



# Materiality, infrastructures, and everyday practices in the green transition

Kirsten Gram-Hanssen

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AALBORG  
UNIVERSITY

# This presentation

- Based on previous research on everyday practices and energy consumption and on my ongoing ERC grant
- The importance of acknowledging relations between everyday practices and material arrangements
- How I work with this from a practice theoretical perspective and from an empirical perspective
- What key messages this has for policy and what research questions this may point towards



# The advantages of theories of practices – in the study of residential energy consumption

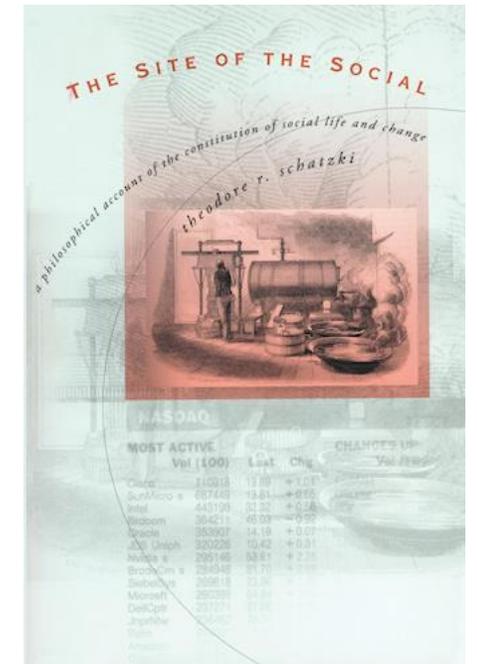
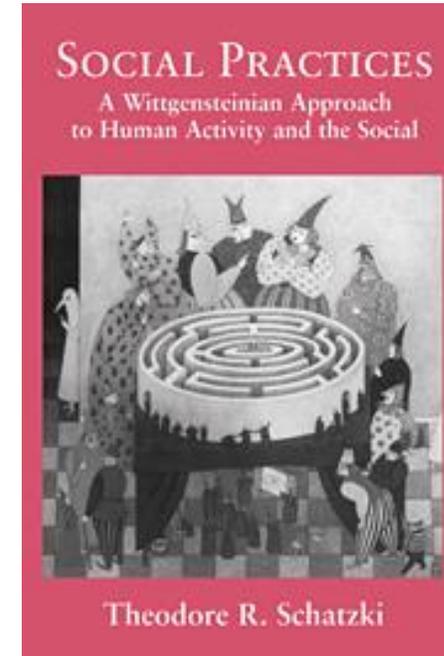
Focus on...

- ▶ the ordinary rather than the spectacular consumption
- ▶ the practices rather than the energy or the attitudes
- ▶ longer trajectories of how practices evolve
- ▶ the importance of the materiality



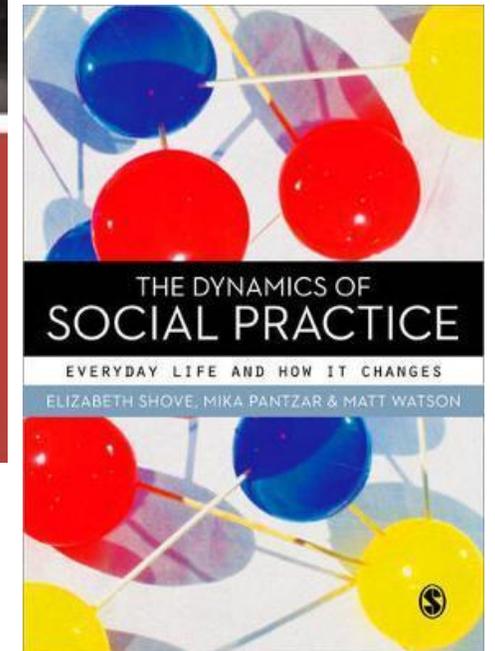
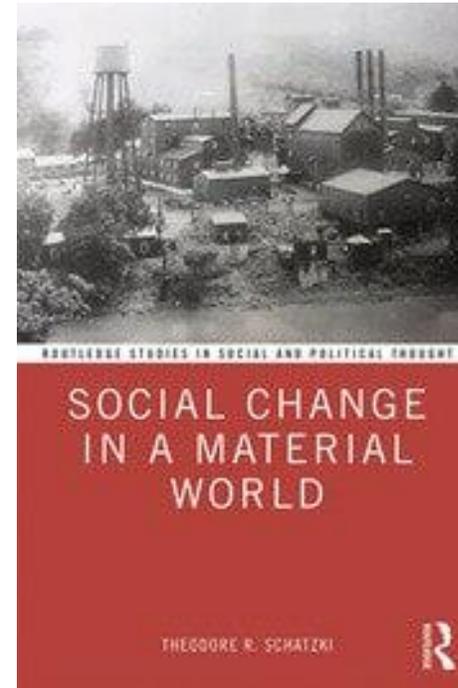
# The basics of theories of practice

- 1<sup>st</sup> generations PT theories: Overcoming the dualism of structures and actors
- 2<sup>nd</sup> generations PT theories: flat ontology - nothing but practices exist
- Practices consist of sayings and doings hold together by various elements
- Recursive relation between practice as entities and as performance – individuals as carriers
- Relates to each other as compounds, bundles or complexes – the individual as the intersection
- The social world as the plenum of practices
- Consumption as moments in practices



# Material arrangements

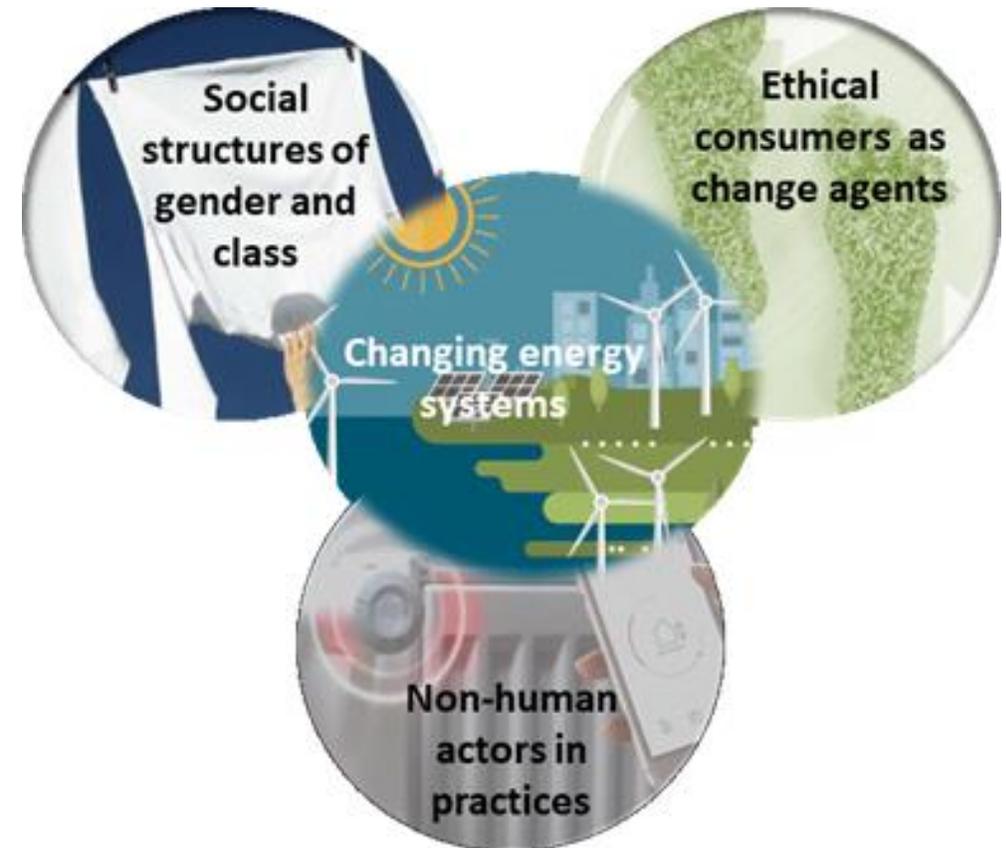
- Materials as one of the elements holding practices together, or rather material arrangements as what practices unfold within?
- Materials as humans, artifacts, organism, and things of nature
- The professional practices of the build environment and of other materiality of provision systems, are important
- Relations between practices and material arrangements include causality, prefiguration, constitution, and intelligibility



# What we might have lost – or are missing in theories of practice?

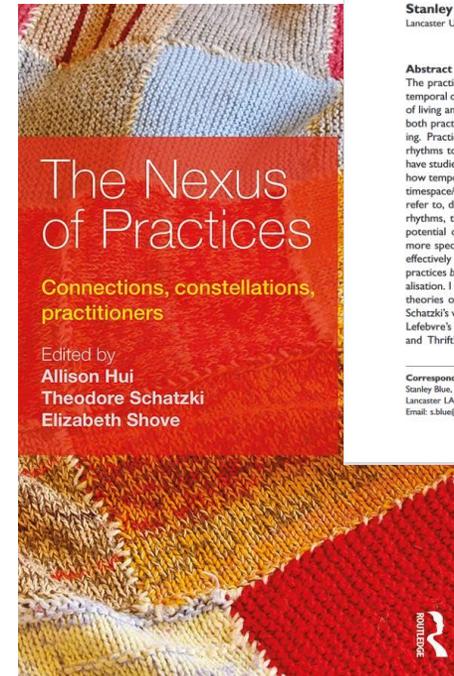
eCAPE – ERC adv grant project from 2018 to 2025

- ▶ How performance of practices varies
  - ▶ Questions of gender equality and energy poverty
  - ▶ Not seeing how the socio-cultural dynamics influence the trajectories of practices
- ▶ Peoples conscious, possibly, ethical understandings, are left out
  - ▶ Empirically we see ethics matter – so how to conceptualise it?
  - ▶ Sustainable transitions need people, so theories need people to
- ▶ Are non-human agency in the sustainable transitions well understood within theories of practice?
  - ▶ Smart home technology and natural disasters e.g.



# Institutions, structures and culture in theories of practice

- ▶ 2<sup>nd</sup> generation practice theory has been reluctant to theorize anything above or across of practices
- ▶ Connecting, suffusing and threading through practices, as well as institutionalization and the question of culture have been raised in recent years
- ▶ “...large social phenomena (like macro and global ones) have the same composition as do small, local, and micro phenomena: they consist of practice-arrangement bundles . . .”(Schatzki 2011:2).



Check for updates

Special Section: Revisiting Key Concepts

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**Institutional rhythms:  
Combining practice  
theory and  
rhythm analysis to  
conceptualise processes  
of institutionalisation**

**Stanley Blue**  
Lancaster University, UK

**Abstract**  
The practice turn in social theory has renewed interest in conceptualising the temporal organisation of social life as a way of explaining contemporary patterns of living and culture. This article explores how practice theory, practice rhythms and rhythm analysis have been used to study how temporal organisation of social life has been studied in practice theory. Practice rhythms in social theory have renewed interest in conceptualising the temporal organisation of social life as a way of explaining contemporary patterns of living and culture. This article explores how practice theory, practice rhythms and rhythm analysis have been used to study how temporal organisation of social life has been studied in practice theory.

Introduction to Special Issue

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**Introduction to the Special Issue: Renewing Theories of Practice and Reappraising the Cultural**

**Daniel Welch**  
The University of Manchester, UK

**Bente Halkier**  
University of Copenhagen, Denmark

**Margit Keller**  
Tartu Ülikool, Estonia

**Abstract**  
This short article introduces the Special Issue ‘Renewing Theories of Practice and Reappraising the Cultural’. We first discuss the ‘practice turn’ in the sociology of consumption. We introduce three lacunae that advocates have identified in contemporary theories of practice that animate the contributions of the Special Issue: around the theorisation of culture, economy and the reflexive individual. We go on to discuss the place of culture in the ‘practice turn’, and its relations to cultural sociology. We then appraise some recent attempts at resolution. Lastly, we summarise the individual contributions to the Special Issue.

**Keywords**  
Consumer culture, consumption, cultural turn, culture, practice theory, practice turn, theories of practice

**Introduction**  
The wave of sociological scholarship following the ‘practice turn’ (Schatzki et al., 2001) has theoretically revitalised a number of the discipline’s sub-fields, most notably the study of consumption (Halkier et al., 2011; Warde, 2014; Warde et al., 2017). These

**Corresponding author:**  
Daniel Welch, The University of Manchester, SCI 9th Floor AMBS, Manchester, M15 6PL, UK.  
Email: daniel.welch@manchester.ac.uk

# Developing theories of practice

# Include socio-cultural variation in practice theory?

Differences in carrying and performance of practices

- ▶ Materiality and possessions
- ▶ Competences and know how
- ▶ Meanings and norms
- ▶ Relations between practices including temporality



# Including gender in theories of practice

- Theory of practice have neglected gender
- Doing and un-doing gender
- Feminist studies on dualisms, gender, home and technology
- Gender is performed when doing other practices
- Gender is going on cross on many (all) practices and can be understood as General Understandings. (A Schatzki'an concept)



# Conceptualizing ethical consumption within theories of practice

- Environmental ethics is not the meaning or teleo-logics of a practice. Environment is never the reason we perform a practice
- Ethics, might inform the way a practice is performed
- Environmental ethics might go on cross on many different practice we perform, but maybe not all (compartmentalization)
- The importance of materiality, routinization and the collectivity of practices, should not be underestimated
- Ethics (like gender) can be conceptualized as general understandings



(Gram-Hanssen, 2021)

# Non-human agency in theories of practice

- ▶ For Schatzki only humans carry practices
- ▶ Latour and ANT talk about symmetrical anthropology
- ▶ Can we bring this symmetrical anthropology into theories of practice?



**Empirical energy studies**

# When energy retrofitting don't solve the problems

- After 30 years of energy efficiency policy, households' consumption are the same
- Larger, bigger, more, faster: Rebound effect and consumer society
- Demography and the build environment: 40% single person household in DK - but most houses builds for families
- Political solutions are “non-energy” policy: housing policy and elderly policy



# Empirical studies in times of changing energy systems

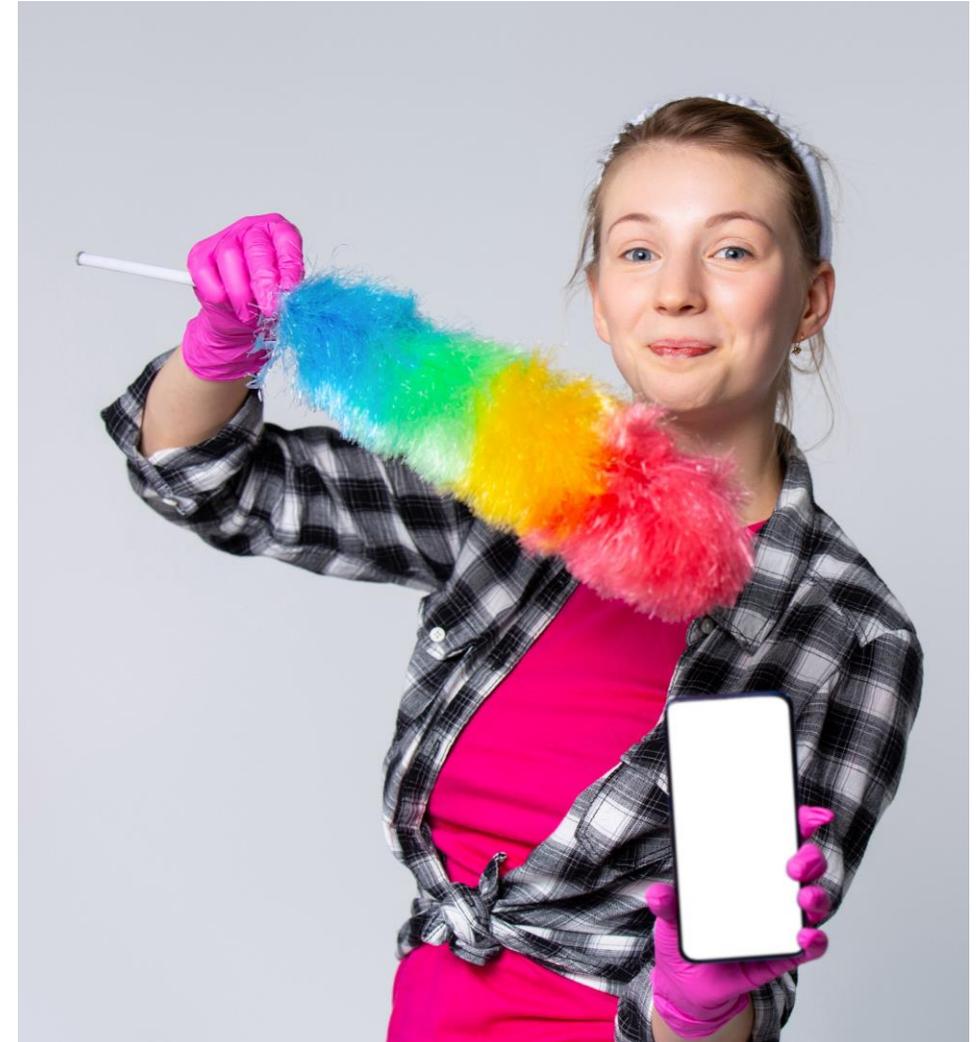
- From few big powerplants delivering what and when demand is there – towards many decentralized smaller renewable production units
- Making production and consumption meet in time resolutions, with intermittent production from sun and wind and demand following social rhythms
- Digitalization and liberalization, together with prize signals for consumers
- Energy crisis and what that means for everyday practices?



# Gender, energy and smart home

- Buildings & Cities, SI, and a PhD (to be defended)
- Gender matters for the performance of everyday practices: most energy consuming practice in homes performed by women
- Investing in PV, smart home technology and following flexible prizes are gendered and mainly performed by men
- Competences, interest and flexibility in everyday life varies strongly among household members
- Tech products development and energy systems could learn from this

(Aagaard & Madsen, 2022; Mechlenborg & Gram-Hanssen, 2022; Aagaard, 2022)



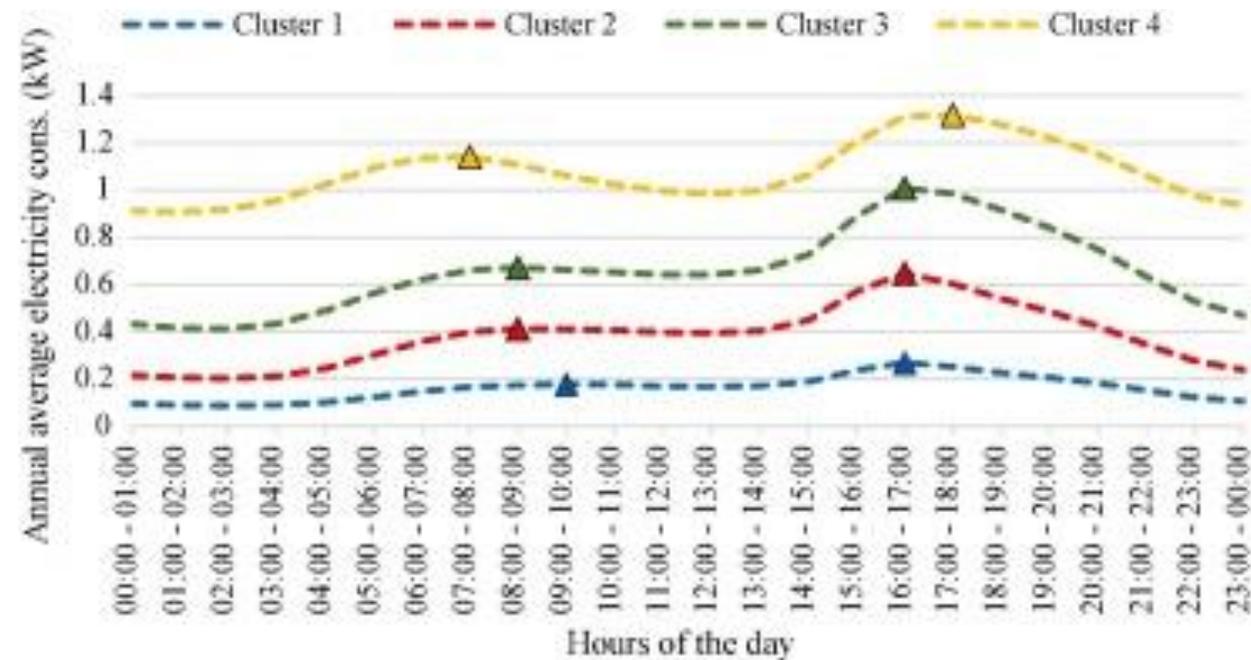
# Who and how to control flexible demand?

- ▶ Flexible demand, to be controlled by utilities or consumers? Or to partly be automatized?
- ▶ Who, among the consumers, will be able to understand, control and benefit from this?
- ▶ If flexible consumption only works for those who can understand and use new technologies, then we will face some problems
  - ▶ Related to inequality
  - ▶ Related to a sustainable energy systems
- ▶ Can we develop smart home technologies and infrastructures which are easy to use also for those not born digital?



# Energy vulnerability and flexible demand

- Do we get new types of vulnerability with flexible demand?
- Register analysis: Households having higher demand compared to others also have more peaky demand
- Survey analysis: households with children experience less flexibility in everyday life, but no gender difference?
- Flexible prizes not a big thing before energy crisis, but now?



(Trotta, 2020)

# Environmental ethics: an on-going PhD

- Studying people who are actively engaged in energy consumption, production and climate issues
- How ethics are at play in context in everyday practices and for some imply critics of consumer culture and infrastructures, whereas not for all (Askholm and Gram-Hanssen, 2022)
- The cultivation of environmental ethics and how people became more sustainable what it means to them (Askholm, forthcoming)



# Care, comfort and smart home technology

- Sustainable consumption of energy is about balancing care for people, buildings and environment
- This must happen in situated practices – thus not based on objective comfort norms
- Can smart home technology help in this?
- What are the imaginaries behind smart home technology development?



# Energy vulnerability in times of crisis

- ▶ Do energy poverty become a major issue in DK?
- ▶ Do we get lasting changes in everyday practices?
- ▶ Starting to investigate this now qualitatively, including:
  - ▶ Vulnerable people on the edge of being able to afford their heating
  - ▶ Middleclass people experiencing financial issues caused by heating expenditures
  - ▶ People experiencing the energy crisis as a welcome push for further reducing consumption for the sake of climate



# Non-human agency?

- ▶ Theoretical questions rather than empirical analysis
- ▶ Learning to live in a smart home – based on autobiography
- ▶ Differences between dynamic non-humans and other types of non-humans?
- ▶ Ethic of care as a way of linking to non-humans?
- ▶ The difficult part of my study?



**Policy messages**

# UNDERSTANDING PEOPLE AND MATERIAL ARRANGEMENT TOGETHER

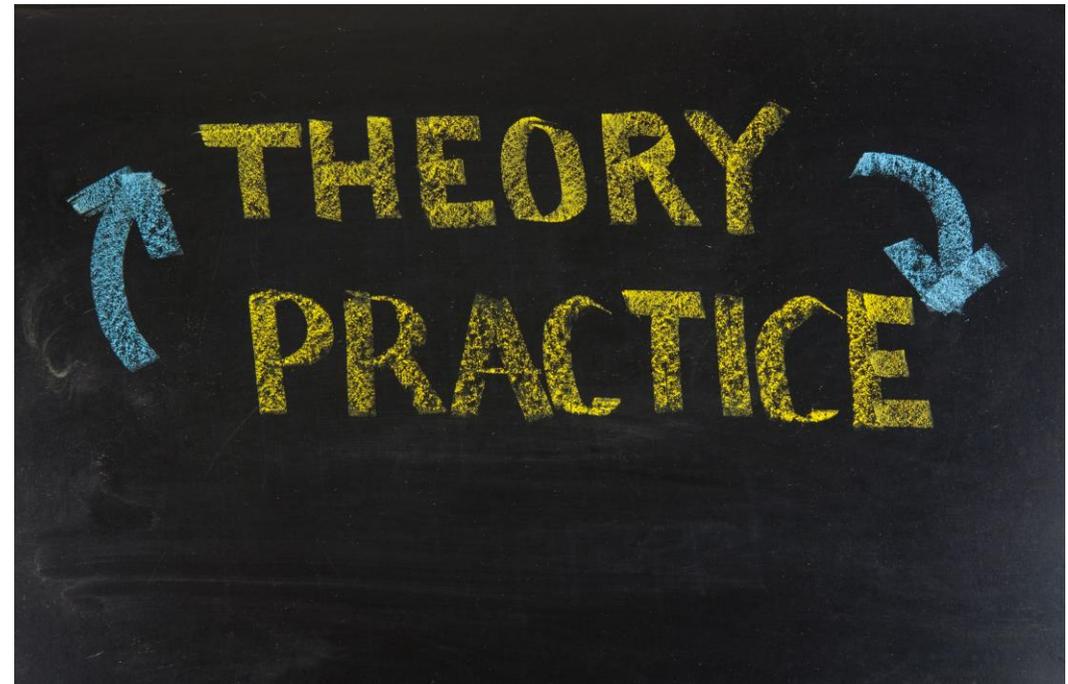
- ❶ Technological solution in them self will not bring a sustainable society – important to keep on producing empirical results to exemplify this
- ❷ We need to look beyond energy and environment policy to include also “non-energy” policy in understanding how demand change
- ❸ Work with technology developers and designers to find better products that solve the real problems



**Theory messages**

# What I have tried to say about theory

- ❶ Theories of practice have some clear advantages in my field of research, in the clear focus on materiality, routinization and the collectivity of norms, and how the trajectories of norms develop
- ❷ Theories of practice have been too reluctant to include (old) approaches of the social and the cultural
- ❸ Theories of practice are (maybe) not acknowledging the importance of the symmetrical anthropology between humans and non-humans



**New research questions?**

# New times? New questions?

- ▶ Climate and (smart) infrastructures are changing fast
- ▶ Combining how both climate change and infrastructure development relates to changing practices
- ▶ Understand how humans place in the world are changing with climate change and infrastructure development. Our relations and capabilities versus “nature”
- ▶ Remote areas as a special (critical) case, but in what ways?



# Some references from eCAPE

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# Thank you for the attention

**eCAPE: New Energy Consumer roles and smart technologies – Actors, Practices and Equality.**

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