

Decarbonizing suburban and rural housing

Citizens as agents of change

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University of Helsinki, main building, F3003 Tekla Hultin

BOOK OF ABSTRACTS

SESSION: Climate-wise housing: governance, business and policies 1

Room U2071

Session Chair: Eliisa Kylkilahti

Taking initiative, driving social innovation? – Cities co-creating services to support low-carbon housing and retrofits

Eliisa Kylkilahti, Anne Viljanen, Anne Toppinen

Our study approaches decarbonizing housing as a service developed via social innovation process. The process aims to generate ideas contributing to climate change mitigation in the built environment. Cities may act as enablers or intermediators for low-carbon housing. However, their possibilities to drive initiatives should be better known. The study builds on the theoretical understanding of social innovations and utilizes service-design approach. It analyses a multi-actor co-design process that involves city representatives and stakeholders. Prior to generating workshop data, qualitative consumer-citizen data and city strategic documents were analyzed. The analysis focuses on the framing challenges and assumptions of decarbonized future, citizen needs and the factors driving initiatives further. Results suggest a common pool of challenges, assumptions on decarbonized future in 2035 not all positive, and call for developing citizen-support. To address strategic aims, vision and citizen needs into actionable initiatives, cities face three key issues: inter-organizational division of labor, plenitude of actors with limited interaction channels, and unidentified ownership of responsibility in the process. This study contributes to literature of multi-actor social innovations. It is a unique endeavor in the front-end of co-creation process, with a special focus on cities as public sector actors nurturing urgently needed low-carbon solutions.

Resident participation in sustainability projects of Finnish housing companies

Julia Johansson

Resident participation in sustainability projects of Finnish housing companies Julia Johansson & Eliisa Kylkilahti University of Helsinki The housing sector, in terms of residential buildings, uses approximately 27% of the world's energy and accounts for 17% of global CO2 emissions. EU's strategy for transitioning to cleaner and more sustainable energy systems stresses citizen participation to cultivate a sense of ownership and accountability among the population. The Finnish housing company model emphasizes collective ownership and responsibility as well as a sense of community among residents in managing and maintaining their living spaces. Literature suggests that residents generally hold a positive view of sustainable renovation projects, but they have concerns and issues regarding the renovation process, including matters of procedural justice and that they are motivated to engage in sustainable behaviour when they feel a sense of control over their actions and when these actions align with prevailing social norms. This study asks how and what kind of sustainability projects housing companies are driving. More specifically the study aims recognize what are the most effective strategies for involving residents in promoting sustainability transitions in housing. The empirical data consists of housing expert (n=7) and resident (n=8) interviews collected between September and December 2023. The chosen participants were in the process or planning phase of a sustainability project, most typically energy renovation or joint yard project. The preliminary results suggest that the driving force for sustainability initiatives often stems from a proactive resident or property manager capable of assimilating new information and altering perspectives. Many residents adopt a concrete and practical approach to sustainability, focusing on immediate concerns such as utility fees and indoor comfort rather than delving into broader sustainability or energy efficiency discussions. Feeling of ownership and believing in the ability to influence create commitment and proactivity. A low-threshold communication encourages residents to highlight their needs or concerns which may initiate a discussion process that can result in a project being implemented in the housing association.

Land-use policy instruments for sustainable housing: Insights from municipality planners in Finland

Katja Lähtinen, Vesa Kanninen, Pia Bäcklund, Liina Häyrinen, Atte Koskivaara, Nicki Malm

Housing has become a topical issue for local sustainable land-use planning concerns in relation to the United Nations Sustainable Development Goals (SDGs), for example. The Finnish land-use planning system is characterised by municipal planning monopolies and enables the use of formal and informal land-use planning instruments. With online survey data collected in 2021 from land-use planners working in Finnish municipalities, this study provides information about local level operationalization of sustainable housing aims, and their effects on the use of land-use policy instruments. As methods of analysis, exploratory factor analysis and binary logistic

regression analysis are employed. According to our findings, the two main themes in enhancing sustainable housing in Finnish municipalities are the Citizen focus and the Construction focus, which from the perspective of land-use policy instruments are enhanced differently. Despite the similar regulatory possibilities for enhancing both themes, the Citizen focus is more enhanced by formal, and the Construction focus more by informal approaches. For future development, a better recognition of the links between social and environmental sustainability aspects in housing and detachment from instrumental silos would support local sustainability activities in municipalities.

SESSION: Climate-wise living: values, attitudes and practices 1

Room F3003

Session Chair: Henna Syrjälä

“Living with nature as the nearest neighbor” – Values related to nature in Finnish citizens’ housing aspirations

Charlotta Harju, Katja Lähtinen, Anne Toppinen

Interaction between actors around sustainability transition is seen as elementary for co-creating knowledge about what constitutes a fair, just and sustainable society. The focus in this paper is on the housing and construction sector as a socio-technical system in Finland, which currently accounts for about 40% of energy use and 35% of greenhouse gas emissions. We conducted a qualitative interview study among 18 organisations and a larger network study comprising 35 actors to address our research questions: How do actors constitute a network and define climate-wise housing and construction? What specific focus areas around climate action can be identified? What barriers to, and enablers of, climate-wise housing and construction can be identified? Although the network seems relatively dense and inclusive, some misalignment emerged upon closer examination. The actors were uniformly engaged in energy-related topics but differed in their emphasis on household choices, low-carbon materials and the circular economy. We identified a range of enablers and barriers within four broad categories: alignment of goals, network characteristics, intermediation, and propensity to transition. Although our results suggest that development in terms of climate action has started to gain more ground in Finland in recent years, there is some evidence of institutional inertia.

Arguing for and against country living in an online newspaper comment section

Eveliina Salmela, Merja Koskela, Henna Syrjälä, Liisa Kääntä

The aim of this presentation is to explore how living in the countryside is argued for in Finnish online discussions concerning people's mundane housing in the context of climate change. In this presentation we focus on subject positions, that is, how people position themselves and others in reader comments. This is interesting, because such positioning has social and political implications (e.g. Fielding & Hornsey, 2016). Especially creating in-groups and out-groups (see Hall, 1990) has been found to be typical of this kind of topics that have potential for polarization. The data consists of 105 urban-rural relevant comments on 25 articles published in Helsingin Sanomat (digital version, years 2017-2020) concerning sustainable housing. The method of the study was based on discourse analysis (Fairclough, 2003). We identified passages of the discussions where actions and activities of people or groups of people were named. We categorized the actors and coded them as representants of in-groups, out-groups or neutral (see e.g. Ide, 2016). The results of the analysis show that the voice of the countryside is highlighted in the data. People from the countryside are portrayed as the "unheard", while the city people are described as having the power and the money. However, the subject positions tend to be both stable and changing, depending on the circumstances, such as leaving the countryside or moving there for various reasons.

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Five Finlands

Joni Vainikka, Eve Salmela, Sara-Ellen Laitinen, Joonas Lindfors, Anne Toppinen, Venla Bernelius

High awareness of the changing climate is not always met with a sense of urgency in climate action as views among the public on coping measures continue to differ. Diversity of views and attitudes has been acknowledged in previous research that segments the climate-concerned public but often without qualifying the discursive landscape within such groupings. In this mixed-methods-based paper, we first employ a latent class analysis to a random sample survey data representing the Finnish public to form a five-part classification. Second, we complement and operationalize the segmentation with qualitative insights drawn from online discussions and interview data. We name the segments of Finnish dwellers as engaged, aware, cautious, unsure and divergent based on their general views toward the changing climate and reflect why respondents seem to cluster into such segments based on socioeconomic, geographical and ideological data. Using this classification as a lens allows us to identify citizens between more active or vocal opposites and to shed light on the overlooked mass that holds a key for more

effective climate policies. While such a classification can overlap and be contextual and shifting, it helps to put different approaches and attitudes to scale. Through operationalizing the created typology, we discuss why it is crucial to understand the views of the mass in the middle, or people who are aware but, to an extent, disempowered from climate-wise practices, and why proliferating a societal change through them has the greatest potential in successful climate mitigation.

SESSION: Climate-wise housing: governance, business and policies 2

Room U2071

Session Chair: Katja Lähtinen

Vesa Kanninen, Selja Ryöppy, Katja Lähtinen, Anne Toppinen

Interaction between actors around sustainability transition is seen as elementary for co-creating knowledge about what constitutes a fair, just and sustainable society. The focus in this paper is on the housing and construction sector as a socio-technical system in Finland, which currently accounts for about 40% of energy use and 35% of greenhouse gas emissions. We conducted a qualitative interview study among 18 organisations and a larger network study comprising 35 actors to address our research questions: How do actors constitute a network and define climate-wise housing and construction? What specific focus areas around climate action can be identified? What barriers to, and enablers of, climate-wise housing and construction can be identified? Although the network seems relatively dense and inclusive, some misalignment emerged upon closer examination. The actors were uniformly engaged in energy-related topics but differed in their emphasis on household choices, low-carbon materials and the circular economy. We identified a range of enablers and barriers within four broad categories: alignment of goals, network characteristics, intermediation, and propensity to transition. Although our results suggest that development in terms of climate action has started to gain more ground in Finland in recent years, there is some evidence of institutional inertia.

The Development of Business Networks in Wooden Multistorey Construction

Atte Koskivaara

This research studies the development of business networks of a sustainable niche market - wooden multistorey construction (WMC). In strategic niche management, networks are initially considered to be loose and sparse, but to get denser over time as more knowledge is accumulated in the networks through experiments. Additionally, the role of spatial proximity is considered to imply that easier communication and interaction between partners are important to collaboration. The analysis of networks is a viable way to assess the development of

sustainable transitions as established practices create expectations and social learning is accumulated through experimentation. Because the emergence of networks in niches is essential for the development of protected spaces and novel technologies, Social Network Analysis (SNA) has become widely used to assess the connections and relationships among actors to comprehend niche characteristics. This research studies the development of Finnish WMC business networks by assessing actualized residential building projects during a period of 1996-2023. The study identifies two distinct periods of WMC activity, analyses structures of the networks during these two periods, assesses breadth, depth, and connectedness of the networks as well as the importance and development of spatial proximity between network actors.

Circular economy business ecosystem: from barriers to solutions in wood construction in Finland

Md. Rayhanur Rahman, Angelina Korsunova-Tsaruk, Anastasija Dmitrijeva, Anne Toppinen

Previous research found wood has the greatest reuse capacity when compared to conventional materials. Although the EU is emphasizing circularity in wood construction, the current rates are at a marginal level research has shown that further enhancement of business ecosystem is critical for the increase of wood material circularity in construction. This study explores the business ecosystem actor's involvement in material circulation in Finland and analyses the rationale behind the barriers to increasing recycled wood materials used in construction. The research data is based on 14 semi-structured qualitative interviews and two workshops (forthcoming in spring 2024) with experts working in the field of construction. We first mapped actors and found indications that the construction operational level actors are yet largely missing. The interview findings also emphasize the significant role of mediating actors, such as the management of material hubs, in accelerating the circular economy in wood construction. During workshops we wish to dive deeper into practical solutions, also including the use of digital platforms for better circulating wooden building materials.

Twenty years of the wood construction policy in Finland – case of a performative governance?

Erkki-Jussi Nylén

If a long-term policy becomes a subject for an investigative journalism, it is safe to say that it likely is not a good look. Finnish public broadcasting company YLE released a television program titled "The lost forerunner country of wood construction" in its investigative journalism program MOT on 20th Sep 2021. Program listed various policy programs that has initiated in a purpose of furthering wood construction in Finland. I came across to the same list in other instances too, and none of them discussed what was done in these policy programs. In my presentation, I will

discuss my ongoing analysis of the unfolding of wood construction policy in Finland since mid-1990s. Promotion of wood construction has been a policy item in each government program since 1995, but wood construction still remains a niche. I intend analyse the policy from perspective of performative governance. Iza Ding defines performative governance as “the state’s deployment of visual, verbal, and gestural symbols of good governance for the audience of citizens” The main alternative to performative governance is substantive governance which, in simple terms, delivers both communications and results. My aim in this research is to find out what has been done in the name of wood construction policy over the years and unpack reasons why objectives of the policy has been difficult to achieve. My plan is also to compare wood construction policy to other market shaping policy: promotion of nutrient recycling, which is familiar to me from previous work.

SESSION: Climate-wise living: values, attitudes and practices 2

Room F3003

Session Chair: Merja Koskela

Sufficiency in Housing – Is there a Case for Shared Use of Spaces?

Enni Ruokamo, Eliisa Kylkilahti, Michael Lettenmeier, Anne Toppinen

The shared use of living space has been identified one option for increasing the sustainability of housing. 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. Space sharing could be an attractive avenue to increase the utilization rate and the efficiency of space use between households. The paper proposed is based on a large-scale random sample consumer survey in Finland that was related to multiple aspects of sustainability and low-carbon options in housing. The paper presents the results of the survey that are related to the preferences of the interviewees in terms of shared use of spaces, providing both quantitative preference-related results and qualitative analysis of answers to an open question on shared space use. Both quantitative and qualitative results show that shared space use seems to be a concept of relatively low popularity. However, there are differences depending on the space to be shared. While around half of the respondents are willing to use shared space for workout, playing activities of children, and workshop or repairing activities, only a small fraction of the respondent would use it for preparing food, working and studying, and accommodation of guests. Nevertheless, there are differences in preferences depending on the respondents’ background so that families with bigger household size and living in urban areas show higher interest in sharing in comparison to rural areas and detached housing. The paper concludes that shared space use seems to be relatively unattractive under present conditions. Increasing awareness of

the benefits of shared space use by, e.g., spreading good examples and experiences could be one approach to improve the situation.

Dreaming of solar panels – consumers' economic discourses in climate-wise housing

Eliisa Kylkilahti

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). 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, support for energy renovations has been targeted at skilled and fairly well-off households who might take action even without subsidies. A better understanding of the economic situation and financial competence that frame people's everyday lives is needed. By analyzing household interview data, this study asks, what kind of economic discourses are present when the sustainability of housing is discussed. As background information, participants have been asked, among other things, about their household's disposable income and how they themselves feel about their financial situation. The data is organized accordingly to recognize how different financial positions connect with the perceived possibilities to make climate-wise changes in housing. The preliminary results indicate that solar panels, heat pumps and full renovations represent dream or something 'you should have' among many. Money is considered a constraint in all income groups, however, it is tied to different realities.

The influence of materials on household energy consumption – Three practice-theoretical perspectives

Sara-Ellen Laitinen, Henna Syrjälä, Eliisa Kylkilahti, Liisa Kääntä

Materials are an essential part of social practices and their performance. Yet, there are different views on the role of materials in practice and the agency they induce in relation to humans. The purpose of this research is to clarify the differences in three practice-theoretical approaches by drawing on household energy-consumption practices. We examine the influence of materials on the performance and sustainability of these practices. To this end, we analyse consumer narratives (n=25) and interviews (n=30) on daily home practices. Based on this multifaceted practice-theoretical analysis, we demonstrate that materials can influence the performance of a practice in three main ways: by changing the performance of the practice, preventing its performance, or creating a new practice. The role and agency of material in performing the practice vary depending on the practice-theoretical approach through which the practice is examined. Sustainability is determined by the materiality of the practice, its connection to other practices, and people's reactions to the influence of material on the performance of the practice.

Divergence, magnified presence, and the construction of obstruction: a story of climate denialism in Finland

Joni Vainikka, Eveliina Salmela

Within social sciences ideas of relationality have pushed scholars to rethink the connections between entities and how our identities are products of others. As physical distance is not indicative of presence and proximity, questions of the inside and the outside become topologically twisted. Recently scholars have started to look at questions of disconnection, non-relationality and unavailability and the idea that not everything can be sources of attachments. Thick relations can engender attitudinal and ideological differences, negating forces and beliefs of an outside. This divergence can be spatial, categorical or learned. It can also be manufactured when a frail identity construct is conditioned through the other and not through internal relations or attachments. We take this divergence as a starting point to understand climate denialism that spawns, especially in anonymous social media platforms. Arguing that anonymity enables dismissive ideas to spread and self-enforce without authorship, this paper analyses how the changing climate becomes personified through ideological differences where facts are lost for the need for inflammatory acceptance by the perceived peers. Within social media idealising an antipode magnifies the presence of a minority that is most often socially inept at voicing similar sentiments in everyday social environments. Empirically the paper departs from a survey (n=1446) covering future housing and decarbonisation collated with social media analysis of anonymous discussion boards. Using statistical methods to guide a discourse analysis on the denialist mediasphere material, we conclude that researchers should keep in mind that, while visible, obstructionist ideologies are not that widespread and more discussion should be directed to the behaviour of the mass between the imagined opposites which in many cases are more relational.