaviours will enhance energy system models and peak demand scenarios, leading to more accurate forecasting and planning. By understanding and harnessing this flexibility, policymakers and energy planners can develop more effective strategies for mainstreaming sustainable consumption and accelerating the transition to a net-zero future.

AI's Shadow: Risk perceptions and their Impact on sustainable consumption

Emilie Vrain, Charlie Wilson

University of Oxford, United Kingdom

Generative AI has captured global attention over the past two years, with media coverage emphasising both its transformative potential and risks, particularly regarding data privacy. This phenomenon, referred to as "AI hype," encompasses the heightened public awareness and discourse surrounding AI technologies, fuelled by advancements in large language models and generative AI applications. This research examines how such heightened salience of AI, including concerns about privacy and risks, hinders efforts to mainstream sustainable consumption practices enabled by digitalisation.

Using survey data from a nationally representative sample of 2,078 UK respondents collected in April 2024, this study uses structural equation models to investigate the pathways linking exposure to AI-related information, perceptions of AI risks, and data privacy concerns to the usage of 15 digital sustainable consumer products and services across four domains: retail, mobility, food, and home. Self-reported changes from the previous year were also captured to allow further analyses into influential factors. Additionally, respondents participated in an experiment featuring vignettes that manipulated the perceived involvement of AI collecting personal data in four of these technologies: 1) retail – peer-to-peer retail platform; 2) mobility – bike share scheme platform; 3) food – food waste reduction app; 4) home - smart thermostat. Two vignette variants for each technology were developed to emphasise either: 1) high salience or 2) low salience of AI collecting data. Paired t-tests were used to analyse changes in propensity before and after the vignette and independent t-tests used to analyse differences between high and low AI salience.

Findings challenge the assumption that exposure to AI information amplifies perceptions of risk. Instead, individuals with limited exposure or direct experience of AI reported higher risk perceptions. Despite overall increases in perceived AI risks and privacy concerns since 2023, these concerns were not uniformly linked to reduced usage of digital sustainable technologies. Potential explanatory factors include: 1) such technologies are not currently perceived as posing a significant risk to data privacy, or 2) AI involvement for functionality is not currently salient. However, under controlled experimental conditions results demonstrated that if AI salience is high then willingness to use such technologies decreases, particularly when their perceived relative advantage was low.

This research highlights the nuanced relationship between AI salience, risk perceptions, and sustainable consumption. As AI technologies become more prominent in society, we argue so too will public awareness of the personal data they collect—potentially creating new barriers to the usage of digital sustainable consumption products and services. To fully leverage AI's potential in addressing sustainability challenges, policy frameworks must prioritise data privacy and sovereignty through transparency, and "privacy by design" to foster trust and encourage usage of sustainable consumption technologies. This systemic approach is essential to align technological advancements with sustainability goals.

The Impact of Transaction Framing: Exploring Barriers to Participation in Online Second-Hand Economy for Casual E-Commerce Consumers

Maksym Kolomoiets

Charles University

Problem definition

Digitalization offers new pathways to sustainable consumption in the form of, inter alia, second-hand online markets. However, the ambiguity around consumers' propensity to enter circular markets is frequently mentioned as a salient barrier to businesses' sustainability transition. The value-action gap, meaning insufficient participation in sustainable consumption with regard to ethical values people claim to share, is an especially puzzling problem for sustainability researchers.

Consumer-to-consumer (C2C) markets differ from conventional commerce in terms of the informal nature of their operations, which presents a source of misunderstandings and frictions. The weak framing of C2C transactions and the need to perform relational work by dealing with the other user directly might prevent potential users from habitualization of second-hand practices.

Method

The practice theory approach to consumption, as well as the theoretical notions of market framing and circuits of commerce, were used as the conceptual basis for the analysis. The data are constituted by qualitative interviews with e-commerce users in France and Czechia. In each country, 20 interviews were collected and analyzed by means of open coding.

Results

The informal and unstandardized nature of second-hand online sites is subjectively experienced as an uncertainty by potential consumers. Such uncertainty and the need to perform the framing of the transaction themselves is a significant barrier to participation in sustainable second-hand markets. The research results highlight the need for more functional web designs that would address the factual and social ambiguities surrounding the situation of the C2C trade to not externalize the problems of framing onto users.

Significance to mainstreaming sustainable consumption

The successful design of second-hand platforms, which would utilize the presented research results, will make this sector of circular markets more attractive to a broad and casual consumer base. More accessible circular markets, which are easier to navigate tacitly, can help bridge the value-action gap.

Unlocking Sustainable Living: Learnings from Digital and Behavioral Strategies for Energy Reduction During the Swedish Energy Crisis

Mikaela O'Bryan, Patrik Berander

Malmö University, Sweden

Problem definition

The 2022 European energy crisis led to significantly increased energy prices in southern Sweden, prompting households to adapt by reducing their energy consumption. This study explores the long-term effects of different strategies households employed to manage their energy use during this crisis. It examines the enduring impact of behavioral changes versus the use of digital solutions in sustaining reduced energy consumption levels as prices stabilized.

Method

We conducted a comparative study of household energy consumption in December of 2021, 2022, and 2023 — key moments reflecting the rise, peak, and normalization of energy prices. The study revisited respondents from an earlier study to evaluate the results of their energy consumption behaviors. The study was conducted through a structured questionnaire to collect their actual consumption data in order to understand the long-term effect of energy consumption across three identified clusters of energy reduction strategies: (1) relying on changed behavior while sacrificing some comfort, (2) accept higher energy costs while maintaining comfort, and (3) using digital solutions to reduce energy consumption with maintained comfort.

Results

The findings reveal a decrease in energy usage across both the clusters (1) behavioral and (3) digital solutions during the crisis, with digital solutions showing slightly better long-term endurance. Households employing digital solutions not only reduced their energy consumption but were also more likely to maintain these lower levels even as energy prices returned to normal. In contrast, those relying primarily on behavioral changes tended to revert to higher consumption levels, suggesting less endurance in the absence of technological support. This indicates that behavior-driven consumption strategies are more vulnerable to external factors like cost incentives. Additionally, individual cases within the digital cluster highlighted the role of automated energy management systems in reducing household effort while sustaining comfort, further reinforcing the durability of this approach.

Significance to mainstreaming sustainable consumption

This study underscores the potential of digital solutions in supporting sustainable living without sacrificing comfort, highlighting how technology can engage households in the energy transition

effectively. By facilitating smarter energy management practices, digital solutions can help mainstream sustainable consumption behaviors, reducing the overall energy demand. This aligns with societal goals of reducing dependency on energy production expansion, thus contributing to environmental and economic sustainability. Moreover, the study indicates that digital solutions could offer a pathway to engage comfort-oriented consumers who are less likely to adopt intrusive behavioral changes, providing them with a means to participate in the energy transition without compromising their standard of living. The ability of digital solutions to provide both ease of use and durable reductions in energy consumption makes them a key enabler for scaling sustainable practices across diverse household types.

12:30pm - 2:15pm

Food 1

Location: **Nya Fest**

Session Chair: **Lucija Lapuh**

Land abuse change: Regenerative agriculture and the question of producing meat within planetary boundaries

Ulrike Ehgartner¹, Steffen Hirth²

¹University of York, United Kingdom; ²University of Leeds, United Kingdom

Problem Definition: The need to create food systems within planetary boundaries is increasingly urgent, yet the future of animal agriculture remains highly contested. Regenerative agriculture presents itself as a holistic farming approach that claims to restore ecosystems, improve resilience, and mitigate environmental impacts. However, the role of livestock in regenerative agriculture is fraught with tension, as actors hold differing views on the centrality of meat production. This ambiguity raises significant questions about land use, sustainability targets, and the extent to which regenerative agriculture models legitimise meat consumption while sidestepping spatial limitations, socio-economic costs, and environmental trade-offs. This paper investigates how regenerative agriculture is framed in relation to the role of livestock in future food systems.

Method: This study draws on qualitative, in-depth interviews with key UK stakeholders in regenerative agriculture, including farmers, supply chain actors, and advocates. We adopt a critical discourse analysis framework to unpack how narratives of sustainability, resilience, and resource use are constructed within regenerative agriculture. Special attention is given to discussions surrounding land management, livestock integration, and soil health through practices like rotational grazing, cover cropping, and minimal tillage. Additionally, we analyse how these discourses intersect with debates on biodiversity conservation and the 'green rebranding' of livestock (Cusworth et al., 2022) and the positioning of livestock as 'natural' allies in environmental sustainability (McGregor & Houston, 2018).

Results: The findings reveal that regenerative agriculture is often framed as a solution to both environmental and economic challenges, with livestock frequently positioned as a crucial component of resilient food systems. Stakeholders employ a variety of narratives on the value of livestock. We identified three discursive strands: (a) livestock as labourers, (b) livestock as ecological stewards and (c) livestock as landscape managers. Jointly, these narratives reinforce the value of meat consumption. While some proponents position meat consumption as compatible with planetary boundaries, others express concerns about the scalability of regenerative agriculture and its socio-economic ramifications. A significant issue lies thereby in how the regenerative agriculture discourse sidesteps critical debates about spatial constraints and the socio-economic disparities involved in transitioning to regenerative practices. Our analysis highlights the need for transparent discussions about the role of meat production in sustainable consumption and the risks of over-promising regenerative agriculture's ability to meet broad sustainability goals.

Significance to Mainstreaming Sustainable Consumption: This research contributes to the understanding of how framing mechanisms in regenerative agriculture shape perceptions of sustainability and resource use, particularly regarding livestock production. By analysing the normative frameworks and tensions embedded in the discourse surrounding regenerative agriculture, this paper illuminates conflicting visions of sustainable consumption. It suggests that mainstreaming regenerative agriculture, and by extension, sustainable meat consumption, will require more honest deliberation around the spatial, ecological, and socio-economic realities of upscaling these practices. These insights are crucial for policymakers, industry actors, and consumers in determining the extent to which regenerative agriculture can be a viable path toward sustainable consumption.

Motivational drivers of meat consumption in Latin America

Jonas Ludwig

Technische Universität Berlin, Germany

Problem definition

Consumers around the globe are growing increasingly aware of the impact that their consumption has on greenhouse gas emissions. For consumers to act according to their sustainability intentions, it is important for them to understand which behaviors matter most, especially in high-impact areas like eating. Do consumers know which foods have the greatest impact on emissions? This research focuses on meat consumption in Latin America and investigates how climate knowledge and concern, and social-motivational factors like meat attachment, traditional eating, and prosocial orientation relate to preferences for meat.

Method

I conducted a pre-registered web study ($N = 3565$) in six countries: Argentina, Brazil, Chile, Colombia, Mexico, Peru. To assess emissions impact knowledge, participants rank-ordered six food items (beef, chicken, plant-based meat, tofu, maize, beans), according to their emissions per 100 g of protein. I calculated a rank correlation coefficient (τ) for each participant as an indicator of emissions judgment accuracy, based on the assigned rank for each item and the objective rank based on recent carbon accounting data. Participants next indicated their preference for meat over plant-based alternatives, by rating on slider scales (-50 to 50) how much they would lean toward one of the options when choosing between (a) beef and plant-based hamburgers, and (b) chicken and tofu. Participants also provided information about prosocial values and their motivation to eat meat, captured with The Eating Motivation Survey (TEMS) and the Meat Attachment Questionnaire (MAQ).

Results

Latin American consumers, on average, have a good understanding of the emissions impact of their food choices. The average accuracy in the ranking task was $\tau = 0.38$ [0.36, 0.40]. Accuracy differed considerably across countries, from 0.33 in Peru to 0.42 in Brazil. These results suggest that many consumers understand that meat, especially beef, produces more emissions than other sources of protein. When choosing between meat and a plant-based alternative, Latin American consumers, on average, prefer the meat option. Mixed-effects regressions revealed that (self-assessed) carbon emissions knowledge negatively predicted meat choice, while climate concern was unrelated. Several social motivations were linked to choosing meat over plant-based alternatives. Traditional eating predicted meat choice, as well as hedonism connected to meat consumption. Interestingly, the relations between social motives and meat preferences varied substantially across societies. For example, traditional eating was a strong motivational driver of meat consumption only in Argentina and Chile. Brazil was the only country in which feelings of entitlement predicted meat choices.

Significance to mainstreaming sustainable consumption

This work contributes to a better understanding of how climate knowledge and concern, and motivational, social, and cultural factors jointly shape meat consumption in Latin America. I document regional heterogeneity and identify factors that can potentially impede or support behavior change toward more sustainable consumption. For instance, it is noteworthy that climate knowledge negatively predicts meat preferences, while climate concern does not. Together, the results suggest exploring behavioral interventions that combine educational elements, to improve carbon emissions knowledge, with other strategies tailored to the regional context, like reducing meat attachment or feelings of entitlement.

The acceptability of sufficiency practices in food consumption among consumers

Agnes Francois Lecompte¹, Isabelle Prim Allaz², Laurent Bertrandias³

¹Université Bretagne Sud, France; ²Université Lyon 2, France; ³Toulouse Business School, France

Problem definition

The Paris Agreement and 2050 carbon neutrality target require EU countries to reduce the average carbon emission per person from 11 tons of CO₂ equivalent per year (measurement 2019) to 2 tons in 2050 (Carbone 4, 2019). Sufficiency, i.e., adopting lifestyles with less environmental impact by consumers, is an inevitable path to achieving this goal. Therefore, public and private actors encourage a normative vision of sufficiency driven by clear objectives and injunctions (Spangenberg & Lorek, 2019). Normative sufficiency raises several difficulties, including consumers' acceptability (Spangenberg & Lorek, 2019; Jungell-Michelsson & Heikkurinen, 2022). Therefore, it seems essential to understand which factors are likely to foster acceptability. In this paper, we strive to address two issues: Which set of sufficiency consumption practices are associated with the lowest and highest acceptability, and whether an individual's carbon profile predicts the acceptability of a sufficiency practice.

Method

The research is based on a dataset provided by the NGO "2Tonnes" which contains anonymized responses from 1367 French participants in "2Tonnes" workshops in 2023. During a workshop, participants are placed in a virtual universe where they must reduce their carbon footprint by 2050 by making choices among various sufficiency practices, such as giving up flying, becoming flexitarian, and buying local food. A few days before attending a workshop, the participants must also fill out a questionnaire assessing their carbon impact (food, housing, transportation, etc.). We conducted quantitative analyses on the seven decisions regarding food.

Results

Two primary outcomes emerge from the analyses.

First, classification analyses make three sets of practices emerge based on their frequency of adoption, utilized as a proxy for acceptability: (1) anti-waste practices are the most acceptable, (2) practices likely to generate co-benefits for consumers (e.g., health, taste) such as eating local or buying less processed food, and (3) practices that involve renouncing to a particular food (e.g. becoming vegan) or spending more (e.g. buying organic food), which are the less acceptable.

Second, the participants' carbon profile seems to partly explain their adoption of a sufficiency practice, especially for practices involving co-benefits (2) or renouncement (3). Anti-waste practices (1) do not seem related to carbon footprint level or structure. Overall, practices involving co-benefits (2) are more

frequently chosen by consumers with a higher-than-average total carbon footprint, reflecting an impactful lifestyle. Moreover, practices involving a clear renouncement (3) are more frequently accepted by individuals with a more virtuous carbon-related lifestyle than the average. . This set of practices probably reflects behaviours that appear in a second step for individuals, that is after having previous acts of responsibility. The case of behavior with a financial overcharge follows a separate logic, with income probably being an explanatory variable.

Significance to mainstreaming sustainable consumption

This research proposes the acceptability of sufficiency practices is driven by the detection of co-benefits and the loss due to renouncement, and also by the individual's carbon footprint profile. Our work opens several avenues for the promotion of sufficiency transitions, by providing a segmentation of practices based on their acceptability.

"What If...?" Experimental dilemma gaming for exploring 'a new normal' in future food consumption

Sigrid Wertheim-Heck, Anke Brons

Wageningen University, Netherlands, The

Problem definition

In thinking about how 9 billion people can be fed sustainably by 2050, new imaginaries for future food systems are needed. While there is ample attention for the need to change modes of food provision, sustainable food futures inevitably also require changes in food consumption practices. Food consumption is deeply intertwined with social norms, and what we consider "normal" is rooted in broader societal structures and everyday behavioural patterns. Our study therefore aims to explore what a new norm(al) in future food consumption might look like, through a 'thinking lab' experiment in the Netherlands, based on expert-informed scenarios.

Theoretically, this study draws on social practice theories, in developing radical future scenarios in which food consumption is situated within an imaginary societal context. The scenarios served as the basis for a dilemma-based game, designed to explore trade-offs in food consumption, to identify where there is potential for societal change or resistance. How radically can we reshape consumption practices? What are we (un)willing to sacrifice?

Methodologically, the study used a staged mixed-methods and co-creative approach. First, expert interviews were conducted on the future of lifestyle and provisioning systems, focusing on work, mobility, dwelling and food provisioning. From these interviews, a set of trends was defined, which were validated in a conference workshop and subsequent expert survey, resulting in a final set of key trends for the future of consumption. From these trends, five radical future scenarios were defined: Normal, Social, Local, Minimal and Equal. Based on these scenarios, a set of dilemmas were developed that focused on imagining a radical new norm(al). The dilemmas were created around food consumption practices, based on radical scenarios, touching upon crucial aspects of transformation, to study underlying mental modes of participants. These dilemmas provided input for the experiment, which can be considered a 'thinking lab', where participants had to choose between dilemmas and discuss their choices afterwards. The experiment, including around 1500 participants was run in different settings in the Netherlands (such as festivals, universities, vocational schools, businesses). The game was preceded by a short survey to measure several social demographic characteristics (such as age, dietary patterns, education, living environment).

Results and significance: Although variation in several dilemmas was measured based on socio-demographic profiles, the game overall showed that the social component in food issues outweighed freedom of choice and provided insights that transcended the food domain. This holds importance from a policy perspective. People appear quite willing to sacrifice some freedom of choice, provided the social benefits are sufficiently substantial. A significant secondary finding from the experimental game set-up was the role of opening for dialogue, which naturally emerged from the participants as the experiment was conducted. The game explored societal boundaries and trade-offs, identifying areas of consensus—whether resistance or agreement—and areas of divergence, with the absence of consensus highlighting opportunities for change and progress. Engaging in dialogue on divergence revealed insights into the underlying values, norms, and trade-offs that either enable or hinder change.

Locally grown consumers: Understanding the socio-material agencing of alternative food consumers

Christian Fuentes¹, Jonas Bååth², Emmelina Eriksson¹

¹Lund University, Sweden; ²Swedish University of Agricultural Sciences

Problem definition

One of the central issues discussed in the alternative food networks (AFN) research is the recruitment of new consumers. Not only does recruiting new members influence the scaling possibilities of alternative food networks (AFN), but AFN generally also struggles to broaden their consumer base beyond the urban middle class. In response to these problems, previous research has studied who AFN consumers are in demographic terms, their reasons for joining AFNs, what determines their

satisfaction, and, in some cases, how and why AFNs remain inaccessible or unattractive for other groups of consumers than the urban, well-off, middle class. These problems have often been seen as resulting from failure to match consumer dispositions and AFN offerings. That is, the understanding has been that the problems experienced by AFNs when recruiting and retaining members are caused by misalignments between consumers' preferences and the characteristics of the AFN arrangement. Underlying this explanation is the assumption that consumers exist "out there" in the world fully formed with a specific set of characteristics and that AFNs must adapt to these actors or try to find consumers that will better match their offering. In this paper, we take issue with this explanation. We contend that consumers are not static beings to be found but are instead made in practice and that it is therefore important to understand these processes of consumer making.

Method

This paper aims to empirically explore and conceptualise the processes by which AFN consumers are recruited and constructed as actors. Influenced by constructive market studies (CMS), we investigate the *agencing* of AFN consumers. We are interested in the processes by which AFN consumers are made and gain the capacity to act. Empirically, our analysis is based on an ethnographic study of REKO-rings in Sweden – a network of local food markets enabled via Facebook groups and intended to interconnect local food producers and consumers.

Results

The analysis shows how REKO-consumers, as a specific type of market actor, are made through the interrelated socio-material processes of *ethicalizing* (learning why it is right to engage in AFN consumer practices), *educating* (developing the competencies to perform AFN consumer practices) and *equipping* (acquiring the tools and accessing the necessary infrastructure to perform AFN practices) and *engaging* (developing the relationships to other REKO actors and constructed a REKO identity).

Significance to mainstreaming sustainable consumption

Drawing on this analysis, we propose that what sets successful from unsuccessful AFNs apart is not the absence of consumer problems but differences in how effective the processes of consumer agencing are. This means that the scaling, or mainstreaming, of alternative food networks and sustainable food consumption, is not dependent on finding already existing alternative consumers out there. Instead, the success of AFNs rests on, at least partly, the effectiveness of the agencing processes put in place to construct alternative food consumers.

The role of ethnic restaurants in shifts in normal food consumption in the Netherlands

E.R. van Ballegooij, S.C.O. Wertheim-Heck, H.M. van der Horst

Wageningen University and Research, the Netherlands

Problem definition

Overconsumption is a major driver of environmental threats, closely tied to affluent lifestyles characterised by an abundance of choice, convenience, and comfort. To operate within planetary boundaries, these lifestyles must undergo significant transformation. Among affluent societies such as Dutch society, food consumption practices are especially urgent to address. However, food consumption itself is not just an individual choice—it is deeply embedded in social, cultural, and economic contexts.

This paper addresses the urgent need to transform what is considered 'normal' food consumption in affluent societies, particularly focusing on how the normalisation of food practices happens over time. The concept of "normal" is inherently context-bound, dynamic, and socially constructed, shifting alongside changes in social structures and practices. By investigating these processes of normalisation, this paper aims to provide insights into how certain consumption practices become entrenched as routine, while others fade away.

Over the past decades, the diversity of consumed food in the Netherlands has rapidly increased. At the same time, eating out has become a cultural norm and the cuisines offered in restaurants are more and more diverse.

Method

This paper specifically examines the role of ethnic restaurants as key sites in the normalisation of ethnic cuisines in Dutch food culture. As dining out has become a cultural norm in the Netherlands, the growing diversity of restaurant offerings provides an ideal context for studying shifts in food consumption. Ethnic restaurants are pivotal sites where these global and local influences converge, facilitating the normalisation of diverse food practices. We therefore depart from the following hypothesis: "ethnic restaurants play a role in the emergence of diverse cuisines in at-home food consumption."

To investigate this hypothesis, we conceptualise restaurants as "consumption-junctions"—places where the provision and consumption of food meet and where new food practices can be adopted and diffused into everyday life. Through interviews with restaurant owners and chefs, we seek to understand how ethnic restaurants contribute to shifts in food consumption practices. These interviews will generate insights into the mechanisms through which ethnic cuisines transition from restaurant settings into home kitchens, normalising over time.

Building on these insights, we will conduct a survey of Dutch consumers to further test hypotheses about the interconnectedness of dining out and at-home food consumption. This survey will provide a broader, quantitative perspective on how the adoption of ethnic cuisines is linked to everyday consumption practices in the home.

Results

We are in the first stages of data collection and will present preliminary results.

Significance to mainstreaming sustainable consumption

By focusing on ethnic restaurants and their influence on everyday food consumption, this paper contributes to our understanding of the dynamics of normalising consumption practices. It offers a case study of how culturally diverse cuisines can become integrated into the mainstream, shedding light on broader processes of food practice transformation in affluent societies. The findings potentially have implications for designing interventions that encourage more sustainable food consumption in these contexts.

12:30pm - 2:15pm

Policies for sustainable consumption

Location: **Gustafscenen**

Session Chair: **Jörgen Larsson**

Understanding perceptions of a red meat tax

Emma Ejelöv¹, Jonas Nässén¹, Simon Matti², Jörgen Larsson¹, Liselotte Schäfer-Elinder³

¹Chalmers, Sweden; ²Luleå Tekniska Högskola, Sweden; ³Karolinska institutet, Sweden

Problem definition

Red and processed meat significantly contribute to climate change and health risks. While production-side improvements offer limited potential for reducing GHG emissions, consumption-side policies, such as taxes on emission-intensive foods like meat, could mitigate both environmental and health impacts through price-driven behavior changes. However, such taxes are often unpopular due to their personal cost. Public opinion is a key factor in understanding policy development, as politicians may be reluctant to propose unpopular measures that could meet opposition from voters. In this study, we investigate factors that influence the acceptability of a tax on red meat in Sweden, such as specifying use of revenue, and focus especially on gaining a deeper understanding of the theoretical foundations of policy-specific beliefs.

Method

A total of 3233 Swedish citizens and 1253 Swedish politicians responded to an experimental survey sent out to the Citizen panel and Politician panel, run by the SOM Institute, University of Gothenburg. Respondents were first asked to rate the acceptability of a tax on red meat framed as either: 1) a climate tax, 2) a public health tax, or 3) both a climate and public health tax. Respondents were then asked to rate the tax when revenues were specified as going to a) support agriculture, b) support further climate [public health] initiatives, c) reduce VAT on broad categories of foods, or d) reduce VAT specifically on fruit and vegetables. Respondents also rated policy-specific beliefs, as well as specific arguments for and against the introduction of a meat tax.

Results

The results showed that framing the tax had no effect on politicians and only a minor one on citizens; they became slightly more positive about the combined climate and public health justification compared to solely public health. The acceptability was generally greater when revenues were specified as opposed to unspecified, but the two cost-neutral revenue uses (a tax shift entailing either a broad reduction of VAT or just on fruit and vegetables) were the most acceptable proposals to both the public and politicians. The effects of policy-specific beliefs, i.e., perceived fairness, effectiveness and infringement on autonomy, will be further explored.

Significance to mainstreaming sustainable consumption

Understanding why citizens and politicians are negative toward a tax on red meat can inform how such a tax could be designed in order to improve acceptability. These results suggest that the feasibility of implementing a red meat tax could be improved by ensuring that the average consumer's total food costs do not increase.

Modelling policy packages for just climate transformations

Jens Ergon¹, Markus Larsson², Göran Finnveden², Mikael Karlsson¹, Ioannis Gutzianas³, Bence Kiss-Dobronyi⁴

¹Uppsala University, Sweden; ²KTH, Sweden; ³Cambridge Econometrics; ⁴Corvinus University

Climate policy backlashes and growing tensions surrounding climate policies have raised the interest in policy packages that reduce greenhouse gas emissions effectively, while also addressing distributional effects, and counteracting socio-economic inequalities. In this paper, we use the recent climate policy rollback in Sweden, including reduced fuel tax and biofuel mandate, as a real-world example to design, model and study the effects of policy packages with combined environmental, economic, and social goals. We use the macro-econometric model E3ME, combined with micro-data for different income groups, to study the effects of current climate policy rollback, and model the effects of several stylised policy packages that combine re-strengthened climate policies with tax recycling

schemes, green subsidies, and social spending. We also study the effects of progressive tax reforms, including increased taxes on capital incomes, and model the effects of policy packages using such tax revenues for climate mitigation. The results highlight opportunities to design policy packages that not only have larger impacts on emissions than single policy instruments, but also compensate for distributional effects, spur employment and economic development, and decrease inequalities. We also find that the current Swedish roll-back of fuel taxes and biofuel mandates is inefficient, unless the aim is to increase the use of fossil fuels. By combining raised fuel taxes with recycling schemes and green subsidies, or by combining progressive taxation with green subsidies and spending on public education, policy packages can be designed that reduce emissions effectively, compensate undesirable distributional effects, and enhance employment and economic performance.

Governance Framework for Reducing Single Use Plastic Takeaway Packaging: Example from the German Mandatory Reusable Packaging Obligation

Deniz Turkcü¹, Elisabeth Süßbauer²

¹LUT University, Finland; ²TU Berlin, Germany

The growing demand for take-away food and beverages in industrialized nations has led to an increase in the use of single-use packaging, which contributes to environmental degradation, resource depletion, and higher waste management costs. Reusable packaging has emerged as an effective way for reducing the environmental impact of waste from single-use plastic food packaging and thus supporting sustainability transitions. Environmental governance plays a key role in supporting sustainability transitions from single-use to reuse. For example, the EU's Single-Use Plastics Directive has led several countries to introduce regulations, taxes, or bans. With its Packaging Act (VerpackG), Germany became the first country globally to mandate reusable packaging for take-away food and beverages, requiring restaurants, bistros, cafés, supermarkets, canteens and delivery services to offer reusable containers. However, there is limited research on reusable packaging for takeaway food and beverages, with most studies focusing on user behavior, particularly for coffee and hot drinks. While some research examines the perspective of caterers, transitioning to reusable packaging requires more than consumer adoption. A holistic framework is needed to include all relevant stakeholders, addressing their needs, goals, and barriers to identify shortcomings and develop effective solutions for replacing single-use plastics in the catering sector. This qualitative study of 25 semi-structured expert interviews from academia, NGOs and private sector examines the challenges in the governance and implementation of Germany's Packaging Act (VerpackG). The paper identifies and analyzes six main barriers to implementing reusable packaging: lack of usage by consumers, lack of activation by restaurants, problems about the content of the policy, lack of finances, lack of motivation. Further, by applying the Policy Arrangement Approach (PAA), it explores the tensions between different actors, and how discourses, rules of the game, resources and power influence these barriers. The findings propose a holistic, multi-level framework that addresses the interests and challenges of all stakeholders involved in the transition from single-use to reusable packaging. By identifying key barriers and proposing mitigation strategies, this study advances the broader discussion on sustainability transitions and provides valuable insights for enhancing policy measures to reduce single-use plastic waste. By improving the governance of reusable packaging in a multi-actor context, the paper helps establish the necessary framework conditions to promote sustainable consumption on a larger scale.

Indicators for sustainable consumption in Germany: From science to policy

Laura Spengler

German Environment Agency (UBA), Germany

Problem definition: Sustainable consumption is a broad issue, touching lifestyle choices in very different areas such as mobility, food, or purchasing behaviour. It is therefore not easy to measure the sustainability of consumption. Single indicators either cover only a specific topic or contain highly aggregated data and comprise information from all the different consumption fields, such as the EU's consumption footprint indicator. While such aggregate indicators are important for experts and policy-makers to observe the overall development, they are, however, difficult to understand, not action-leading, and thus have their limitations for consumer communication. Therefore, we had the task to develop for the German National Programme on Sustainable Consumption (NPNK) an indicator set that uses a few indicators per consumption field to give an overview of how sustainable current consumption is, and also helps to strengthen the so far hardly effective programme.

Method: First, comprehensive desk research regarding indicators on sustainable consumption, including six consumption fields, was done. Sources included scientific studies, official data websites, political programmes, and expert interviews. The collected indicators had to have a clear relation to sustainable consumption and the demand side, i.e. production indicators were excluded. A consolidated list of 147 indicators was created. Eight assessment criteria were developed (e.g. relevance, data availability, easy to communicate) to do a comprehensive judgement of the indicators. Two experts assessed the complete list of indicators based on the criteria independently from each other. Differences in the assessments were aligned after reasoning about the differences, resulting in

a single assessment. Based on the assessment, approximately 25 indicators were selected and discussed with experts, resulting in a final version from the scientific process.

Results: The scientific proposal was submitted to the relevant federal ministries and after consultations and some changes to the proposal, the ministries endorsed a set of 20 indicators that were published in August 2024 (<https://nachhaltigerkonsum.info/indikatoren>). The indicator set gives an overview of relevant developments in six consumption fields, including e.g. housing, mobility and food. Interestingly, several politically rather inconvenient indicators such as meat consumption, car possession rate and living space per person survived the political discussions. Targets related to the indicators are available only in a few cases, so this is an area for possible future development.

Significance to mainstreaming sustainable consumption: Too often, making progress on sustainable consumption remains a vague declaration of intent by both consumers and policy-makers. Measures of very limited environmental impact such as saving plastic bags or buying regional food are sometimes overestimated, while the overwhelming importance of measures such as flying less and insulating buildings is not acknowledged sufficiently because of various reasons. Showing actual trends, combined with a clear guidance on relevant measures, is therefore necessary. The indicator set provides opportunities for public communication as well as guidance for policy-makers in Germany on which areas to concentrate in order to make consumption more sustainable.

Design matters: Identifying consumer preferences for different designs of a subsidy scheme for the use of repair services

Iris Etzinger¹, Marc Reimann^{1,2}

¹University of Graz, Institute of Operations and Information Systems; ²Northumbria University, Department of Marketing, Operations and Systems

Problem definition

Repair plays a crucial role in the circular economy, offering a more sustainable alternative to the fast consumption-disposal cycles prevalent in modern consumer behaviour. However, despite its environmental and economic benefits, the use of repair services is declining. One of the main barriers for consumers is the (perceived) high cost of repair, especially compared to buying new products. In response, several European countries have introduced financial incentives to counteract this barrier, among them a broad variety of subsidy schemes varying in their design, including aspects like application procedures, funding levels or eligibility. Research suggests that consumer preferences for these financial incentives differ across segments, implying that the effectiveness of a subsidy scheme may depend on how it is designed. However, there is limited understanding of which specific design elements resonate most with consumers, especially across different consumer and product groups. In this study we therefore want to take up this aspect and analyse 1) how the most preferred design of a subsidy scheme for the use of repair services for consumer goods looks like, 2) to what extent the preferred design of the subsidy scheme depends upon the product group and 3) to what extent different consumer segments play a role in relation to the preferred design.

Method

We aim to analyse consumer preferences for different subsidy designs using adaptive-choice-based conjoint analysis and a post-task questionnaire among a representative sample of Austrian citizens. In our study, we present participants with a series of hypothetical subsidy schemes, each differing in attribute levels like cost coverage, application process, participating repair shops, funding sources and levels, eligibility and payment modalities to capture relevant operative dimensions of a subsidy scheme. Participants are primed that the government is introducing a subsidy scheme for the use of repair services but the design is under debate. Thus, citizens are consulted which design they would support the most. In each choice-task, the participants have to decide for which scheme they would vote, if today would be a referendum deciding about the design of the scheme. Using hierarchical bayes modeling, we estimate the partial utility values to determine the relative importance of each attribute, allowing us to capture the trade-offs that consumers are willing to make.

Results

We plan to present preliminary results of this ongoing research at the upcoming conference.

Significance to mainstreaming sustainable consumption

The new EU Right-to-Repair legislation mandates that member states must implement at least one measure to promote repair, explicitly mentioning vouchers and other subsidy schemes. Providing insights into preferred design options and customer segmentation can thus enhance future policy-making, consequently increasing repair subsidies efficacy and propagating repair in society.

Taxing for a Tastier Tomorrow: Integrated Health and Environmental Taxes for a Sustainable and Equitable Food System

Jörgen Larsson¹, Edvin Månsson¹, Elin Rööf², Sarah Säll², Emma Patterson³, Liselotte Schäfer Elinder⁴, Jonas Nässén¹, Emma Ejelöv¹

¹Chalmers University of Technology; ²Swedish University of Agricultural Sciences; ³Swedish Food Agency; ⁴Karolinska Institutet, Sweden

Problem Definition

Unsustainable food consumption patterns are exacerbating global environmental challenges and contributing to adverse health outcomes. Despite numerous policy efforts, modifying consumer behavior towards healthier and environmentally sustainable diets remains difficult. This research addresses the complexity of integrating effective taxation strategies that not only encourage sustainable consumption but also consider health impacts and economic fairness, particularly for low-income groups.

Method

The study utilizes a comprehensive model incorporating various food tax scenarios in Sweden, examining their impact on consumption, health outcomes, and environmental indicators. Four tax scenarios are simulated using detailed consumption data, price sensitivity analyses across income groups, and environmental and health impact assessments. These scenarios include a climate-motivated tax, a health-motivated tax, and two integrative approaches aiming for neutrality in cost and beneficial outcomes in both health and environmental domains.

Results

The results reveal distinct outcomes for each scenario. The climate-motivated tax scenario significantly reduces environmental impacts but at a cost to health outcomes. Conversely, the health-motivated scenario improves health indicators but with less pronounced environmental benefits. Importantly, both scenarios disproportionately affect low-income consumers due to higher relative food costs. The integrative scenarios, however, demonstrate that it is possible to achieve both environmental and health benefits without imposing additional financial burdens on consumers, particularly benefiting low-income groups through designed tax redistributions and subsidies.

Significance for Mainstreaming Sustainable Consumption

This research underscores the feasibility of designing food tax policies that simultaneously address public health, environmental sustainability, and economic equity. By showing that integrated tax reforms can mitigate the regressive nature of food taxes and achieve dual benefits, the study provides a robust framework for policymakers. Such integrative approaches can significantly contribute to mainstreaming sustainable consumption practices, making them crucial for policy adoption and public acceptance in efforts to transition towards sustainable food systems globally.

12:30pm - 2:15pm

Simplifying Sustainable Living: Target Mapping, Measuring and Quantifying Environmental Impacts through Sociological-Environmental Impact Assessment Integration

Location: **Sängsalen**

Session Chair: **Melanie Speck**

Session Chair: **Lynn Wagner**

Ex-post vs. ex-ante assessment methods for sustainable consumption – different goals and implications

Pauline Suski

University Bonn, Germany

Problem definition

Quantitative environmental assessment methods are increasingly applied to households to identify environmental hot spots and measures to mitigate consumption-based impacts. Over the past decade, this research has seen significant developments, such as the European Union's Consumer Footprint. However, these methods often rely on ex ante or ex post survey data with limited participant observation, i.e. ethnography. As a result, the broader context of household lifestyles, including the social systems and networks in which individuals are embedded, is often overlooked. Ignoring the social practices and collective habits that shape consumption can lead to policies that produce unintended and potentially counterproductive side effects.

Method

This presentation will offer a brief overview of current methods for quantitative environmental assessments of households, discussing their goals and limitations. Additionally, it will introduce social practice-based life cycle assessment as an alternative mixed-methods approach for evaluating consumption patterns and their environmental impacts.

Results

Social practice-based life cycle assessment effectively addresses the complexity of intertwined daily routines, emphasizing the interactions between various fields of consumption rather than treating them in isolation. By integrating qualitative insights from social sciences with quantitative environmental data, this approach offers a more holistic view, which can inform innovative consumption-side mitigation strategies. An illustrative case of urban sharing practices in a Wuppertal neighborhood will be provided.

Significance to mainstreaming sustainable consumption

By incorporating the social structures that underpin (un)sustainable consumption into environmental assessments, this approach identifies untapped transformative potential. The conclusions of this research shift the focus from traditional "problem-solving" policy measures (e.g., higher fuel taxes) to more transformative cultural interventions (e.g., supporting neighborhood initiatives by funding community spaces).

Shifting to a plant-based diet could reduce climate and biodiversity impacts by up to 60%

Fabian Hafner¹, Stephan Pfister¹, Ashley Green¹, Livia Cabernard²

¹ETH Zurich; ²Technical University Munich, Germany

The global food system, especially animal husbandry, is a major driver of negative environmental impacts. In this paper, we investigate the potential environmental benefits of adopting more plant-based diets—such as vegan, vegetarian, and no beef diets—on reducing greenhouse gas (GHG) emissions, land use, biodiversity loss, and water stress across global food supply chains. By integrating MRIO data from EXIOBASE3 with nutritional data from FAOSTAT, we analyzed 49 global regions and compared the results to planetary boundaries. Our findings show that a global shift to a vegan diet could reduce GHG emissions by up to 61%, decrease land use by 60%, and lower related biodiversity loss by 49%. The vegetarian and no beef scenarios show approximately half of these reduction potentials, while water stress remains relatively unchanged across all dietary shifts. A widespread adoption of plant-based diets could enable the global food system to align with the food-specific 1.5°C climate target. However, even with this dietary shift, we would still exceed the planetary boundary for biodiversity preservation. Additionally, many high-income regions would struggle to achieve equitable emissions levels that align with climate goals. In conclusion, transitioning to more plant-based diets offers significant potential for alleviating environmental pressures and promoting a more sustainable and equitable food system. However, additional policy measures are necessary to meet biodiversity goals and ensure that climate targets are equitably achieved across all regions.

Bridging behavioral sciences and urban planning

Felix Creutzig^{1,2}

¹University of Sussex, UK; ²PIK Potsdam, Germany

Behavioral sciences and urban planning of infrastructures are treated by different communities with little interchange. Here we present evidence that urban infrastructures are the dominant factor shaping urban behaviour, inter alia based on causal machine learning methods and big data. We conclude that behavioural disciplines and urban planning should develop a joint research agenda.

Towards climate-wise housing

Eliisa Kylkilahti

University of Helsinki, Finland

Problem: Strategically many municipalities have committed to climate targets, such as achieving carbon-neutrality by 2030. In the housing and construction sector they can influence issues such as energy efficiency of new building via regulation. However, it is difficult for them to understand household practices. At the same time residents call for more support and possibilities to take climate-wise action in their everydaylife.

Method: Insights shared in this short-talk are based on the analysis of multiple datasets of DeCarbonHome project, including household interviews and diaries and municipality workshop series.

Results: The presentation raises up questions of how to support resident in climate-wise housing, what kind of tools and information (e.g. calculators) are needed, and who should take action and offer solutions in these issues.

Significance to mainstreaming sustainable consumption: The talk provides insight of how to develop useful tools to support climate-wise housing.

1.5-Degree Lifestyles - what's next

Michael Lettenmeier^{1,2}

¹D-mat Ltd., Finland; ²Helsinki University, Finland

Global warming and the climate breakdown are accelerating. Although the 1.5-degree target is getting out of hand, we have to stick as close as possible to 1.5 degrees

The IPCC's AR6 report states that changes in demand, i.e. consumption, are inevitable in order to come even close to the 1.5-degree target. This means that 1.5-degree lifestyles have to be mainstreamed now.

Several research projects have shown us how consumption has to change towards 1.5-degree lifestyles. However, there are still different kinds of structural barriers to be overcome to proceed to 1.5-degree lifestyles in the mainstream. For example, a widely shared narrative of a good life within

1.5-degree target is still missing despite of appreciated approaches for illustrating the opportunities of decreasing lifestyle carbon footprints, like the Climate Puzzle or the PS Lifestyle.

This presentation provides a quick overview of the recommendations of the EU1.5°Lifestyles project for policy-makers and other stakeholders.

Feminist LCAs: Finding leverage points for wellbeing within planetary boundaries

Katherine Ellsworth-Krebs

University of Strathclyde, United Kingdom

Life Cycle Assessment (LCA) studies are valuable tools for identifying high impact processes and redesigning supply chains. However, LCAs have limits, in the sense that they offer insight into relative sustainability and don't question whether a product, or its use, is sustainable in absolute terms. In this intentionally provocative paper, you join Emma, a fictional average American 15-year-old, as she consults an LCA researcher, a sustainable consumption expert and a sociologist to investigate the best way to reduce the environmental impact of her hair removal. This paper presents a streamlined LCA for shaving, waxing and laser and connects this to a sociomaterial analysis of the history of hair removal in the USA to offer intervention into leverage points beyond Emma's choice of product. Our argument is not that avoiding shaving or waxing or laser is 'the best' action an individual could take to lower their environmental impact, instead we highlight how even the smallest activities coalesce into billion-dollar industries globally, with attendant billion tonne emissions. Thus, we utilise some of Donella Meadows' twelve strategic leverage points to change systems in order to identify other interventions, such as (6) shifting information flows to make LCAs more impactful and accessible; (4) self-organising to normalise hairiness; or (3) changing the goals of the system. For example, valuing wellbeing over profit would arguably lead to regulation preventing medical professionals from marketing painful non-medical procedures. This paper reflects on how individuals make sense of their environmental impact within systems and argues for an increased emphasis on global wellbeing and absolute sustainability.

Workshop: Community Transitions and Sustainable Consumption: Bridging the gap between Global South and North (Part 2)

Location: **Aula**

Session Chair: **Soumyajit Bhar**

Session Chair: **Kalpita Bhar Paul**

Humanity faces three interconnected challenges: environmental sustainability challenges, inter and intra-generational social justice challenges, and worsening psychological well-being in the era of extreme individualization normalized by the prevailing consumer culture. To address these, we propose recognizing the concept of 'community' as a potential driver for collective action, crucial for overcoming the impasse posed by these issues. Three different strands of literature—psychology of well-being, sustainable consumption, and social justice—highlight the role of community in addressing these challenges. Psychology of well-being studies reveal that relying solely on material means for basic needs like security, companionship, and freedom may offer short-term well-being but significantly compromise long-term well-being (Jackson, 2004; Jackson, 2005; Isham et al., 2022). Sustainable consumption literature advocates for sustainability transitions, emphasizing community-based approaches to decouple human needs from material possessions and sustain socio-environmental well-being (Khmara and Kronenberg, 2020). Therefore community-centered pathways can offer 'double-dividend': a sustainable world and long-term well-being (Jackson, 2005). Lastly, social justice literature demonstrates how community-oriented pathways to natural resource management can ensure collective action towards socially just and environmentally sustainable outcomes (Cochran and Ray, 2009; Narayan and Kamath, 2012). The concept of community remains diverse due to its varying definitions across contexts and periods. In the Global North, intentional communities are emerging, driven by post-materialistic values e.g. pro-environmental values. These intentional communities are rewarding from an individual perspective as it allows community-participation based on personal choice and values. In contrast, traditional communities in the Global South, particularly in regions like India, witnessing fragmentation of community. There's a notable shift towards breaking-free of community lifestyles by embracing the material pathways provided by the globalized fossil fuel order. Traditional community structures are diminishing, as they tend to constrain individual freedoms through socio-cultural regressive norms. The expansion of negative liberty, manifested as freedom of consumer choice, is increasingly gaining socio-cultural acceptance and desirability. These shifts in individual values, and consequently in culture and societal priorities, have significant implications for the environment, social justice, and individual well-being. In an era marked by three interconnected challenges, fostering collective action for socio-ecological transformation towards a better world is imperative. Hence, documenting the shifts in community structure and ethos in the Global South becomes imperative, alongside evaluating the effectiveness of intentional communities in the Global North in fostering collective action towards embracing progressive values. By doing so, we aim to underscore the transformative potential of communities in promoting a sustainable and equitable future, thereby enhancing the well-being of their members. Some of the questions that we would like to explore are: 1. To what extent shared material reality become a critical foundation for the sustaining of community and its ethos? 2. As the large section of world population discarding traditional community-based living, how to achieve environmental sustainability and justice? 3. How can we effectively address social and environmental justice concerns while promoting community-based sustainability transition pathways originating from the Global North? 4. How far 'risk society' hinders the sustenance of communities and possibility of collective action across different spatial and temporal scale?

12:30pm - 2:15pm

Workshop: Play a co-creation game for circular business model innovation

Location: **201**

Session Chair: **Katherine Whalen**

What if we reimagined how to develop circular business offerings by applying two existing approaches – co-creation and games – in a new way? Circular business model development requires collaboration between various stakeholders, especially when it comes to identifying opportunities for shared value creation (Brown et al., 2021). Co-creation is an established method within the design domain that supports collaboration and has shown potential to help companies identify new ways to meet customer needs (Sanders & Stappers, 2014). Rooted in design

12:30pm - 2:15pm

	thinking, co-creation employs design-oriented research methods that probe the everyday and reveal participants' ideas about the future. Yet, co-creation between companies and customers has not been fully utilized in circular business model innovation. Previous research identifies a gap in the creation of circular offerings and customer needs (Lofthouse & Prendeville, 2018). Moreover, few examples of using co-creation in the design of circular offerings exist (van Dam et al., 2021). Similarly, game-based approaches have shown potential to support sustainable innovation and games have been used for learning about circular economy (Whalen & Kijne, 2019). Digital games can also be engaging ways for interacting with customers remotely, which is a growing interest in a post-COVID world. But, games have yet to be used to gather customer insights for circular design. Therefore, this workshop aims to explore how games can be used to help companies and customers co-create circular offerings. Through a mix of reflective discussion and playing a newly developed digital game prototype*, we expect a memorable, hands-on play session. Together we'll learn from each other as we discuss the benefits and drawbacks to co-creation in a game environment. We'll try out the digital game prototype to better understand the possibilities for using games in co-creation of circular business models. And we'll share experiences with co-creation, circular economy, and game development as a step towards reimagining approaches to circular design. *The game is currently being developed and assessed in the FORMAS-funded project 'Game-Based Approaches to Create Innovative Circular Value Propositions' which concludes early 2025. Workshop: Demystifying the process of academic publication for early-career researchers Location: 133 Session Chair: Maurie Cohen Session Chair: Marlyne Sahakian Session Chair: Daniel Welch This session will provide early-career researchers (ECRs) and other interested participants with an opportunity to learn about the processes and procedures of academic publication. The focus will be on two journals of particular interest to the sustainable consumption research community: 1) Sustainability: Science, Practice, and Policy (SSPP) and 2) Consumption and Society. SSPP has been a continual presence in the field since 2005 and has acquired a reputation as a leading venue for the publication of academic perspectives and viewpoints related to both the social science and practice of sustainability, with special attention regularly devoted to emergent and established issues in the field of sustainable consumption. Consumption and Society emerged from the SCORAI EU community and the European Sociological Association's Research Network on Consumption, and was launched in summer 2022. The journal publishes articles that advance the understanding of consumption as a societal phenomenon, with a keen interest in sustainable consumption topics. The session will be led by editors of both publications and will discuss submission steps, refereeing procedures, revisions, and pre-publication processing. Also included will be a discussion about the differences between open-access and subscription-based publications and other recent developments relevant to authors (such as the European Commission's Plan S and altmetrics). We will also provide instructive guidance on how to boost the visibility of your published work through the active use of social media and other promotional techniques, such as the creation of short video clips or online roundtable discussions. In addition to a general session, we will break into three groups to be able to respond to more specific questions, directed to the three editors. Maurie Cohen is editor for 'Sustainability, Science, Practice and Policy' Marlyne Sahakian is co-editor for 'Consumption and Society' Daniel Welch is co-editor for 'Consumption and Society'
12:30pm - 2:15pm	
2:15pm - 2:45pm	Coffee Break Location: Stora Sparbanksfoajén
2:45pm - 4:30pm	Measuring Sustainable Consumption Location: Stora Salen Session Chair: Luis Mundaca

How LCA is used to assess GHG emission reduction through circular consumption – a scoping literature review

Johan Lars Brändström

University of Gävle, Sweden

Problem

To secure a safe operating space for future generations and to avoid irreversible climate impact effects, the global Greenhouse Gas (GHG) emission levels must reach net-zero level within a couple of decades. One method to monitor GHG emission levels is to depart from consumption-based emissions, which is useful for the purpose of understanding how lifestyle choices affect an individual's climate footprint. Today, many European countries report levels[OE1] around 6-10 tons per capita and year, while the global average is 5 tons. As a step to reduce these emissions, and to increase the resource efficiency in the EU, the circular economy action plan was signed in 2020. It includes measures that increase the responsibility for companies to increase material efficiency by adopting circular economy (CE) strategies. However, material efficiency strategies can sometimes reduce energy efficiency from a system perspective and, consequently, increased GHG emissions. The most applied method for assessing environmental consequences, and GHG emissions specifically, of CE strategies is Life Cycle Assessment (LCA). A common approach applied in scientific publications is to compare GHG emission levels of adopting circular strategies to business-as-usual or linear solutions. However, these comparisons are seldom selected to accomplish the maximal GWP reduction or resource efficiency but instead tend to select scenarios that are of methodological interest. Moreover, most of such assessments are focused on recycling strategies, the least resource efficient of the strategies found within CE paradigm.

Method

To highlight potential gaps in current literature, we conduct a scoping literature review where LCA assessments on CE strategies are mapped and organized. An analytical framework was developed to aid defining a set of inclusion criteria for the literature search. Then, we compared the sectoral distribution of the included studies to highlight what areas are underexplored. Furthermore, studies were organized according to how the assessed strategies contribute to resource efficiency, using the circularity ladder as guidance. Here, assessments focusing on recycling solutions were excluded, as

they tend to be overrepresented within the literature and are not the main priority when it comes to GHG reduction. Lastly, the number of studies within each product category was compared to its relative contribution to consumption-based GHG emissions.

Results

The results show that current LCA literature applied on CE strategies is largely focused on either long lifetime or sharing solutions within the different sectors, while sufficiency measures are rarely examined. Moreover, some sectors are generally overrepresented in relation to their contribution to consumption-based GHG emissions, and vice versa. There is also a clear focus on specific CE strategies within most sectors, leaving the impact of other CE strategies relatively unexplored.

Significance

We underline these gaps within current literature assessing the impact of CE strategies, guiding future studies towards assessments relevant for reducing consumption-based emissions from circular consumption. This work is important to outline the underutilized potential of CE implementation, and we underline that more focus should be directed both to the implementation of prioritized solutions within the circularity ladder and to the assessment of the effects of such strategies.

Sustainable Consumption from the Perspective of an Input-Output Model - a modelling approach

Jan Plassenberg

GWSmbH, Germany

Promoting sustainable consumption is crucial to addressing the environmental challenges of our time. Private households play a key role in this process, both as consumers and as part of the workforce. This presentation introduces a consumption module that analyzes the interactions between consumption patterns, the labor market, and economic conditions.

The consumption module not only examines the direct effects of consumption but also the indirect impacts along the value chains. It is based on the macroeconomic input-output model INFORGE, which maps inter-industrial relationships within the German economy. The unique feature of our module lies in the integration of household consumption patterns with data from the "Income and Consumption Survey" of the Federal Statistical Office. This enables a detailed analysis of how changes in consumer behavior, particularly through sustainable practices, influence the economy.

One possible application of our model is to explore how sustainable consumption affects different type of households (wealth, size, location). In one scenario, a potential development path for sustainable consumption can be illustrated and compared with the current state.

Differences in income, lifestyle, and regional conditions mean that households are impacted differently by measures to promote sustainable consumption. Our model shows how consumption decisions in the areas of mobility, energy, and goods affect the overall system and what feedback effects arise in the economy. These insights are particularly important for targeted analysis of the effects of political measures on specific household groups, helping to promote sustainability without disproportionately burdening certain groups.

A key advantage of the consumption module is its flexibility. With the availability of appropriate data, the model can be adapted to other countries to analyze country-specific consumption patterns and their impacts on the economy and sustainability. This makes the module a valuable tool for international comparisons and the development of global strategies to promote sustainable consumption.

It helps to understand the dynamic relationships between sustainability, consumer behavior, and macroeconomic development. The module can demonstrate to policymakers and businesses how the transformation towards a sustainable economy impacts private households, while simultaneously fostering resilient economic growth.

Psychological dynamics in the adoption of sustainable lifestyles: the role of motivations, developmental experiences and their relationship to mental health

Adina Dumitru, Luisa Losada, Manuel Peralbo, Pilar Vieiro, Montserrat Duran

University of A Coruña

The commitment established by the Paris Agreement to keep global temperatures under 1,5 degrees requires significant changes in lifestyles, involving the adoption of medium and high impact lifestyle choices which are difficult both from an individual and political standpoint. A minority of European citizens have been frontrunners in this process, attempting to live non-normative lifestyles, and keep emissions below the 1,5 limit.

As part of the H2020 European project EU 1.5 Degree Lifestyles, we present results from 38 in-depth interviews with individuals in 5 European countries (Germany, Hungary, Latvia, Spain, and Sweden) who have adopted medium and high-impact sustainable lifestyle choices in at least two lifestyle domains. The lifestyle domains considered were housing, mobility, food, energy and leisure. The interviews were analysed using a grounded theory approach and supported by MAXQDA.

We identify the key motivations to adopt sustainable lifestyles, which include doing meaningful things, having knowledge, autonomy, and control over decisions, feeling responsible for the surrounding environment, or a desire for simplicity or balance, as well as formative childhood, adolescence and youth experiences that contribute to “aha” moments and constitute turning points in people’s life trajectory. Among these, spending childhood time in nature, sharing a sense of appreciation for nature in the family, or with significant peers, as well as moments of awe and amazement involving nature feature quite prominently. We also identify internal, psychological resources that are relevant in dealing with internal but also social and structural barriers to living a sustainable lifestyle, and the mental health and wellbeing challenges that committed individuals encounter in their quest for a sustainable lifestyle. Interestingly, some of the most committed people struggle hard with the contradictions involved in attempting to live according to one’s values in a world that does not positively sanction such options. The results support recommendations for psychologically-informed strategies to promote sustainable consumption and drive high-impact lifestyle changes for European citizens across the lifespan.

Moral Trade-offs: Exploring How Moral Balancing Shapes Sustainable Consumption Behaviors

Konrad Kober

Technical University of Munich, Germany

Mainstreaming sustainable consumption requires an in-depth understanding of the psychological processes that influence individual behavior. One key process is moral balancing, where individuals regulate their actions to maintain a balance between their fixed moral identity (MI) and their more dynamic moral self-image (MSI). This balancing act can lead to two key effects: moral licensing, where people justify unsustainable actions after engaging in pro-environmental behaviors, and moral cleansing, where individuals attempt to compensate for immoral or unsustainable actions by engaging in subsequent pro-environmental behaviors. Understanding how the discrepancy between MI and MSI drives these behaviors is crucial to developing interventions that promote long-term, consistent sustainable actions.

In this study, I aim to experimentally test the moral balancing theory and its dual effects—moral licensing and moral cleansing. While MI represents an individual’s stable set of moral values, MSI is a fluid, up-to-date measure of their recent moral actions. It is the dynamic interaction and discrepancy between MI and MSI that determines behavior. A positive MSI relative to MI can lead to moral licensing, where prior moral actions provide justification for unsustainable behaviors. On the other hand, a negative MSI compared to MI can trigger moral cleansing, where individuals engage in compensatory sustainable actions to restore their moral self-image.

The study will involve approximately 110 participants, randomly sampled from the ExperimentTUM participant pool. Participants will be assigned to recall either a moral, immoral, or neutral past action, which will manipulate their MSI. After the recall task, participants will engage in a donation task, which measures moral (sustainable) decision-making behavior. Throughout the experiment, MSI will be measured at several points using implicit and explicit psychometric tools, including the Go/No-Go Association Task (GNAT) while MI will remain constant as a baseline measure of the individual’s moral values.

Although the full results will be available by the time of the SCORAI Europe 2025 Conference, the expected outcomes are that participants with a high MSI relative to their MI will demonstrate moral licensing tendencies, exhibiting greater willingness to engage in unsustainable behavior. Conversely, participants whose MSI falls below their MI are expected to engage in moral cleansing, compensating for prior immoral actions by making more moral (sustainable) choices. These dynamics will help explain why sustainable consumption interventions often yield inconsistent results, as they typically overlook the influence of the MI-MSI discrepancy on behavior.

The implications for mainstreaming sustainable consumption are substantial. For individuals who exhibit moral licensing, interventions should focus on preventing the justification of unsustainable actions by reinforcing consistent, long-term sustainable behaviors. Conversely, for those prone to moral cleansing, strategies should focus on amplifying the compensatory effect by encouraging incremental, positive actions that align their MSI with their MI. These tailored approaches can help foster consistent, sustainable consumption patterns.

In conclusion, this study contributes to our understanding of how moral balancing, through both moral licensing and moral cleansing, influences sustainable consumption. By exploring the dynamic relationship between MI and MSI, the research offers practical strategies to design interventions that support the mainstreaming of consistent pro-environmental behaviors.

Assessing the Net Effects of Low-Carbon Lifestyles: The Role of Environmental Self-Identity

David Andersson, Jonas Nässén

Chalmers, Sweden

Problem definition:

This study investigates the net effects of various low-carbon lifestyle options that have the potential to significantly reduce greenhouse gas emissions. We analyze both the direct and indirect effects of these lifestyle choices on total carbon footprints. Further, since previous research has found indications that pro-environmental motivation may lead to limited or reversed rebound effects, we explore how the indirect effects relate to the participants' environmental self-identity. The analysis utilizes carbon footprint data estimated through an app that assesses participants' consumption patterns using financial transaction data (Andersson, 2020). This approach enables a detailed examination of how changes in spending within one consumption domain may be interlinked with expenditures in other domains, facilitating a nuanced analysis of rebound effects and spillovers, and in turn, how this relates to environmental self-identity.

Method:

We analyze a randomly selected sample of 4,100 single-adult households in Sweden that were recruited to the app "Konsumtionskollen" (Consumption Checker). Building on and extending the work of Andersson and N'ass'en (2023), we employ multivariate regression models to examine the direct and indirect effects of adopting different low-carbon lifestyle options. This methodology allows us to measure the impact of lifestyle choices on individual carbon footprints and assess the influence of environmental self-identity on these behaviors.

Expected Results:

Data was collected during early summer 2024 and will be available for analysis in October. We expect our findings to reveal the direct and indirect effects of different low-carbon lifestyle options among a representative sample population, thereby shedding light providing valuable insights into under which circumstances and which behaviours it is reasonable to suspect positive spillover respective indirect rebound effects. We hypothesise that participants with a pronounced environmental self-identity are more likely to exhibit such behaviors and to also be more likely to demonstrate positive spillover effects, and consequently that study participants with a weaker environmental self-identity may be more likely to demonstrate indirect rebound effects

Significance to mainstreaming sustainable consumption:

By providing quantitative estimates of the net effects of different low-carbon behavior options we believe this research can provide policymakers and practitioners the basis for planning and policy processes that can effectively promote sustainable consumption more widely. This research also highlights the role of environmental self-identity in enhancing sustainable consumption.

References

- Andersson, D. (2020). A novel approach to calculate individuals' carbon footprints using financial transaction data—app development and design. *Journal of Cleaner Production*, page 120396.
- Andersson, D. and N'ass'en, J. (2023). Measuring the direct and indirect effects of low-carbon lifestyles using financial transactions. *Journal of Cleaner Production*, 386:135739.

Estimating Scope 1 & 2 emissions for UK SMEs

Alec Peter Phillpotts¹, David Leake², Anne Owen¹, Jonathan Norman¹

¹University of Leeds, United Kingdom; ²Lloyds Banking Group, United Kingdom

Smaller businesses often lack the resources and time to measure, monitor and disclose their associated emissions, and as a result there are large data gaps concerning small and medium-sized enterprises (SME) emissions and their contribution to industry totals. In the absence of this information, targeted decarbonisation plans are more difficult to identify and enact. Additionally, external parties are increasingly concerned with the emissions embedded within supply chains or financial loans. Data gaps result in imperfect estimation techniques and/or an increased preference to only engage with businesses reporting their emissions.

We present a new statistical model for predicting Scope 1 and 2 emissions for SMEs from widely accessible information, including company turnover, industry classification and sectorial characteristics from public accounts. Our model has been trained on the banking transactions of over 80,000 UK SMEs and improves on the accuracy of naïve predictions for Scope 1 and 2 emissions by upwards of 50%. New modelling approaches that offer easy access to accurate carbon profiles can increase engagement amongst the SME community and its stakeholders to support new reporting that helps accelerate the Net Zero transition. Using granular data to fit models that use commonly available data inputs as predictors offers a new approach for predicting carbon emissions, moving beyond existing

solutions that rely on sector-level estimates (that inevitably suffer from low accuracy) or detailed firm-level activity data (that are resource intensive to collect).

2:45pm - 4:30pm

Digital Innovation, Systems of Provision and Sustainable Consumption

Location: **Lilla Salen**

Session Chair: **Emilie Vrain**

Leveraging Building Monitoring Systems for Sustainable Consumption: A Review of Their Effects and Challenges

Shoaib Azizi^{1,2,3}, **Göran Finnveden**^{1,2,3}

¹KTH Royal Institute of Technology, Department of Sustainable Development, Environmental Science and Engineering, Stockholm, Sweden; ²Digital Futures; ³KTH Climate Action Centre

Problem definition

The transition towards sustainable consumption patterns in the built environment has gained increasing attention in recent years, driven by the significance of reducing environmental impacts and improving resource efficiency. Recent advancements in Information and Communication Technologies (ICT) and the Internet of Things (IoT) have opened up new opportunities for mainstreaming sustainable consumption in the building sector. Building monitoring systems (BMS), enhanced by IoT, enable real-time data collection and smart management of resources, supporting the optimization of building performance. The BMSs enable various enablement effects such as improved energy efficiency, occupant behavior change, space use efficiency, fault detection and diagnosis and resource optimization. However, there is a gap in understanding the extent to which the enablement effects can lead to long-term reduction in environmental impacts. Furthermore, the lifecycle environmental impacts of these systems, including production, deployment, and maintenance, raise questions about their overall sustainability.

Method

A systematic literature review has been conducted, focusing on peer-reviewed journal articles, conference proceedings, and technical reports published over the last 15 years. The review covers several topics including:

- The evolution of ICT and IoT technologies in building monitoring systems;
- The enablement effects of these systems, including energy efficiency, occupant behavior change, and resource optimization;
- The environmental impacts associated with the lifecycle of BMS, from production to end-of-life disposal.
- The challenges and strategies for mainstreaming these technologies and their implications for sustainable lifestyles, behavior change, and policy.

Results

The review identifies several primary enablement effects of IoT-based BMS including energy and water use efficiency, space use efficiency, promoting environmentally conscious behavior, decision-making support, fault detection and diagnosis, and predictive maintenance. These effects result in resource efficiency, and reduction in greenhouse gas emissions. However, the lifecycle environmental impacts of these systems, such as material use for electronics and the energy required for data storage and processing, present a challenge. The results suggest that while the enablement effects justify the implementation of BMS in certain cases, particularly in high-impact, high-consumption buildings, a comprehensive assessment of lifecycle impacts is essential to ensure long-term sustainability. Furthermore, mainstreaming these systems requires addressing key barriers such as lack of interoperability between systems, and the need for continuous maintenance to ensure the effectiveness and prevent their counter effect on building performance.

Significance to mainstreaming sustainable consumption

ICT and IoT in buildings offer strong potential as supporting infrastructures for sustainable consumption by enabling significant reductions in energy and resource use. The study highlights the importance of integrating BMS with broader policy and governance frameworks that support sustainable consumption lifestyles, such as Energy Performance Certificates (EPC). Mainstreaming these systems will require overcoming barriers for their interoperability regarding technology and business model. Developing policy packages that encourage system developers following industry standards and the building managers use these systems in both residential and commercial sectors can play role in mainstreaming sustainable consumption in buildings. IoT-based BMS can play a critical role in achieving low-carbon lifestyles, but their deployment must be guided by a comprehensive understanding of their lifecycle environmental impacts and benefits.

Digitalization of (sustainable) consumption: Platform capitalism or democratizing provisioning?

Manisha Anantharaman¹, **Noemi Linarez-Ramirez**², **Christian Clemm**³, **Aykut Coskun**⁴, **Arne Dulsrud**⁵, **Maria Fuentes**⁶, **Tatsuki Watanabe**³, **Hakan Yilmazer**⁴

¹Sciences Po, France; ²Saint Mary's College of California; ³University of Tokyo; ⁴Koc University;

⁵Oslo Metropolitan University; ⁶Lund University

Problem definition

The past two decades have seen a proliferation of digital interventions into consumers' everyday lives. Several digital platforms that provide food and mobility goods and services offer promising ways to reduce the environmental impact of daily consumption. Yet, the potential of digital solutions to mainstream sustainable consumption has come under scrutiny. For one, digital technologies might fail to integrate or disrupt existing household infrastructures of consumption. Further, while proponents hail bike and carsharing platforms as a way to more efficiently and sustainably "share" existing assets, critics charge that such platforms represent a new horizon of monopolistic data extraction, perpetuate precarious work, and might hasten the erosion of underfunded public services in an era of austerity urbanism. In a related vein, apps that claim to reduce food waste through redistribution could be normalizing food surplus, overproduction, and overconsumption.

Given the sheer number and diversity of platforms operating across the world, research must move beyond single-case studies or country-specific analyses to assess the potential of platformization to delivery sustainability. In response, this paper critically examines the role of digital platforms in promoting sustainable food and mobility in five countries—USA, Sweden, Norway, Turkey, and Japan.

Method

Taking an economic and organizational sociology perspective, this paper draws on a unique dataset to examine how digital provisioning platforms organize markets, facilitate transactions, and through that shape consumption. Using desk research, we mapped and categorized the organizational forms, market orientations, funding models, and sustainability propositions of platforms that facilitate the sharing of surplus food, access to local food, micromobility, and car-sharing.

Results

While food and mobility platforms often promote sustainable practices, such as reducing food waste or encouraging shared mobility, their overall business models resemble those of traditional "platform capitalism". The mapping exercise indicates that most digital platforms operate within for-profit, venture-capital-funded organizations. These platforms seek to amplify network effects and prioritize rapid growth of their user base to acquire funding. They emphasize convenience, low-cost offerings and incentives to attract more consumers and producers to their platforms. Public and non-profit platforms remain marginal and appear to struggle to compete with commercial entities. The most successful public and associational models are ones that receive support from public funds or sponsor organizations and are embedded in local trust-based networks.

Significance for mainstreaming sustainable consumption

This analysis contributes to understanding how the institutional landscape impacts how digital platforms function to deliver more sustainable forms of consumption. We argue that digital platforms promoting sustainability could be understood as representing a new frontier of "green capitalism." This raises critical questions about the effectiveness of platform-based solutions in mainstreaming sustainable consumption, as profit-oriented platform models, by definition tend to prioritize short-term financial gains over long-term ecological and social goals. This effect is amplified when their main sources of funding come from venture capitalists. The paper also highlights examples of successful alternative, non-profit, and publicly funded platform models, which, though currently limited, may offer more sustainable pathways for consumption if supported by broader institutional and regulatory frameworks and public financing.

The sustainability of shared mobility: an analysis of shared mobility in everyday practice bundles

Live Bøyum, Arne Dulsrud

Oslo Metropolitan University, Norway

Problem definition: Shared mobility has the potential to contribute to the transition to a more sustainable mobility system by offering an alternative to private car usage. The extent to which shared mobility encourages environmentally friendly mobility practices, however, remains unclear. Few studies have analyzed how shared mobility is embedded into consumers' daily lives. This paper addresses this gap by examine how the link between everyday life practices and mobility practices facilitates sustainable shared mobility. Drawing on social practice theory (SPT), we examine how everyday activities such as working, shopping, parenting, leisure and socializing bundles together into so called "practice bundles", and ask the research question: To what extent can shared mobility compete with private cars in different organizations of everyday practice bundles?

Method: We argue that SPT, which examines the material infrastructure, routines, and institutionalization of social practices, provides a suitable framework for analyzing shared mobility. Through this perspective, mobility can be understood as an "in-between practice" connecting bundles of everyday practices such as working, shopping, leisure, socializing, and parenting. Through an analysis of 22 in-depth interviews with households living in the greater Oslo area, who use shared mobility platforms, including bike/e-scooter sharing and/or ride sharing, we analyze to what extent shared mobility can compete with car usage in different types of practice bundles.

Results: Preliminary findings indicate that shared bikes and e-scooters are commonly used in combination with public transport or as an alternative to walking for work commutes. Shared bikes and e-scooters are also frequently used for leisure activities like sightseeing and socializing in the city center. However, they are not typically used for parenting tasks such as delivering or picking up

children at school/kindergarten, or for shopping groceries, which are activities that typically require car usage. Consequently, the findings indicate that e-scooters and bike sharing tend to replace more sustainable modes of travel like walking and public transport. Ride sharing, on the other hand, is often used when moving, going on weekend trips or holidays, or for transporting larger items. It is also used in combination with public transport for work commutes, particularly when the respondents have work meetings outside the office. However, the findings indicate that the consumers still prefer to use their own car for daily activities, rather than replacing their car with ride sharing.

Significance to mainstreaming sustainable consumption: Shared mobility should not reduce demand for existing sustainable travel modes such as walking, biking and public transport. The coordinating of everyday practices into different practice bundles leads to diverse sustainable shared mobility practices. However, the results indicate that replacing car usage with shared mobility is challenging. We argue that the perceived advantages of private cars, such as speed, flexibility, and constant availability, may need to be limited to enhance the uptake of sustainable shared mobility.

A digital sustainability transition in flux: tensions around sustainable datacenters in the Netherlands

Sanneke Kloppenburg, Paulan Korenhof

Wageningen University, Netherlands, The

Problem definition

Systems of provision and everyday life practices in today's datafied society rely on the use of digital devices and data, with huge implications for resource consumption. In policy circles, the 'twin transition' refers to the ambition to have the green and digital transition reinforce one another. Yet, little is known about how this twin transition is imagined and materially enacted at particular sites, and what tensions and conflicts arise. This paper focuses on datacenters -an infrastructure that is seen as key for supporting a sustainable and digital future, yet has also sparked public concern about negative environmental and societal impacts. In this dynamic societal context, datacenters increasingly seek to improve their sustainability. For example, while datacenters have high energy consumption and are feared to put pressure on already constrained local energy grids, some data centers now also supply residual heat, or so-called data thermal energy, to surrounding neighbourhoods. Such 'sustainable' datacenters thereby become a paradigmatic case to explore how sustainability and digital transitions are entangled.

Method

To understand this entanglement, we develop a relational understanding of datacenters that emphasises their (contested) connections with the physical environment and water and energy infrastructures. We apply this perspective to the case of sustainable datacenters in the Netherlands by collecting and analysing reports of the Dutch Data Center association, websites of datacenters, local newspapers articles and online media campaigns by NGOs. We analyse both the socio-technical imaginaries around sustainable datacenters to see how new connections are made discursively, as well how specific sustainable datacenters are materially embedded in local environments and infrastructures.

Results

We find that connections and tensions appear both in socio-technical imaginaries of (future) sustainable datacenters as 'water and energy positive', and in the material practices of integrating such datacenters in particular local environments and infrastructures. Analysing the developments and conflicts around sustainable datacenters in the Netherlands sheds light on how new relations between energy, water, and data are created, maintained, and contested, and how the intertwining of these infrastructures spurs new controversies over just digital and sustainable futures.

Significance for mainstreaming sustainable consumption

Our findings provide insights into an underresearched key infrastructure of our current datafied society. A better understanding of the societal and environmental conflicts around datacenters and increased public awareness of these issues are key for mainstreaming sustainable digital consumption and improving the environmental governance of datacenters.

Ecological Platform Regulation: Policy Options for Sustainable Consumption and Consumer Protection

Justus von Geibler, Toni Gnanko, Katharina Gröne, Christa Liedtke

Wuppertal Institute, Research Division Sustainable Production and Consumption, Germany

Problem definition

Today, digital platforms are increasingly shaping consumption and are used as a medium for information searches and purchasing decisions, for marketing and social communication. Online marketplaces are currently based on consumption-centred business models. Unclear platform mechanisms, such as the non-transparent influencing of user behaviour or the hiding of content through selection and choice mechanisms, are causing major transparency gaps for citizens and state actors. The increasing competitiveness of online marketplaces promotes fast-paced overconsumption,

which is accompanied by an increase in environmental impacts. Online marketplaces lack clear offers for consumers to act sustainably within their economic means. Political interventions that go beyond voluntary information from consumers are needed to promote more sustainable production and consumption patterns in online retail. So far, platform regulation has not been sufficiently geared towards a sustainable consumption.

Against this backdrop, a number of questions arise: How can consumption processes on platforms be redefined in order to promote sustainable consumption and consumer protection? How can dynamic, adaptive and collaborative governance frameworks support the development of competences for government action and the establishment of ecological platform regulation?

Method

As a first step, the research process began with a literature-based conception of a collaborative and co-creative governance format that can be used to jointly develop new design approaches in multi-organisational exchange. Related approaches with strong links to the designed format include policy living labs and real-world laboratories. The aim of the format is to incorporate creative, output- and solution-orientated elements into democratic decision-making processes. In a second step, such a collaborative and co-creative governance format was implemented with the aim of identifying political design options for sustainable consumption in an ecologically orientated platform economy.

Results

The compiled research results highlight in particular legal challenges and approaches for action to make platform companies more accountable and to strengthen the regulation of digital platforms for the common good. The tightening of obligations and introduction of new laws can help to address sustainability and consumer protection on platforms more strongly and to reinforce the implementation of a sustainable platform economy and state control of the sustainability transformation. In total, more than 40 policy design options for "sustainable consumption and consumer protection by design" were identified, and six measures were prioritised and concretised:

1. Regulation of personalised advertising
2. Commitment to transparency (e.g. on sustainability seals or material composition)
3. Internalisation of negative external effects (e.g. via a CO₂ or resource price)
4. Stricter liability rules with regard to compliance with due diligence obligations
5. Strengthen green platforms as alternatives
6. Infrastructure responsibility of very large platforms (Art. 34 DSA)

Significance to mainstreaming sustainable consumption

The increasing competitiveness of online marketplaces is driving fast-paced overconsumption, accompanied by an increase in negative environmental impacts and a manipulation of consumers, e.g. through the use of dark patterns on online platforms. Online marketplaces lack clear offers for consumers to be able to act sustainably within their economic means. Political interventions that go beyond voluntary information from consumers are needed to promote more sustainable production and consumption patterns in online retail.

2:45pm - 4:30pm

Food 2

Location: **Nya Fest**
Session Chair: **Thanh Mai Ha**

Eating ourselves out of the environmental crisis – can potentials with dietary shifts be realised?

Ylva Ran¹, Martin Persson², Biljana Macura³, Malin Jonell⁴, Therese Lindahl⁴, Assem Abu Hatab⁵, Anke Brons⁶, Jeroen Candel⁶, Elin Rööös¹

¹Swedish University of Agricultural Sciences; ²Chalmers University of Technology; ³Stockholm Environment Institute; ⁴Royal Academy of Sciences and Stockholm Resilience Centre; ⁵North Africa Institute and Swedish University of Agricultural Sciences; ⁶Wageningen University

Problem definition

Reductions in food waste and consumption of animal source foods (in high income settings where consumption is high) show great potential to substantially reduce greenhouse gas emissions and other environmental impacts (Willett et al., 2019). The question however remains to what extent these mitigation options could be realised in practice. Considering global trends, the prospects of substantially reducing the consumption of animal sourced foods looks bleak; the demand for animal foods is expected to increase by 40% until 2050 (Komarek et al., 2021). It could, however, be argued that consumption patterns could change if the right incentives were put in place. A range of governance mechanisms are available to steer consumption patterns, including regulations, taxes, labelling and information campaigns that all target different types of determinants of behaviour (van Valkengoed et al., 2022).

Method

We conducted a systematic mapping of public policy interventions for more sustainable food consumption and an umbrella review on the effect of governance interventions for dietary shifts and reduced food waste. For the systematic mapping we collected evidence from 229 articles on study location, intervention type, evaluated outcome and study design. In the umbrella review we synthesize evidence from 20 reviews on identified governance interventions, reported effects and measured outcomes, as well as reported conclusions.

Results

In our systematic mapping we found 267 cases of public policy interventions that aim to contribute to more sustainable food consumption. The majority were information-based, and 50% were labelling. About 13% of studies tested market-based interventions and 8% of the interventions were some type of changes to the choice making context.

In our umbrella review we found mainly positive outcomes reported (e.g. for labelling and written cues), indicating that there are available options to steer food consumption behaviour. However, sample sizes are often small and most studies looked at stated rather than revealed preferences and were only tested in specific contexts. All together, these aspects decrease the external validity of studies investigating the effect of interventions (Just and Byrne, 2020)

Significance to mainstreaming sustainable consumption

In our literature studies we found a lack of evidence reviews on financial instruments and regulations, which can be effective but challenging in the current political landscape (Fesenfeld, 2023). In addition, eating patterns are also shaped by automatic and heuristic behaviours which can be difficult to change (Verplanken, 2018), for example, those building social norms and feedback structures shaping our automatic decision-making, may not manifest themselves until much later (Valkengoed et al., 2022). It is therefore inherently challenging to find an answer to what policies and policy mixes are effective in changing consumer behaviour towards sustainable consumption. We encourage researchers, policy makers and relevant food system actors to jointly engage in implementing and testing different interventions and intervention mixes in real world settings, tracking the results in a transparent way including publishing null results and spread the experiences to the world. Very drastic changes to current diets and trends are unrealistic, but prevailing trends in dietary patterns are also not inevitable

Investigating Food Environments in Hyderabad, India. The role of changing dietary patterns.

Katharina Gröne, Lena Hennes

Wuppertal für Klima, Umwelt, Energie, Germany

India is currently experiencing multiple forms of malnutrition, encompassing both undernutrition and micronutrient deficiencies, as well as a rising prevalence of overweight, obesity, and diet-related non-communicable diseases such as diabetes and hypertension. These nutrition-related challenges, once associated primarily with High-Income Countries, are now increasingly appearing in Low- and Middle-Income Countries, with overweight and obesity particularly prevalent in urban areas. In India, a notable increase in overweight is observed among the urban middle class, a trend often linked to a shift towards Westernized dietary patterns.

The aim of this study is to investigate the interplay between individual food environments and changing dietary patterns of urban India's middle class, particularly how these changes are contributing to broader social and ecological challenges in the country. The paper adds up to the still low number of contributions dealing with the link between social structures and the practices of actors and their (changing) habits and lifestyles of consumers - a topic that plays an increasingly important role in the Global South.

This research employs a mixed-method approach, combining ethnographic fieldwork with sustainability assessments from a food environment perspective. Data was collected through in-depth interviews with food providers who represent the link between consumption and production in various zones of Hyderabad, along with expert interviews to contextualize findings. Additionally, two "shopping baskets" were analyzed, each containing five products. One basket represents the urban dietary transition with more westernized products, while the other reflects more traditional Indian foods. The ecological and social impacts of these products, based on existing literature, were analyzed to illustrate the consequences of dietary shifts.

Our results reveal differences in the ecological impacts of the two shopping baskets, highlighting the broader environmental consequences of the ongoing nutrition transition. Social factors, including health, economic affordability, gender influences, and the differential availability, accessibility, and acceptability of foods, play a significant role in the evolving dietary patterns of urban India's middle class

The presentation contributes to a more comprehensive understanding of the urban Indian food environment and the dynamics of the nutrition transition. By linking changing dietary patterns with their environmental and social impacts, we underscore the importance of promoting sustainable consumption and integrating sustainability into the mainstream discourse on nutrition.

Capitalism eats beans for breakfast – Shaping the direction of innovation of plant-based meat analogues in the Swedish food system in the wake of Livestock's Long Shadow

Helena Fornstedt, Thomas Taro Lennerfors

Uppsala University, Sweden

Problem definition

The need to eat differently has become apparent since the UN report Livestock's Long Shadow was launched (Food and Agriculture Organization of the United Nations. 2006), highlighting the environmental problems of red meat. As a response, in Sweden, some argue that red meat should be made more sustainable (HKScan et al. 2021), while others advocate a protein shift away from meat (Macklean 2016) which is embodied in product innovations fitting neatly with Swedish culinary tradition and replacing meat's spot on the dinner plate. Previously, Fornstedt et al. (in review) have outlined the sociotechnical innovation system for plant-based meat analogues (PBMA) in Sweden that was crucial in contributing to mainstreaming the consumption of PBMA, drawing on an interview study with 60 people in the Swedish food system, complemented with an analysis of news articles, public documents, webpages, etc.

The paper indicated that capitalism could be a factor shaping the development of the innovation system, and this present paper seeks to explore whether and how it was steered by capitalism. This assists in understanding why the innovation system developed as it did, but also contributes to discussions within sustainability transitions studies where capitalism is treated as a background factor (Feola, Vincent, and Moore 2021; Feola 2020), as well as how capitalism shape sustainable consumption.

Method

Capitalism is in this paper tentatively seen, drawing on Feola (2020), as a historically specific form of social and economic organisation characterised by private property, pursuit of economic gains through production and markets, commodification of labour, and generalised production and exchange of commodities. The fundamental dynamic of capitalism is the imperative of capital accumulation, involving strategies like externalizing costs, lowering labour costs, and commodifying biophysical and human spheres. Capitalism also entails a cultural, social and political architecture shaping individual and collective identities and relations, including principles of competition, individualization, rationalization, and an imaginary of progress through endless accumulation.

Results

These characteristics of capitalism are used to explain the findings in the empirical study of the development of the innovation system around plant-based meat analogues to determine how well it coheres with capitalism. The paper also seeks to understand how activities within the innovation system deviates from the hypothesised 'pure' capitalist development, given that capitalism often coexists with non-capitalist logics, institutions and practices (Feola, Vincent, and Moore 2021; Feola 2020). Although the analysis is to be made, hypothesized results supporting the guiding role of capitalism is the increased technology-intensiveness of innovation, the driving force of consumer choice, etc. Some activities seemingly not in line with capitalism concerns the creation of a grassroots legume promotion network, new state guidelines concerning sustainable nutrition, etc.

Significance to mainstreaming sustainable consumption

The findings can help us understand both the path towards mainstreaming the consumption of PBMA, but also what development trajectories of sustainable consumption were marginalized because of capitalism. To highlight the multiplicity of futures and how some are favoured by capitalism can give food for thought for a range of efforts to promote sustainable consumption.

Driving Sustainable Food Choices: Consumer Behavior in the Basque Country

Kiana Keshavarz, Carmen Jaca Garcia, Maria Jesus Alvarez

university of Navarra, Spain

Food consumption plays a significant role in global sustainability challenges, contributing significantly to environmental degradation and resource depletion. The food industry alone accounts for more than a quarter (26 %) of global greenhouse gas emissions and consumes vast amounts of land and water resources. Changes in consumer behaviour can lead to a reduction of these emissions, since consumers' decisions are the driving force behind market demand. Despite growing awareness of environmental issues and an increasing preference for sustainable products, a gap remains between intention and actual behaviour.

This research seeks to address this gap by examining the factors that influence sustainable food choices, with a focus on pre-purchase decision-making within supermarket settings. To better understand these dynamics, this study adopts Social Practice Theory (SPT). This theory highlights those everyday activities, such as grocery shopping, are not merely isolated actions but part of a broader pattern of behaviour shaped by interconnected elements. According to Shove et al., social practices consist of three interconnected elements: meanings, competences, and materials (32). We use this theory to investigate how social norms (meanings) around sustainability, consumer knowledge and awareness (competencies), and the availability and affordability of sustainable products (materials) shape sustainable purchasing habits. SPT emphasizes the role of broader routines and social contexts in shaping consumer behaviour, contrasting with frameworks that primarily focus on individual attitudes and intentions, such as the Theory of Planned Behaviour.

Grounded in Social Practice Theory (SPT), the following hypotheses were formulated to examine both direct and indirect relationships between the key factors influencing consumer behaviour:

H1: Stronger social norms promoting sustainable food choices increase the likelihood of sustainable purchasing behaviour.

H2: Consumers with greater awareness of the ecological impacts of food choices are more likely to engage in sustainable purchasing behaviour.

H3: Consumers with a higher level of knowledge and understanding of eco-labels are more likely to engage in sustainable purchasing behaviour.

H4: Increased availability of sustainable products with clear and informative labelling positively affects consumer engagement in green purchasing behaviour.

H5: A higher price premium for sustainable food products discourages consumer engagement in green purchasing behaviour

Based on these hypotheses, we designed a survey to collect the necessary data, which will be analysed using Structural Equation Modelling (SEM). The study takes place in the Basque Country, a region characterized by high environmental awareness but relatively low levels of sustainable product consumption. By pinpointing the key drivers of sustainable food choices, this study offers actionable insights for designing targeted in-store interventions and formulating public policies to more effectively promote sustainable consumption on a broader scale.

The Role of Biodiversity in Consumer Research towards Food

Deborah Schneider^{1,2}, Sanja Osieja^{1,2}, Carsten Herbes¹, Ramona Weinrich²

¹Nuertingen-Geislingen University, Germany; ²University of Hohenheim, Germany

[Problem]

Although sustainable consumption has drawn significant attention from scholars and practitioners alike, biodiversity, an integral component of environmental sustainability, remains rather underexplored with regard to consumer attitudes and behaviour. Food production is a major driver of biodiversity loss [1] and consumers can help to transform the food system by adopting biodiversity-friendly diets and behaviours [3], but knowledge on this topic remains fragmented. Thus, this study aims to provide a comprehensive overview through a systematic literature review on consumer food research on biodiversity.

[Method]

Following the PRISMA protocol [4], we reviewed 38 articles published between 2014 and 2024. Theories, contexts, characteristics and methods were analysed using the TCCM framework [5]. For influencing characteristics, we applied a framework combining drivers of green consumption [6] and organic food choice [7]. Furthermore, we examined how biodiversity is framed and defined within these studies. Finally, we analysed the trade-offs consumers face in biodiversity-related purchase decisions, and reviewed the recommendations provided.

[Results]

Our findings indicate that biodiversity as a product attribute has positive effects on consumers' attitudes, willingness to pay and behaviour, while perceived personal relevance increases these effects. However, consumers' limited knowledge of biodiversity and its inherent trade-offs impede comprehensive evaluation and decision-making. Therefore, the relative importance of biodiversity remains low. Some articles fail to precisely define biodiversity, while the role of framing is largely overlooked. Most recommendations concern marketing and communication, particularly labels and certifications.

Based on our results, we provide an agenda for future research. We recommend to examine effective ways to communicate biodiversity, considering consumers' limited knowledge, the conceptualisation of biodiversity and the framing of messages.

[Significance]

This article gives insights into the potential and limitations of market-based biodiversity conservation. It provides future research directions to assess consumers' trade-offs in decision-making and to develop effective communication approaches.

[1] Benton, T.G., Bieg, C., Harwatt, H., Pudasaini, R., Wellesley, L., 2021. Food systems impacts on biodiversity loss: three levers for food system transformation in support of nature.

[2] Crenna, E., Sinkko, T., Sala, S., 2019. Biodiversity impacts due to food consumption in Europe. *J. Clean. Prod.* 227, 378–391. <https://doi.org/10.1016/j.jclepro.2019.04.054>

[3] Rös, E., Mayer, A., Müller, A., Kalt, G., Ferguson, S., Erb, K.-H., Hart, R., Matej, S., Kaufmann, L., Pfeifer, C., Frehner, A., Smith, P., Schwarz, G., 2022. Agroecological practices in combination with healthy diets can help meet EU food system policy targets. *Sci. Total Environ.* 847, 157612. <https://doi.org/10.1016/j.scitotenv.2022.157612>

[4] Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G., PRISMA Group, 2009. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Med.* 6, e1000097. <https://doi.org/10.1371/journal.pmed.1000097>

[5] Paul, J., Rosado-Serrano, A., 2019. Gradual Internationalization vs Born-Global/International new venture models: A review and research agenda. *Int. Mark. Rev.* 36, 830–858. <https://doi.org/10.1108/IMR-10-2018-0280>

- [6] Testa, F., Pretner, G., Iovino, R., Bianchi, G., Tessoro, S., Iraldo, F., 2021. Drivers to green consumption: a systematic review. *Environ. Dev. Sustain.* 23, 4826–4880. <https://doi.org/10.1007/s10668-020-00844-5>
- [7] Rana, J., Paul, J., 2017. Consumer behavior and purchase intention for organic food: A review and research agenda. *J. Retail. Consum. Serv.* 38, 157–165. <https://doi.org/10.1016/j.jretconser.2017.06.004>

2:45pm - 4:30pm

Fashion and Textiles

Location: **Gustafscenen**

Session Chair: **LARS FOGH MORTENSEN**

What is waste and what is not? Heterogeneous narratives in the post-consumer textile network in the Netherlands and their implications on the governance of textile flows

Arjan de Koning, Antonella Maiello, Elena Bondarouk, Daniela Vicherat Mattar, Glenn Aguilar Hernandez

Leiden University, The Netherlands

Problem definition

About 21 kg per person or a total of 361 kiloton of clothing and textiles was bought in the Netherlands in 2018. An almost equal amount of textile and clothing was discarded that year. Production of textiles and clothing is associated with high environmental and social impacts. Even after having been discarded, considerable environmental and social impacts may occur. Those end-of-life (EoL) effects are the focus of this research. About half of textile and clothing discarded in the Netherlands is incinerated in the Netherlands. The other half is mostly exported for re-use or recycling. Anecdotal evidence indicates that part of the 2nd hand clothing being exported is dumped.

A central concept in the fate of discarded textiles is its perceived value (not only its price) in comparison with virgin materials and/or new clothing. We investigate if a mismatch between perceived value of textiles (what is waste and what is not) by different actors along the supply chain is the cause of textile dumping. The purpose of this research is to formulate further research recommendations to be able to govern the textile supply chain such that EoL impacts are minimized.

Method

Existing information in the form of scientific literature and reports about the physical supply chain of textiles was reviewed with a focus on unknown destinations of discarded textiles. Parallel to this physical mapping, stakeholders mentioned in the literature were mapped along the supply-chain with a focus on stakeholders along the EoL supply-chain in- and outside the Netherlands. Stakeholders were interviewed and invited to join a workshop. The interviews were used to snowball further stakeholders and gather more information about the mechanisms that influence destination, quality, and volumes of textile flows. This process gave us a reasonable, even though not statistically valid, representation of stakeholders at our workshop. The workshop was a one-day experiment where actors from 6 categories industry, government, social entrepreneurs and innovators, academia, import-export organizations, and second-hand shops came together. At the workshop they received input from experts and policy makers, gave input on their practices, mapped their networks, discussed, and reflected on open questions. The workshop followed a World-Café approach, driven by small-group discussion methodology.

Results

The results show heterogeneous perspectives on what waste is and is not, even in a small context as the one of the post-consumer textile professionals in the Netherlands. Participants reflected on how the same second-hand product can be waste or not according to the place (household and related context) it is consumed. They also perceive differently the kind of responsibilities behind the decision of "waste or not to waste".

Significance to mainstreaming sustainable consumption

The most important result that has substantial implications for the research agenda is that academics must work outside their disciplinary silos when it comes to waste, for public governments whose actions is often diminished by lack of internal coordination and international collaboration and for practitioners, who, according to our observations, tend to see the regulator/legislator as the one responsible to solve the problem.

Digital platforms and the reconfiguration of second-hand shopping: Slowing down and speeding up clothing consumption

Frida Eggert, Isabelle Rahm, Christian Fuentes

Lund University, Sweden

Problem definition

Multiple digital platforms now facilitate the commerce of second-hand clothes. These platforms are argued to address the sustainability problems associated with the fashion industry's take, make and waste model and its increasing energy consumption, pollution, and waste generation. However, for these platforms to deliver on their promise, they would need to reconfigure consumers' everyday

clothing practices, effectively replacing the purchase of new clothes and/or slowing their consumption. This is no easy task given the entrenched nature of many household practices and the ingrained mechanism of consumer culture which favours novelty and a consumerist approach. With this in mind, we cannot take the circular claims of these platforms at face value, but must instead ask and investigate: How and under what conditions do these circular fashion platforms reconfigure consumers' clothing practices? Do these reconfigurations lead to more sustainable modes of consumption?

Method

This paper aims to empirically explore and conceptualise how digital platforms reconfigure the practice of second-hand clothes shopping. Taking a shopping-as-practice approach and drawing on an ethnographically inspired study, this paper explores how a Swedish digital second-hand commerce platform enables different modes of shopping.

Results

The analysis shows that this digital platform and its socio-technical script make two opposed modes of second-hand clothes shopping - slow and fast second-hand shopping – possible. While the building blocks of this digitally mediated mode of second-hand clothes shopping –browsing, narrowing down, price comparing, and purchasing – were the same in both modes, how they were performed, with what frequency, and with what purpose varied greatly. While slow second-hand clothes shopping involves selecting only a few items believed to be both wearable and durable, fast second-hand clothing shopping involves frequently shopping and selling large amounts of second-hand clothes.

Significance to mainstreaming sustainable consumption

If we are to understand how digital second-hand fashion shopping platforms can become more widely used, we must comprehend how and with what consequences they are used today. Similarly, if we are to assess the sustainability claims made by these second-hand platforms and their advocates, we must understand if and in what way they reconfigure consumers' broader clothing practices.

Exploring the Repair Intention-Behaviour Gap Among Textile Consumers: A Case Study of Nudie Jeans

Nicole Berggren¹, Karolina Vikingsson², Karin Gardström³, Kevin Gelsi⁴, Carl Johan Dalhammar¹

¹Lund University, Sweden; ²RI.SE; ³Voyado; ⁴Nudie Jeans

The textile and clothing industry currently follows a linear economic model with significant environmental and social impacts, and the sector is in urgent need of reform. The development of circular economy (CE) solutions can be one way of driving change by promoting resource reuse and recycling to minimise raw material extraction and waste. One promising strategy is to extend product lifespans through repair, which helps reduce both resource consumption and waste. But there is an “intention-behaviour gap” (IBG) observed in relation to consumers' repair practices, which constitutes a substantial challenge to the CE transition: consumers often intend to repair their textiles but seldom do so. Nudie Jeans offers free repairs to their consumers, but not all their consumers choose to make use of this offer.

The aim of this study was, therefore, to measure the repair IBG among Nudie Jeans consumers and assess variations across age, gender, household size, and continent. A second objective was to develop suggestions for effective email communication strategies to mitigate this gap. The study followed a mixed methods design. First, 1600 survey respondents were randomly selected for statistical analysis. A statistically significant IBG of medium to large practical relevance was found, as almost one-fourth of the respondents demonstrated an IBG (8.9-24.1%). There were no significant demographic variations except in relation to gender, as women's IBG was twice that of men.

Second, 12 participants were purposely selected for online, semi-structured interviews due to their substantial IBGs. A conceptual framework that integrated theories such as the Theory of Planned Behavior, Social Cognitive Theory, Implementation Intentions, Prototype Willingness Model, Elaboration Likelihood Model, and Nudging guided the design of the interview protocol. Thematic analysis of the interviews identified key strategies to encourage repairs: educational content with clear instructions, rational and emotional persuasion emphasising environmental and cost-saving benefits, personalised implementation support, and interactive features like clickable links and rich visual content.

The analysis also provided some insight into gender differences, suggesting that gender-specific communication strategies could enhance engagement, as women tend to engage more in clothing self-repair, while men often prefer professional services. Fashion industry stakeholders, such as marketers and brands, should refine communication strategies by integrating educational initiatives to empower consumers with knowledge, repair skills, and personalised features for encouragement. Policymakers should support policies that encourage repair services accessibility and educational campaigns to elevate consumer awareness. These approaches could be the most effective in bridging the IBG in repair practices and advancing the mainstreaming of sustainable consumption by encouraging shifts in consumer behaviour toward repairing and reusing textiles over disposal and purchasing new.

The results show that a mix of interventions are required in order to change behaviours, and the results are relevant also for repairs of other types of goods.

Textiles and Plastics in EU policy: the relationships and coherence across EU policies on the sustainability issues of textiles and plastics

Mariko Takedomi Karlsson, Fredric Bauer, Lars Nilsson

Department of Technology and Society, Lund University

Problem Definition

The recent explosive growth of ultra-fast fashion firms has again highlighted the socio-ecological problems of the fashion industry, including the urgent waste problem caused by it. Fast fashion garments are largely produced from synthetic (plastic) fibres made from fossil fuels, making the issue of textile waste also an issue of plastic (and even toxic) waste. Textiles are on the other hand the third largest use domain for plastics. Through the fibres used textiles are thus directly linked to plastics, another contentious issue associated with a multitude of environmental problems as well as a plethora of multi-level governance initiatives all focusing on supporting different forms of circular economies. In our work we aim to explore and unpack the synergies and potential gaps between these domains in the rapidly developing European governance landscape.

We investigate the coherence across and between relevant European Commission's strategies anchored in the Circular Economy Action Plan (CEAP) as well as subsidiary instruments such as directives and regulations. We explore coherence in problem definitions and scope, actors and responsibilities, as well as proposed interventions and instruments, aiming to identify synergies, interdependencies, and potential gaps. Our findings will contribute to the understanding of how well EU policies are equipped to deal with some of the most urgent and interdependent sustainability issues regarding textiles and the fashion industry.

Method

We identify relevant EU governance initiatives and interventions (strategic communications, directives, regulations, and other policy instruments). The formal documents describing the initiatives and interventions were all collected from the EUR-lex database. The documents were analysed with a coding scheme focusing on problem definitions and scope, actors and responsibilities, as well as proposed interventions and instruments. For the second stage of analysis we employ the anchoring policy perspective (Inderberg and Bailey 2024) to understand how (and in what hierarchical ways) specific policies relate to one another. The policy documents we selected include the textiles strategy, plastics strategy, chemical strategy, Ecodesign for Sustainable Production Regulation, Corporate Sustainability Due Diligence Directive, and the Waste Framework Directive.

Results

We will present preliminary results at the conference. Mainly we will discuss the alignments that we have found between plastics and textiles across the different policies. Tentative results indicate a limited coherence between the plastic and textile strategies regarding problem definition and scope, e.g. plastics are mainly discussed in the textiles strategy in relation to microplastic pollution, but not in relation to how integrated plastics and textiles truly are regarding issues of (eco)toxicological risks, fossil fuel use, and climate impacts of production.

Significance to mainstreaming sustainable consumption

The EU CEAP identifies responsible consumption and production as a key issue for a sustainable transition and enabling a circular economy. However, we have found that the problem of overproduction is only touched upon at a surface level. We identify the absence of addressing overconsumption and overproduction as an inhibitor to mainstreaming sustainable consumption in the fashion sector which has one of the most globalized and complex supply chains.

Exploring Complexity in Sustainable Nappy Alternatives

Jason William Graham-Nye, Nick Florin, Monique Retamal, Rachael Wakefield-Rann

University of Technology Sydney, Australia

Problem definition

Disposable nappies are a significant environmental concern due to their plastic waste, and despite efforts like recycling programs, the waste burden remains largely unchanged. Alternative solutions, such as reusable, washable nappies, have struggled to disrupt the entrenched practices of disposable nappies. This research investigates the persistence of disposable nappy practices. It then evaluates whether an emerging new approach involving a compostable nappy offered in a Circular Economy-inspired Product Service System could provide a viable solution.

Method

Adopting a dual-lens approach, this study utilizes Social Practice Theory (SPT) and Multi-Level Perspective (MLP) frameworks. SPT zooms in on the daily practices surrounding diaper use, highlighting the social norms and routines that sustain traditional practices. MLP provides a macro view, examining how socio-technical systems at the niche, regime, and landscape levels interact to influence the adoption of new technologies. Through a qualitative field trial of a novel compostable nappy and collection service in Sydney, Australia and semi-structured interviews with industry

stakeholders, this study reveals critical intersection points between individual practices and systemic factors.

Results

The findings underscore the complex interplay of technical, social, and economic factors in transitioning towards more sustainable nappy solutions. Despite limitations in the trialled compostable nappy service, the paper identifies key leverage points and proposes interventions that could enhance future innovations, policies, and consumer awareness. This case study offers valuable insights into the broader challenge of reducing consumption and transitioning to circular economy practices, highlighting the need for integrated approaches that address both micro-level practices and macro-level systemic dynamics.

Significance to mainstreaming sustainable consumption

This session delves into the complexities of implementing sustainable nappy alternatives, focusing on the challenges and opportunities presented by compostable nappies. This research contributes to a deeper understanding of the barriers and enablers in implementing Circular Economy approaches, providing actionable recommendations for advancing sustainability in the nappy industry and beyond.

2:45pm - 4:30pm

Towards New Ventures for Education for Sustainable Consumption

Location: **Sångsalen**

Session Chair: **Daniel Fischer**

Session Chair: **Ulf Schrader**

Session Chair: **Maike Gossen**

Consumption as a Boundary Object in Promoting Biodiversity through Transdisciplinary Learning: The Case of the Carpathian Mountains

Senan Gardiner, Claire Grauer, Daniel Fischer

Leuphana University, Lüneburg, Germany

Problem definition

In order to protect biodiversity, it is critical to reduce our consumption. Target 16 in the Kunming Montreal Global Biodiversity Framework (GBF) is to “enable sustainable consumption choices to reduce waste and overconsumption”.

The Carpathian Convention is a regional agreement to promote cooperation in the protection and sustainable development of the Carpathian mountains. The Convention cites education as the key to sustainable development and the preservation of the region's biodiversity. However, among biodiversity experts, there is a lack of understanding of concepts and methodologies necessary to involve the wider Carpathian community and stakeholders.

Method

Case Study: The ProBioTIC project; Promoting Biodiversity through Transdisciplinary Learning Interventions in the Carpathian region. This case study uses sustainable consumption and production as a boundary object to bring stakeholders, experts and university students to work together and develop learning interventions that are community led, transdisciplinary and use local and traditional knowledge. Specifically one branch of this project is the design of a transdisciplinary module in Leuphana University where students work with stakeholders from the Carpathian region to cocreate learning interventions that connect biodiversity and sustainable consumption.

Results

The seminar aims at teaching students how to collaborate with praxis partners to jointly develop socially relevant solutions to sustainability-related problems. At this stage, students have already acquired relevant knowledge and skills to carry out transdisciplinary research and the goal of the course is to teach them how to approach transdisciplinary sustainability research in practice to devise effective learning interventions.

Through the design and delivery of this course, the following results are expected

- Emergent learning opportunities from collaboration of the stakeholders and students.
- Projects on sustainable consumption and Carpathian biodiversity, such as eco-labelling, eco-tourism, nature-friendly and mindful consumption
- Highlighting leverage points where biodiversity impacts can be ameliorated on a local scale
- Identifying traditional local knowledge that can connect communities to their bioregions.
- Policy recommendations for the Carpathian Framework policy working groups
- A pilot course using transdisciplinary and ESD methodologies to bring together biodiversity experts, stakeholders and students in the Carpathian region

Significance to mainstreaming sustainable consumption

The project is innovative in approach because by linking biodiversity science, policy and practice, which explicitly involves a teaching and learning component to teach biodiversity experts, as well as sustainability and geography students, how to utilise ESD and transdisciplinary learning to promote biodiversity at various levels in the region. The outcomes of the learning interventions will be used to develop policy recommendations to support the promotion of sustainable activities and thus biodiversity in the region in the long term.

Sufficiency-Promoting Education: An Essential Element of Education for Sustainable Consumption

Maike Gossen, Ulf Schrader

Technische Universität Berlin

Problem definition

This contribution explores the integration of sufficiency into sustainability education as an important but underrepresented strategy for promoting sustainable consumption. Despite the early recognition of sufficiency in sustainability education, current approaches have largely neglected the need for sufficiency as well as the systemic causes of overconsumption and inequality.

Method

Based on a literature review on education for sustainable development, education for sustainable consumption and transformative learning in combination with expert interviews, this work proposes a conceptual framework for sufficiency-promoting education.

Results

The framework for sufficiency-promoting education highlights whole-institution approaches and emphasizes active, interdisciplinary learning methods that promote critical and future-oriented thinking, collective action and socio-emotional skills. By embedding sufficiency into curricula, this approach cultivates a mindset that prioritizes fundamental human needs within the upper and lower limits of consumption, encourages critical reflection on the interdependence of global and local systems, and promotes sufficiency-oriented practices. The proposed framework serves as a starting point for further research and debate on the integration of sufficiency into sustainability education, particularly in the Global North, while recognising its relevance to global sustainability efforts.

Significance to mainstreaming sustainable consumption

This contribution argues for sufficiency-promoting education as a transformative approach that is aligned with genuine sustainability goals and contributes to the critical discourse on shifting the focus from enabling individual responsibility to understanding and changing systemic conditions to promote sustainable consumption.

What does the world cost? Synergies between financial education and education for sustainable consumption

Ulf Schrader¹, Daniel Fischer², Viola Muster³

¹Technische Universität Berlin, Germany; ²Leuphana University Lüneburg, Germany; ³FH Erfurt, Germany

Problem definition

Both financial literacy and sustainable consumption competencies are considered key qualifications in modern societies. However, the two educational areas of financial education (FE) and education for sustainable consumption (ESC) have so far been inadequately integrated or implemented together. While social and ecological aspects are often neglected in FE, ESC tends to focus primarily on these sustainability dimensions and neglects economic aspects. Although both financial and sustainability-related content are addressed in consumer education, this is often done only in an additive manner. While it is difficult to implement new topics and approaches into curricula it might be facilitated if it creates utility for different educational interest groups. In this presentation we will present possible synergy effects between FE and ESC, illustrate its potential with practical educational examples, and discuss possible effects.

Method

Literature research and analysis of educational sources.

Results

Synergies can be expected, if ESC issues are considered in FE and vice versa. Topics, relevant for both FE and ESC include:

- Reflecting on needs and wants can promote more sufficient consumption and, thus, a more appropriate use of financial and natural resources.
- Over-indebtedness prevention is also a contribution to social sustainability.
- The more environmentally friendly solution does not have to be the more expensive one; there are financial savings opportunities through environmental protection.
- Socially responsible investment can be safer and more profitable, or at least yield-neutral.

Significance to mainstreaming sustainable consumption

Showing synergy effects between FE and ESC could foster ESC implementation by creating extra motivation and reducing reluctance. However, adequate ESC requires that it is not restricted to win-win-settings with FE but includes a more critical perspective.

The role of researchers in the transformation of sustainable lifestyle practices – experiences from a cooperative inquiry

Gabriella Kiss¹, Ágnes Neulinger², Tamás Veress¹, Orsolya Lazányi²

¹Corvinus University of Budapest, Hungary; ²ESSRG

As university teachers and researchers focusing on the socio-ecological aspects of consumption, we regularly contemplate the potential tools and processes that could support the transition towards sustainable consumption practices. Inspired by the ideal of post-normal science (Funtowicz–Ravetz, 1993; Ravetz, 2015), we aim to actively promote and support the adoption of sustainable consumption practices and lifestyles. Simply describing the harms of unsustainable consumption practices is insufficient to induce system-level change (Shove, 2004), therefore, we must carefully select and apply our methodological choices to support our transformative goals. Despite the increasing demand for sustainable transformation, individual and institutional efforts are still insufficient to establish a fairer and more sustainable social order. This paper argues that our commitment as researchers to change towards sustainability should be reflected in our methodological choices and emphasize the need for methodological pluralism (Málovics and Pataki 2022, Norgaard, 1989). It is not enough to simply identify the problem; we must choose a form of research that also results in concrete social change.

Participatory research methods, such as action research or cooperative inquiry, simultaneously enable knowledge generation and cooperation for collectively agreed transformative goals. These methods typically avoid the division and labelling of research participants into groups of research subjects and trained researchers; instead, all participants are co-researchers, invited to engage with and meaningfully participate in the research process. Research processes typically follow a form of the planning-action-reflection cycle (Reason, 2006), encouraging and supporting all participants to co-create knowledge through their personal experiences, emotions, and interactions with others, primarily relevant for achieving the commonly agreed transformative goals (Reason-Bradbury, 2013; Freire, 1982).

As we see it, the application of participatory approaches raises several important questions, such as whose knowledge and participation are necessary to adopt sustainable lifestyle practices, as well as what roles university researchers should have in these spaces. Additionally, we focus on group dynamics of the participatory research processes to understand in detail how being in the process can (or cannot) drive lifestyle changes.

Our paper initiates a discussion on how researchers can promote sustainable consumption through participatory research. The paper describes a string of cooperative inquiry processes, so-called Eco Clubs, where a total of 42 participants (university students) through a 4-year period were joining efforts to adopt sustainable lifestyle practices. The students, as co-researchers in the Eco Club, produced reflection papers that documented their lived experiences of the process. Additionally, interviews were conducted with each participant to follow up and reflect on the entire process. The qualitative analysis of the data produced results that, at least partially, help to map the various factors and social dynamics that come into play affecting lifestyle practices. Through our analysis, we aimed to understand how action-oriented research affects co-researchers' own sustainable consumption practices. The results shed light on the potential role of action-oriented research and co-researchers in mainstreaming sustainable consumption.

4:30pm - 5:00pm

Good bye speech

Location: **Stora Salen**



LUNDS
UNIVERSITET



iiiiee

THE INTERNATIONAL INSTITUTE FOR
INDUSTRIAL ENVIRONMENTAL ECONOMICS

LUND UNIVERSITY
International Institute for
Industrial Environmental
Economics

P.O. Box 117, Tegnérplatsen 4
SE- 221 00 Lund, Sweden
Tel +46 46 222 00 00
www.iiiiee.lu.se