Energy consumption in the comfortable home: practices, perceptions and conventions

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BACKGROUND

• UserTEC: User practices, technologies and residential energy consumption (Innovation Fund Denmark)

• Qualitative analysis of households indoor comfort practices and energy consumption
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INTRODUCTION
• Nuanced understanding of comfort
• Comfort as part of energy-consuming practices
• Practices as sensorial
• Practices as situated in the home
RESEARCH QUESTION

“How is comfort perceived and practiced through daily life in Danish detached houses?”

ANALYTICAL PERSPECTIVE

• Practices are sensorial
• Comfort and home are related concepts
• Materiality is both part of and surrounding practices
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THEORETICAL PERSPECTIVES
PERSPECTIVES ON COMFORT

• Support, pleasure, well-being (Crowley 1999, Rybzynski 1988)
• Thermal comfort (de Dear & Brager, Nicol & Humphreys)
• Conventions and socio-cultural contract (Shove 2003)
• Comfort practices (Gram-Hanssen 2010, Strengers 2010, Hitchings 2011)
• Individual perceptions in socio-cultural context (Vannini & Taggart 2013, 1024, Hauge 2013)
• More than thermal
• Empirical study: To feel comfortable in a home
THE SOCIAL, MATERIAL AND SENSORIAL HOME

• House and home: physical and social (Mallet 2004, Blunt & Dowling 2006)

• Home understood as both material structure and social construct (Mallet 2004, Blunt & Dowling 2006)

• Home-making practices (Blunt & Dowling 2006, Pink 2004)

• The sensory home (Pink 2004)
• Practices are embodied (Schatzki 2001)

• Bodies and practices constitute each other (Wallenborn & Wilhite 2014)

• Senses: e.g. thermoception, touch, smell, vision (Vannini 2011)

• Senses represent embodied experiences of home-making (Pink 2004)
THEORIES OF SOCIAL PRACTICES

- Practices constitute the social world (Schatzki 1996)
- Practice-as-entity and practice-as-performance (Schatzki 1996)
- Elements of a practice: competences, meanings and materials (Shove et al. 2012)
Perspectives on practice theory in the papers

1. Practices, the body and senses
2. Practices in the home
3. Materiality and practices
3 METHODOLOGICAL APPROACH
FIELD STUDY in three groups of detached houses
METHODS in field study

• Photos and observations: materiality
• Home tours: everyday activities
• In-depth interviews: daily life, energy consumption, comfort and home
• Photo-elicitation: comfort and home
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PAPER I – III AND ANALYSES
PAPER I

RQ “How can comfort be understood as sensed and perceived within everyday practices in the home?”
PAPER I

Aspects of comfort in social practices: empirical results

- Warmth and coolness
- Air
- Light
- Material stuff
"You’re _cosy_, sitting together, _relaxing_ after the rigours of the day or week (...) it’s a _comfortable temperature_ around 22 degrees, where you’re _not cold_, it’s also often we bring in the _duvet_ and sit in the sofa, just to have it as part of the cosiness"
“Sometimes I feel, for example if I’ve forgotten to air down in the basement, then it’s like (...) the air is cramped, it’s like it radiates from the furniture and clothes, from all the stuff that’s in there. It should be comfortable at home, so you feel like freshened up”
“(…) now it’s bright and the sun is shining, but I think it’s just as cosy when it gets dark and we light candles in the autumn and winter”

“What was very important to us was to have good lighting here, cosy lighting (…) it shouldn’t just be neon tubes”
MATERIALITY

“(…) the dark floor and the dark furniture (…) it had to go, it had to be bright (…) I bought these two carpets (…) So it brightened a bit, and then I had all the ceilings painted white”

“(…) to sit in soft furniture, or to lie in a soft bed, then you feel comfortable…or to sit in a good office chair”
CONCLUSIONS

- More **senses** involved and interrelated in the perception of comfort through practices
- Aspects of comfort are **interrelated** in practices
- Sensations of comfort vary according to **performed practices**
- Comfort is sensed and interpreted in relation to social **meanings**, **materialities** and bodily **knowhow**
- Senses **mediate** between materiality and social meaning as a bodily knowhow in practices
PAPER II

RQ “How are notions of comfort and notions of home related and intertwined in daily home-making practices?”
PAPER II – perceptions of comfort
PAPER II – perceptions of *homeliness*
Comfort and homeliness: different rooms and different practices

Comfort: practices heating, watching television, drinking tea or coffee, showering and working from home

Comfort: rooms
living room, the home office, the bathroom and the bedroom
Comfort and homeliness: different rooms and different practices

Homeliness: practices cooking, doing laundry, decorating, spending time with the family; talking, dining and playing

Homeliness: rooms kitchen-dining area, the living room, the bedroom, the utility room, the office and the workshop
CONCLUSIONS

• Meanings of comfort and home are *interrelated*

• **Comfort** is more related to bodily sensations and physical experiences; relaxation and leisure time

• **Homeliness** is more related to social relations; the daily tasks of family life

• Comfort and homeliness are related to different *practices* performed in different *rooms*
PAPER III

RQ “How do technologies and material structures of housing form routines of everyday practices and norms of comfort?”
Detached houses 1969-79

- Heating technologies: radiators, underfloor heating, wood stove, heat pump
- Heating practices: more technologies, turning on and off
- Heating and airing practices closely linked
- Ongoing sensing and regulation between warm and cold
PAPER III

Detached houses

1997-2001

• Heating technology: underfloor heating
• Heating practice: both simple and challenging
• Heating and airing: used for regulation
• Regulation around seasons
• Sensing: warm floors
Low-energy houses

2012-13

• Technologies: Underfloor heating and mechanical ventilation
• Heating practices: little regulation
• Sensing: even heating, cool floors, air from outside
• Thermostats: facts and senses
CONCLUSIONS

- **Heating** and **airing** practices are interrelated through bodily knowhow and sensations and social meanings.
- **Perceptions** of comfort vary with technologies and building types.
- Technologies and material structures of houses form and change **practices** related to comfort.
SUMMING UP on theoretical perspectives in papers

1. Practices are **sensorial** and performed by **bodies**
2. Practices related to **comfort** are situated within the social and material **home**
3. In the study of comfort **materiality** is both part of practices and surrounding practices
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CONCLUSIONS AND IMPLICATIONS
MAIN CONCLUSIONS AND CONTRIBUTIONS

• Comfort is multi-sensorial and more than thermal
• Comfort is bodily sensed and socially interpreted
• Comfort is part of everyday practices of homemaking
• Aspects of comfort are both part of performing practices and background to performing practices
• Comfort is individually sensed and socially shared in practices
IMPLICATIONS AND FUTURE VISIONS

• The **comfortable home** and sustainable everyday life

• Different **use of rooms** in houses; accommodate technologies

• Comfort include **various senses**; flexible notion comfort

• Develop new meanings of **sustainable comfort**
Thank you for listening –

Christmas decoration representing comfort and homeliness
Extra slide

Examples

• Focus on how homes can be regulated and developed to accommodate better zoning of temperatures.
• Experimenting with other ways of building (or renovating) houses, favouring comfort aspects such as light, air, materiality and usability, as well as using knowledge of how this interact with the sensation of heat, e.g. how floor materials feel colder or warmer.
• People sense, perceive and understand through their body as much as through reading figures and text messages. This point to houses that in a more direct way communicate to its inhabitants through bodily sensations, guiding them in the management of their indoor comfort in ways that consume less energy.