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Sustainable Consumption Research and Action Initiative

Transitions Beyond a Consumer Society

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PAPER ABSTRACTS, LISTED ALPHABETICALLY

A

Rita de Cassia Afonso¹, Cristine Carvalho¹, Bibiana Serpa Serpa¹
**Production and Consumption of Culture in Brazilian Favelas:
A Case Study in Rio De Janeiro**

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The article presents a broader concept of sustainability and discusses the production and consumption of culture in Rio de Janeiro's favelas, Brazil. It is based on a literature review on sustainable lifestyle and proposes the confrontation with broader sustainability concepts according to Sachs, Sen and UNESCO, who uses also the territorial, cultural and political perspectives besides the traditional economic, social and environmental tripod. The exemplary case - Solos Culturais, conducted by Observatório de Favelas (a non-governmental organization in Rio de Janeiro city), that encourages and supports the cultural production in favelas, will be presented and analyzed in relation to the concepts of sustainability. As main result, we identified a close relationship between sustainability concepts and cultural production in Rio de Janeiro's favelas. Moreover, this paper proposes that the study of culture production in favelas can be covered, situated within the context, in the sustainable lifestyle field.

Sanna Ala-Mantila¹
**Subjective Wellbeing in Helsinki Capital Region –
Examining Living Place Satisfaction and Quality Of Life**

¹Aalto University

New infill projects and densification tend to be connected with the discontent of the existing inhabitants. However, other benefits to density, such as improved service supply and increased social interaction can compensate for the loss of privacy and space. Accordingly, concentrating on e.g. satisfaction with the neighborhood itself is insufficient, and the overall experience of wellbeing is more relevant a measure when discussing densification. The factors of good life are remarkably similar for everyone, and multiple studies report a relationship with health, family status, income, and age. However, urban planning cannot, at least directly, affect these socioeconomic factors. Nevertheless, a strand of planning literature has linked experienced wellbeing with the contextual variables, such as accessibility, and adding a spatial dimension has been found to enhance the explanatory power of models explaining some indicator of subjective well-being. However, it has been also argued that contextual social sustainability is more strongly associated with social structures of the urban form than urban form per se. We study whether contextual factors explain subjective wellbeing, namely satisfaction with the conditions of living place and general quality of life, and whether there are differences in the relationships between area and contextual variables and these two indicators. As our data, we use Finnish Regional Health and Well-being survey, which contains a wide array of background variables along with the self-reported experiential and wellbeing measures. When controlling for relevant socioeconomic background variables, we can study the independent effect of contextual and social capital variables and compare the results of different urban zone classifications. The results indicate, for example, that people are the most satisfied with their living conditions in the pedestrian zones, but the effect of urban zones on general quality of life is not as strong. The effect of perceived contextual disadvantages, such as unsafety, noise and traffic, affect satisfaction with living place conditions more than they affect the overall quality of life. These results also demonstrate that comprehensive indicators such as quality

of life give more balanced a view of the effects of density than looking only at satisfaction with the neighborhood.

Samuel Allen¹, Michael Elmes¹

Bicycle Collectives: Sensemaking and Social Innovation in the Transition to a Circular Economy

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The bicycle is a consumer product which is increasingly viewed by multiple stakeholders as a leverage point for systemic change. Bicycle collectives are social innovations which promote adoption of the bicycle through at least one of three ways: 1) bicycle-recovery reverse supply chains, 2) multi-stakeholder collaboration and 3) advocacy. We explore the sensemaking process underlying the origin and success of non-profit bicycle collectives, with the aim of building understanding of how grassroots innovations in pursuit of societal transitions organize, learn and succeed. We used mixed methods from systems modeling and grounded theory to study how bicycle collectives report using cues to develop and act on new shared mental models. We developed three tools based on 1) behavior-over-time-graphs, 2) reference modes and 3) purposive text analysis for use in studying the sensemaking process. We asked collectives to describe how members made meaning from cues from the environment and how this meaning influenced collective mental models and actions. We were particularly interested in how this occurred in their origin and formative stories of surprising successes and failures. These descriptions produced a set of visualizations of the behavior over time of variables, showing surprising events or undesired trends. These are the cues that theoretically indicate changes in the environment and spur sensemaking. On these visualizations, we overlay the hoped-for, feared and actual behavior of these cues in terms of a cue, or variable. We gathered verbal descriptions of the sensemaking process which consists of stories describing how cues and organizational changes influenced changes to mental models. These visualizations and stories are used in developing a qualitative model of the roles of bicycle collectives in societal transitions toward sustainable mobility. We conclude with a discussion of the implications for theory and practice in reverse supply chains, transitions studies, mixed methods, system dynamics and sensemaking.

Manisha Anantharaman¹

The "Sustainability" of Class Relations in Bangalore, India

¹Saint Mary's College of California

Sustainability scholarship is increasingly focusing on individual behavior change and sustainable consumption as crucial components of engendering more sustainable societies. Practices like bicycling to work, recycling and reusing goods, eating organic food, or buying used clothes are heralded as both integral to and generative of larger societal transformations. Scholars have begun to identify the individual and societal conditions that can help engender such practices; studying attitudes, social norms, and infrastructures. Less attention has been paid to the situated relational class politics of greening lifestyles, which is especially important as most 'green' lifestyle practices are also the very quotidian acts that sustain and support the livelihoods of the poor, especially in developing countries. In this paper, I draw on an ethnographic study of bicycling and waste management practices in Bangalore, India to ask critical questions about the links between middle-classness, poverty, and sustainability. I ask how middle class practitioners of bicycling and waste management in Bangalore relate to those poor others who bicycle and recycle; and define themselves in relation to both the urban poor in Bangalore, and to cyclists and recyclers in the USA and Europe. I argue that as middle class groups adopt and promote these practices, class distinctions are both transformed and reinforced. Class relations are

mediated in new spatial territories like bicycle lanes and recycling centers, and around new discourses on global environmental problems like climate change. At the same time, familiar and embedded cultures of servitude and distinction pervade these new practices, limiting their transformative potential.

Midori Aoyagi¹

Energy Choice, Decoupling Economic Development and Environment in Japan

¹National Institute for Environmental Studies

In this paper we discuss about the people's support for nuclear power and renewable energy. Our approach is from a classic "economy vs. energy" argument with current energy choice, as everyday lifestyles is almost equal to the choice of energy. Our data is from our nation-wide public opinion survey of October 2014. Effective responses were 1548 out of 3000 nationally representatively sampled based on Basic Residents Register. Our results show that people who are better off tended to support resuming nuclear power generation, and also tend to choose economy over environment. On the other hand, people who are not tended to support renewables, and to choose environment over economy. How can we explain this "twisted" situation? One is the priority scenario. People who are not better off put priority on safety over wealth, as they are more fragile against disasters, or large scale accidents. People who are better off put priority on economy over the environment, as keeping business as usual is the most risk-avoidable choice of theirs. Another is the de-growth scenario. People who are currently not in better situation have already recognized de-growth situation and accepted it. But people who are currently in better situation want to keep their current lifestyle standard. Thus, through choice of energy, we can see people's attitudes towards their preferences of future lifestyles.

Kathleen Araújo¹

Scientist Agency in Energy System Change

¹Stony Brook University

Energy transitions are an unmistakable part of today's discourse. While discussion often centers on timescales and least cost economics, it can miss other critical elements, like the agency of scientists at pivotal junctures. To model and explain energy system change, this research considers four energy transformations, following the first global oil crisis of 1973. Cases of Brazilian biofuels, Danish wind power, French nuclear power, and Icelandic geothermal development are evaluated to identify key determinants that enabled the scale-up of advanced, low carbon energy technologies. The research finds that significant change occurred in under 15 years; that technology complexity was not a major impediment; and that energy technologies were often adopted before they were competitive, yet became competitive in the transition process. Amidst these findings, contributions of science agents are explored.

B

Jean Boucher¹

Culture, Carbon, and Climate Change:

A Class Analysis of Climate Change Belief and Lifestyle Lock-in

¹George Mason University

Global climate change is arguably the defining issue of the present age, and carbon emissions are the major cause of this change. Prior research has shown that carbon emissions are strongly positively associated with household incomes--both in a given nation and between nations. Scholars explain that one of the root causes of this "income-carbon"

relationship is lifestyle lock-in: the inability of individuals to change their consumption habits--due to institutionalized structures, contexts, and norms. Using a United States nationally representative dataset (N=2107), I test whether climate change beliefs moderate the income-carbon relationship (emissions were only examined for personal mobility and dietary carbon footprints). I found a significant positive correlation between climate change beliefs and personal carbon footprints only among one segment of the public--those who are most concerned about climate change (18% of the sample). I also reaffirm the significant positive correlation between household income and carbon emissions--income was the most dominant predictor variable in my analyses. I call for taxes and limits on both income and carbon emissions.

Maria das Graças Brightwell¹, Berenice Zanetti ¹, Clécio da Silva¹, Danielle Gelbcke¹, Evelyn Pauli¹

Unpacking Quality and Ethnic Heritage Attributes in Short Circuits of Food Production and Consumption in the South of Brazil

¹Universidade Federal de Santa Catarina

This communication examines quality and ethnic heritage as important but contested attributes to some food products that circulate in short circuits of food production and consumption in the South of Brazil, namely the region known as great Florianópolis. The occupation of the region in the second half of the 19th century by migrants of German origin, distributed in seven colonies, are responsible for the creation of specific foodways. The migrants and their descendents developed, according to Plein; Schneider (2009), "a colonial way of life", which encompassed a productive organization based on family labour, combining agricultural and animal husbandry and aimed primarily at the reproduction of the family unit. These old colonies form, nowadays, the basis of a regional agricultural system whose surplus production plays an important part in the food supply of nearby urban areas. Part of its animal and horticultural production is processed in small scale, using traditional methods and sold to neighbours, grocery shops in small cities and in farmers markets in the peripheries of nearby cities. The adjective "colonial" become an attribute associated to food produced by this productive system and spread beyond the colonies. The "colonial" origin alludes to supposedly "fresh", "natural" and "healthy" qualities. We analyse first of all what perspectives are there for this regional production taking in consideration the demands of urban consumption for "quality products" and a normative system that often exclude and marginalises family farmers' cottage industries. Secondly, we analyse how more contemporary attributes of quality such as organic are enmeshed into the ethnic heritage discourse. The communication draws from both a collective research project funded by the Brazilian government, which maps the spatiality of these circuits, and from individual projects which examines amongst other topics: the process of heritagization of "colonial" foodstuff, the challenges and opportunities of local circuits of organic production and consumption and how food quality is constructed and contested in different scales. The empirical data was gathered from secondary data to build an understanding of the historical process of occupation in the region (government census, academic studies, etc.) as well as primary data, in the form of interviews with producers, manufacturers, sellers and consumers.

Jeremy Brooks¹, Charlie Wilson²

The Influence of Contextual Cues on the Perceived Status Associated with Consumption-Reducing Behaviors

¹Ohio State University, ²University of East Anglia

Few studies have explored whether and when behaviors that reduce overall consumption are associated with low status. Previous research suggests that some low cost

environmentally-friendly behaviors are stigmatized, but has not accounted for the impact of contextual information on perceived status. We use costly signaling theory to describe why consumption-reducing behaviors may be associated with low status and when and how this perception might change. Using two empirical studies in the U.S. that use a large sample of graduate students (N=447), we examine the effects of contextual information on perceptions of consumption reducing behaviors. We then explore the perceived appropriateness of consumption-reducing behavior for signaling status relative to alternative non-environmental behaviors. Using linear mixed-effects models, we find that information indicating that consumption-reducing behavior is a choice results in higher perceived status. However, consumption-reducing behaviors are perceived to be less appropriate for conveying status than consumption-intensive behaviors. The environmental orientation of the respondent has little effect on perceptions of status. These results provide insights into the dynamic process by which sustainable consumption might become more socially acceptable and the factors that may facilitate or inhibit this process.

Ivan Bursztyn¹, Claudia Mesquita Pinto Soares¹
Food and Sustainable Production and Consumption in Rio de Janeiro
¹UFRJ

The social changes in recent decades have given the consumption a starring role in the daily lives of individuals and cities they inhabit. Thus, the imperative of consumption marks a society whose lifestyles are guided very significantly by values and behaviors linked to the consumption of goods, services and symbols. Born in an atmosphere of crisis, especially related to food values, some enterprises carry ecological ideology and are grounded on the pillars of fair trade, innovation and sustainability, in the sharing economy perspective. This new order dismantles the premise of modern individualism and challenges existing institutional orders. This article aims to understand the aspects that involve the sharing economy in the city of Rio de Janeiro. To this end, we developed an exploratory qualitative study, from carrying out semi-structured interviews with cut in five Rio ventures that have sustainability, innovation and fair trade in its premises and work primarily in collaborative consumption systems. All selected projects have food as a business object and are based, above all, on the approach of the producer to the consumer and are analyzed from the perspective of Bostman and Rogers (2011). Some of the results indicate the association of making money with the desire for collective well-being and especially the search for better quality of life of those who devised.

C

Paul Case¹
**Excluding the Future: Corporate Environmental Discourse and the (Non)
Construction of Future Generations**
¹UMass Boston

The idea of future generations is a concept often touched upon in climate change debates. The victimization of future generations - particularly the disproportionate suffering of the poor and those in developing countries - is a prevalent theme conjured by the IPCC, environmental activists, and religious traditions. One implication is that the burden of a transition to 'sustainable consumption' will be borne unevenly, and not in a planned or consensual manner. The future economic, political, and cultural system under climate change constitutes a 'value regime' (Levy & Spicer, 2013). Various actors contest the contours of this regime, for example, the nature of technology, markets, consumption, and inequality. This contestation represents a form of political CSR (Scherer & Palazzo, 2011). Not all actors are represented equally or even present in these negotiations; those excluded

or neglected include future generations, and the existing poor and residents of the global South (Banerjee, 2011). This presentation will report on the early stage of a study on CSR and environmentally-focused content of corporate websites. As GHG emissions are the primary driving force behind the suffering of future generations, a selection of top GHG emitting corporations (defined by the Political Economy Research Institute, 2013) will be considered. This study will seek to explore how the future is constructed in corporate environmental discourse, and how future generations, inequality, and consumption are represented. I will theorize the exclusion of particular groups and representations, building on the idea that exclusion and separation are tools in the legitimation of oppression (Martí & Fernández, 2013). References: Banerjee, S. B. (2011). Corporate Social Responsibility: The Good, the Bad, and the Ugly. *Critical Sociology*, 34(1), 51-79. Levy, D. L., & Spicer, A. (2013). Contested imaginaries and the cultural political economy of climate change climate change. *Organization*, (January), 1-20. Martí, I., & Fernández, P. (2013). The Institutional Work of Oppression and Resistance: Learning from the Holocaust. *Organization Studies*, 34(8), 1195-1223. Political Economy Research Institute. (2013). Greenhouse 100 Polluters Index. Retrieved from <http://www.peri.umass.edu> Scherer, A. G., & Palazzo, G. (2011). The New Political Role of Business in a Globalized World: A Review of a New Perspective on CSR and its Implications for the Firm, Governance, and Democracy. *Journal of Management Studies*, 48(4), 899-931.

D

Matheus De Nardo¹

Measuring Status Perceptions to Improve Behavioral Change Strategies

¹The Ohio State University

Perceived status can affect the diffusion of pro-environmental behaviors and sustainable consumption. However, the status of different forms of sustainable consumption has not been adequately explored. Previous studies suggest that curtailment behaviors are associated with low or neutral status while green consumption is associated with high status. However, these studies have generally examined a small number of behaviors and have rarely considered whether perceptions differ between social groups. We use mixed methods to explore whether and why a suite of pro-environmental behaviors is perceived to be high or low status, the perceived motivation for those behaviors, and whether perceptions depend on the environmental orientation of research participants. We conducted structured, interactive interviews with 71 participants (30 environmental participants and 41 business participants) to explore perceptions of 19 pro-environmental behaviors. Using a variety of quantitative and qualitative analytical approaches, we find that green consumption is rated higher in status than curtailment and that this rating is largely based on monetary considerations. Green consumption is also perceived to be more motivated by environmental concern than curtailment and interpretations of the motivation for adopting behaviors contributes to status perceptions of those behaviors. The two participant groups differed little in their perceptions. Our results suggest that those who argue that curtailment will be necessary for long-term sustainability must address status perceptions because it is likely that they hinder the diffusion of such behaviors. For now, it may be more effective to use social and/or economic mechanisms to increase green consumption.

Liesbeth de Schutter¹

Climate Change in EU Food Consumption: A Historical Perspective and Outlook

¹Vienna University of Economics and Business

From a production perspective, the large bandwidth in global estimations of food related GHG emissions (9.8-16.9 billion tonnes CO₂ equivalents), point at the diversity and complexity of bio-geochemical land conditions, agricultural systems and land management techniques between different geographies. From a consumption perspective, differences in food related emissions per capita largely relate to differences in consumption patterns and volumes of consumed animal products. This paper tries to shed some light on the global carbon footprint related to EU food consumption, both in terms of the geographical origin of land related emissions and as a function of total emissions over time. For this purpose, we applied a consistent approach based on a large number of available LCA analyses of food related emissions in developed countries, to calculate food related GHG emissions related to EU food consumption. Furthermore, we added recent calculations of GHG emissions related to land use change in response to EU food consumption, mainly in distal production locations. Our results show that in the EU, food is still the single most important consumption activity in terms of anthropogenic GHG emissions, before mobility and construction. Furthermore, it is shown that a large and growing share of these emissions occur in foreign countries, mainly as a result of land use and land use change associated with the trend towards global supply chains and supplier networks. The main hotspots in the EU's food related carbon footprint are Latin America, Tropical Asia and Sub Saharan Africa. Consumption and production based emissions have been increasing steeply between 1960 and 1990, largely related to increasing meat and dairy consumption. Only in the last decade, these emissions show a stagnating trend. Finally, emissions related to EU food consumption are considerably larger than emissions related to EU production, where a consumption approach shows to have a larger potential for a reduction in food related emissions. Our results confirm the need for differentiated policies and governance structures to transform both EU food consumption and production towards more sustainable societies in light of climate change, human health and future food security.

Rebecca Duell¹

Conceptualizing Participation for Socially Just Transitions Beyond Consumerist Societies: "Local Food" Practice in Brisbane, Australia

¹Griffith University

Community-led innovation niches represent important strategies for enabling equitable sustainability transition pathways, to sit alongside or even replace prevailing market-driven approaches to sustainable consumption. Such strategies are important because market-driven approaches tend to elide or do little to address the social relationships and socio-structural injustices that constrain people's ability to act with influence through the market place. However, community-led action for sustainable consumption is not inherently just and equitable. Community spaces can potentially (and unwittingly) reproduce social power imbalances and inequalities if they lack a commitment to meaningful participation and the redistribution of decision-making power to socially disadvantaged citizen-consumers. Using local food initiatives in Brisbane, Australia as examples of community-led innovation niches, this paper explores the importance of participation for socially just sustainability transitions. It draws on theories of sustainability, social justice and recent research on alternative agri-food networks to define participation as procedural social justice, an important principle and process of social sustainability (e.g. James, 2015; Goodman et al., 2012; Agyeman et al. 2003; Becker et al. 1999, Young, 1990). Twenty local food practitioners were interviewed to better understand how they interpreted participation and subsequently encouraged citizen-consumers to participate in the 'eat local' movement in Brisbane. Key research findings suggested that local food initiatives often aimed to address distributional social justice goals, by attempting to mitigate income and wealth inequality in local communities and thus enable citizen-consumers to more easily purchase local produce. However, participation for more collaborative and socially inclusive community-led actions was largely absent. Many

local food systems remained wedded to cumulative individual action and consumer sovereignty as key market-driven approaches to sustainability transitions. Consequently, opportunities to more deeply engage with citizen-consumers to understand the obstacles they face in participating in transitions beyond consumerist societies were often missed.

E

Fabian Echegaray¹, Francesca Hansstein²
**Understanding Collaborative Consumption in Emerging Economies:
The Case of Brazil**

¹Market Analysis, ²Shanghai University of Finance and Economics

Companies, policy-makers and media usually translate business success and economic wellbeing in terms of higher unit sales and mass product acquisition by consumers. These tenets assume a model of individual utility understood as material possession and the prevalence of socio-psychological motivations oriented toward conspicuous and emulative behaviors. However, these suppositions are increasingly challenged by access-based, collaborative and sharing consumption models that acknowledge a non-material notion of utility and alternative motivations like communitarian, sustainability, and self-realization drivers for action. Car pooling and sharing, time banks, goods and services exchange, couch surfing are among the most visible examples. These practices (rather popular in the Northern hemisphere) are being adopted in developing societies too, although there is scant evidence on its size, prospects and motivations. This paper seeks to understand the attitudinal context and underlying drivers behind the acceptability of collaborative consumption activities in Brazil. Using a survey conducted upon an urban representative sample of 905 adult Brazilians in early 2015, we model intentions to engage in collaborative consumption following Azjen's theory of planned behavior, by means of structural equation modelling. Preliminary results indicate that only one in five Brazilians are aware of the notion of collaborative consumption and just about 7% have engaged in such practices. Alternatively, a majority of two-thirds are willing to engage in sharing car-rides and books practices in the near future. The role of attitudes, inter-personal trust, economic and non-economic payoffs, perceived behavioral control, and social norms are also discussed.

Laura Edling¹

**A Systems Perspective on Energy Transitions: A Socioeconomic Approach to
Understanding Thermal Woody Biomass Sustainability in Northern New England**

¹University of Vermont

This research will be endowed with a strong commitment to the concept of socio-technical transitions. In this commitment, it will focus on a local, contextualized example of an energy system change and delve into understanding the complexity involved. It will do so in an effort to actively assist in the transition to a socially, ecologically, and economically sustainable energy future. This research will answer four main questions: one, what are the cultural characteristics of individuals and communities that adopt wood pellet technology?; two, what are the system dynamics in northern New England that contribute to a shift to wood pellet heating?; three, what does the Model Neighborhood Wood Heat Initiative, as an experiment and case study in transition management, demonstrate about the societal transition to the sustainable use of energy?; and four, what is the impact of the life cycle of wood pellets on socioeconomic sustainability?

F

Timothy Foxon¹
Reorienting Production and Consumption for a Sustainability Transition

¹University of Sussex

This paper makes the case that the need for a sustainability transition - that is a transition to an economy and society that delivers enhanced human wellbeing and social equity whilst remaining within planetary boundaries - can define a positive direction for social and technological innovation. It argues that this needs to encompass technological and institutional innovation for a new production paradigm that "reverses the energy- and materials intensive model inherited from mass production" (Mazzucato and Perez, 2014), but also a reorientation to an economy not principally built on mass consumption. This raises questions of the consistency of pursuing these two objectives simultaneously. This paper argues many of the prescriptions for a reorientation of production, including a mission-oriented approach to shaping and creating markets to address societal challenges; a reorientation of investment and finance towards value-creating projects in the real economy rather than financial speculation; and taxation that rewards long-run investment rather than value extraction, are consistent with new models of consumption aimed at enhancing human wellbeing and social equity rather than increasing levels of material consumption. Drawing on ideas from Polyani's *The Great Transformation*, this helps to overcome the simplistic distinction between the market and the state as the solution to our economic problems, and also opens up a key role for civil society in contributing to a sustainability transition. Reference Mazzucato, M and Perez, C (2014), 'Innovation as Growth Policy', in: J. Fagerberg, S. Laestadius, B. Martin (eds.): *The Triple Challenge: Europe in a New Age*, Oxford, Oxford University Press.

G

Irene Garnelo Gomez¹, David Littlewood², Kevin Money¹
Understanding the Interaction Between Identity and Motivations in Sustainable Living

¹Henley Business School, ²Sheffield University Management School

Despite an increasing trend towards sustainable living and the adoption of sustainable lifestyles globally, it remains the case that relatively little is known about what motives such practices and about the interaction between motivations and identity in sustainable living. This paper contributes towards addressing these gaps by examining the impact of human drives on sustainable living and how this is moderated by individuals' identity. The Four Drive Theory of human behaviour is used as the foundation of a conceptual framework that is then explored with reference to a qualitative study involving semi-structured interviews with 35 sustainable individuals living in the UK. The results of this research suggest that people are motivated to live sustainably for different reasons depending on the salience of their personal and social identities and the congruence between the layers which form their sustainable selves. The key contributions of this paper are the presentation of a conceptual framework and the introduction of a new typology of sustainable individuals based on the interaction between their identities and the motivations which drive them to live sustainably, which contribute to the understanding of the attitude-behaviour gap in the field of sustainable living by offering a deeper examination of the antecedents of sustainable behaviour and the aspects influencing them.

Meaghan Guckian¹, Ezra Markowitz¹, Brian Lickel¹
Nodding Heads, Smiling Faces: Identifying the Antecedents of Imposing Social Sanctions on Others' Consumer Choices

¹University of Massachusetts Amherst

Ethicists have suggested that individuals have an obligation not only to reduce personal consumption but also to signal one's own de-consumptive behaviors and to sanction others' transgressions. Previous research has demonstrated that systems of social sanctions can increase cooperative behavior amid social dilemmas; yet, to realize these potential benefits in the consumer domain individuals must first be willing to impose social sanctions on others' consumer choices. In two studies, we examined how and to what extent individual and contextual factors shape willingness to impose social sanctions (e.g., praise, confront) on others' consumer choices. Results across both studies suggested that participants' willingness to sanction was correlated with and predicted by their perceived responsibility to sanction as well as perceived behavioral impact of others' behaviors. Results also revealed that self-ascribed 'activists' were more likely to confront others negative actions than 'environmentalists'. In Study 2, we explored willingness to sanction as a function of contextual co-benefit framing; a marginal treatment effect was found on willingness to praise. That is, when others' consumer choices were framed as impacting public health, participants were more willing to praise others' positive consumer choices than participants in the economic and environmental frame condition.

Tobias Gumbert¹

Choice Architecture and the Governmentalization of Sustainable Consumption

¹University of Muenster, Germany

Consumer choice in the marketplace is today increasingly seen as THE contemporary form of environmental politics. In Western industrialized societies, strong liberal norms, such as the freedom of exchange and individual choice, prevent direct intervention into the sphere of consumption and ultimately constitute barriers for policy to address growing resource scarcities and environmental limits. In this context, an emerging form of governance attributed to Libertarian Paternalism, widely termed 'nudging', informs policy practice: while embracing freedom of choice, a non-coercive, soft force of paternalism is desirable to incentivize people to behave rationally (and in this regard environmentally responsibly) and adopt specific behavioral patterns that are beneficial from a policy makers viewpoint (realizing cost saving potentials, improving public health etc.). This practice is, however, increasingly contested: political effects include the individualization of sustainable consumption (and thus the mystification of structural constraints) and the redefinition of the status of citizen as 'consumer-citizen' who is governed-at-a-distance through marketized activation policies. Through these policy practices, the manner in which sustainable consumption is politically addressed is changing in distinct ways. Adopting a Foucaultian governmentality lens to analyze the governance and regulation of sustainable consumption in the context of reducing food waste in OECD countries, this paper seeks to critically conceptualize the political effects of choice architecture more comprehensively. It argues that choice editing is not just about rationalizing consumer conduct and thereby leading to more sustainable societies, but that this practice works through values, beliefs and sentiments to motivate individual self-government and the formation of moral obligations that may ultimately lead to the depoliticization of citizens.

H

Jacob Hammond¹

**Working (Less) For a Higher Calling:
Examining Why Voluntary Simplifiers Are Happier Than Downshifters**

¹Washington State University

Downshifting has been trumpeted as a means through which workers can side-step increasing work pressure, gain greater work-life balance and achieve a higher quality of life.

Yet empirical assessments of such claims show downshiffters self-report lower levels of wellbeing than non-downshiffters. A conceptually similar group - voluntary simplifiers - report higher levels of life satisfaction and wellbeing than the general population. Drawing from literature in sociology, psychology, and social psychology, this paper advances several possible mechanisms to explain these divergent findings. In particular, factors such as intrinsic values, pro-environmental behavior, cultural capital, green capital, meaning, group consciousness, choice, income and health may help account for variation in wellbeing amongst downshiffters. Taken together, these observations illuminate a promising path forward to examine the relationship between downshifting and wellbeing.

Samuel Hanes¹

Farmers as Defensive Environmentalists: Implications for Sustainability Transitions in Industrial Agriculture

¹University of Maine

Farmers are not only producers, they are also consumers who use large quantities of agricultural inputs, such as fuel, pesticides, and groundwater. Sustainable farming requires reducing their consumption. This study looks at conventional farmers in industrial agricultural systems as “defensive environmentalists” who reduce inputs when tightening feedback loops pressure them to do so. Defensive environmentalist theory raises the question of how farmers capture feedback in complex agricultural systems. To explore farmers’ feedback capture, this study presents an in-depth analysis of one major input, honeybees, in Maine, USA’s blueberry industry. Reducing inputs generally means adopting alternatives, and this study examines how farmers capture feedback on the main alternatives to honeybees, especially wild bees. Blueberry farmers practice “satisficing” behavior, eschewing time consuming monitoring and developing rules of thumb. The strengths and weaknesses of satisficing have implications for social and natural scientists helping conventional farmers transition away from industrial agricultural inputs.

Spencer Harbo and Raymond De Young¹

Community-Based Resource Sharing: Motivations and Spillover Effects

¹The University of Michigan

Sharing resources within communities has been one of the key components of organized society throughout human history. Yet, the availability of cheap fossil fuels and advances in production technology have made sharing behaviors relatively uncommon in modern, individualized societies. Because we live on a finite planet, providing opportunities to share physical goods, skills, and services within local communities may present a path forward to a new normal in which our limited resources are once again used more collaboratively, equitably, and sustainably. In a mixed-methods study of community members in five Southeastern Michigan cities (N=274), the intrinsic satisfactions involved with community-based resource sharing, along with common affordances, were uncovered. Intrinsic satisfactions fell into three categories: 1) frugality; 2) social participation; 3) and meaningful action. Common affordances for sharing included convenience, community support, and fun or enjoyable ways to share. Results from this study also indicate a spillover from sharing behaviors to other pro-environmental and pro-social behaviors. These findings shed light on the conditions under which individuals living in industrialized societies may be motivated to reduce their consumption of resources through opportunities for community-based sharing. Policy makers, urban planners, and behavior-change practitioners can incorporate these findings into the design of physical spaces and social marketing strategies in order to facilitate resource sharing within communities, thereby fostering the transition to a more sustainable, resilient, and equitable future.

Franziska Haucke¹

The Fairphone Case? A Social Movement or Another Trend to be Followed?

¹University Osnabrueck

The study examines the movement potential for the Fairphone company, which applies the Fair Trade concept to a smartphone. The presented study delves into the relation of social movement theory and sustainable consumption by determining the effects of civic engagement and degrowth strategies provided by Fairphone and the transmission of these to its consumers. In order to tackle the question what patterns and dynamics of behavioral change lead towards sustainable consumption, an online survey was conducted to analyze the purchasing reasons and self-reflection of Fairphone users. The questionnaire allowed descriptive statistical analysis as well as qualitative in-depth analysis, to investigate whether Fairphone customers see themselves as a part of a broader social movement leading to a more sustainable society or act upon different consumption aspects such as trendiness. Results indicate that Fairphone community members see themselves as actively involved in the construction of the Fairphone and the related meaning, which might be a source of collective identity. They acknowledge their activism as broader than the merely purchasing of a smartphone, whereby the phone itself is considered as an artifact for personal self-expression.

Darcy Hauslik¹

**Inequitable Exposure to Hazardous Waste in Ontario, Canada:
From Production to Consumption**

¹Washington State University

As has been extensively demonstrated, the current paradigm of industrial production is unsustainable in the long term due both to the finite nature of environmental resources and the inequitable distribution of risks and rewards from production and consumption processes. Scholars of sustainable consumption have made a compelling case for how scarce resources and inequality weigh on the decisions and institutional constraints shaping consumption patterns. This paper adds to this tradition by viewing consumption as a part of a synthetic system which is inexorably linked to processes of production. In focusing on the role that inequality plays in the production process, specifically, by examining the preponderance of evidence that facilities which generate large quantities of waste disproportionately burden the poor and people of color, we are more able to see the unsustainable nature of modern consumer society throughout the materials economy. This paper uses logistic regression, informed by the treadmill of production theory, to compare the demographic characteristics of communities in Ontario which have a large quantity waste generating facility within 500 meters to those that do not have such neighbors. This paper finds that the lowest income communities are more than twice as likely to have a large quantity generator within 500 meters as communities with higher incomes. To date, the majority of research documenting environmental inequality has focused on the United States, this study of Ontario which finds similar outcomes (i.e., that large quantity generators are located near communities with higher proportions of minorities and low-income households) suggests that it is not just the particular history of the United States that yields environmental inequality, but rather that this is another manifestation of the inequitable distribution of risks and rewards that makes modern consumer society inherently unsustainable.

Anders Hayden¹

**The End of the GDP-Only World:
Distraction, Dystopia, or Step Beyond the Growth Paradigm toward a Green State?**

The green movement and academics sympathetic to it have been among the main sources of the critique of Gross Domestic Product as a prosperity indicator and demands for alternatives. For many greens, critique of GDP is part of a wider questioning of a society geared to production and consumption growth. In recent years, GDP's limitations have increasingly been recognized by the political mainstream and there has been a proliferation of efforts to introduce new prosperity and wellbeing indicators. These developments have raised hopes in some circles of "dethroning" GDP; indeed Britain's former top civil servant has proclaimed "the end of the GDP-only world." But does the emergence of new wellbeing measurements and the related politics of wellbeing actually imply, as many greens have hoped, a transformative shift in the dominant economic narrative and societal priorities away from growth and ever-rising consumption, and a step toward a green state? Although the use of "beyond GDP" indicators is still in its infancy, the early experience can be assessed to gain a sense of the impacts to date, obstacles and challenges, and possibilities on the horizon. This paper draws on interviews with individuals who have been involved in producing, using, and advocating the use of "beyond GDP" indicators in Britain, a country with an advanced programs of national wellbeing measurement. A transformative vision linking new indicators to a vision of a post-growth society with greater equity has, to date, been overshadowed by a more limited vision of using wellbeing data to produce better policy "at the margins." This has led to concerns that the agenda has been coopted or become a "distraction." The potential for the new wellbeing agenda to take a dystopian turn, as the onus is put on individuals to improve their own wellbeing--by changing thought patterns and lifestyles rather than social conditions, while under increasing government and corporate monitoring--is also be considered. The paper conclude with thoughts on the types of changes needed alongside "beyond GDP" indicators, and argues that they offer no shortcut to a very challenging process of a post-growth transition.

**Pan He¹, Yang Yu², Kuishuang Feng¹, Giovanni Baiocchi¹, Klaus Hubacek¹
The Dual Effects Behind the Dishes: Evaluating the Nutrition Balance and
Environmental Impacts of Chinese Diet Structure**

¹University of Maryland, ²Stanford University

Food consumption and intake in China has changed considerably in recent years as part of its ongoing socio-economic transition. Such transformation, while raising various concerns about nutritional balance and related health issues, has also implications for the natural environment, as food production and distribution activities result have an impact on water resources, land use as well as GHG emissions. In this paper we address the connections among diet, environment, and nutrition, by evaluating the impact of the changing Chinese diet structure on both the environmental ecosystem and evaluating the diet's nutritional balance. Using survey data at the household level for 9 provinces over the 1997-2011 period, we quantify the water, land and GHG print of the individual's food intake, and assess possible deviations of the diet structure from best standards of the nutrition balance. We also look at different consumer groups based on income and other socio-economic characteristics in order to identify possible drivers behind the diet structure transition. Finally, we perform a scenario analysis to assess the environmental impacts of policies aiming at improving nutritional balance by following recommended national dietary guidelines.

**Jukka Heinonen¹, Sigurdur Johannesson¹
More Consumption, Less Production: The Low-Carbon Illusion of Cities**

¹University of Iceland

This paper presents the first ever assessment of the consumption-based carbon footprints (CFs) in Iceland using an input-output based hybrid life cycle assessment method, taking into account all private consumption and both the direct and indirect emissions. Further, the paper compares the CFs in different types of settlements to test the “low-carbon illusion of cities” hypothesis, meaning that in territorial assessment schemes highly urbanized areas often show as low-carbon areas in comparison to country averages or regional averages, but at the same time they are the key centers for consumption and thus they actually just outsource the emissions they or their residents drive. Thus, while cities often show reduced transport related emissions compared to less urbanized areas, or denser settlements compared to less dense, the emissions from other consumption increase and the CFs can end up even being the highest in the densest settlements. This has been suggested to happen in Finland, and no strong reducing impact has been found between density and CFs in any consumption-based CF studies. What is found is that the CFs are the highest in the most highly urbanized areas and somewhat lower in the most rural types of areas. Especially the indirect emissions from services use increase significantly towards the urbanized and more affluent areas. With transport the results are also in line with the hypothesis that higher density reduces private driving, but as in several earlier studies, when all transportation related emissions are accounted for, the advantage is greatly reduced or disappears.

Oliver Heydorn¹

The Social Credit Path to Sustainable Consumption

¹The Clifford Hugh Douglas Institute

In the interwar period of the early twentieth century, Major Clifford Hugh Douglas (1879-1952) identified the existing financial system as the chief cause behind many of our enduring economic problems. Since most other human endeavours are conditioned by economic activity, the economic dysfunction tends to either provoke or intensify various political, cultural, and environmental difficulties in its train. The analysis of the financial system and the corresponding remedial proposals that Douglas developed came to be referred to under the name of Social Credit. Though it may seem paradoxical, Social Credit theory proposes that a re-engineering of the financial system so that it properly supports consumption is perhaps the single greatest thing that could be done in the interests of making consumption sustainable. Doing so would significantly mitigate the struggle for economic survival, and this would allow, in turn, for the elimination of waste in the form of economic sabotage.

Clare Hinrichs¹, Karen Scott², Leif Jensen¹

Re-negotiating the Good Life in an Era of Uncertainty:

Comparative Perspectives on Social Inequalities and Sustainable Consumption

¹Pennsylvania State University, ²Newcastle University

Early sustainable consumption research and action agendas often focused on universalizing efforts aimed at promoting individual lifestyle changes that included greater adoption of environmental behaviors. Critiques of this emphasis on individual behavioral change have now led to greater interest in approaches examining social practices, understood as the more dynamic and provisional interplay of cultural meanings, material infrastructures and social competencies. This paper extends a social practices approach by elaborating and applying the animating concept of the good life. The “good life” offers both an analytical and normative lens for investigating the nature, meaning and consequences of recent consumption shifts in the US and the UK in a context of increasing social inequality, economic uncertainty and austerity, and global environmental change. Drawing on literatures of well-being, of precarity and of sustainable consumption, this paper develops

an analytical framework for examining how changing class positions and identities in contexts of economic uncertainty and global environmental change can destabilize and complicate the notion of the "good life"-- as an idea and aspiration, as practices of daily lived experience, and as an explicit goal of governance. The paper concludes by exploring the conceptual and strategic implications of current revisions and re-negotiations regarding the good life for sustainable consumption practice and policy.

Satu Husso¹
Utopia of Moderation:
Finnish Social Movements' Visions of Achieving Sustainability
¹University of Turku

Utopia is a vision of better society and way of being. Utopian thought has been invisible during the last decades, although it can be an illustrative concept in studying social movements because of its political dimension. Utopias can serve different purposes, for example, contemporary utopianism functions as exploration of alternative socioenvironmental order and as social criticism because it stimulates of the desire to change the prevailing system and culture (Bradley and Hedrén 2014). In this presentation, I focus on the utopia of a better society created by Finnish social movements pursuing sustainable society. I have analyzed the websites and blogs of three social movements from a narrative approach. The analysis suggests, that the movements construct a parallel narrative of a deeply responsible citizen-subject that is resilient to the suppressing power of neoliberal market economy and the penetrating consumer culture.

|

Cindy Isenhour¹
Consumer Power?
Reinserting Power and Politics in Sustainable Consumption Research
¹University of Maine

This paper starts from the well-documented understanding that there are significant limitations associated with our contemporary efforts to reduce the environmental impacts of contemporary consumption patterns. Notable effort has been directed toward improving the efficiency of production and service provision, yet consumption growth continues to outpace these gains, resulting in a net increase in materials use, energy and associated emissions. Similarly the limitations associated with our efforts to encourage more sustainable consumer behavior are also heavily documented, ranging from informational and time constraints to the highly individualizing effect of market-based participation. This paper follows from these understandings to suggest that an analysis of power and politics can not only help to explain why these efforts have largely failed, but can also point to more promising directions for research, policy and practice. The paper surveys three areas of research where analyses of power have provided key insights and fruitful directions for the future including: 1) a strong and historically deep foundation in social theory, focused on the role that consumption plays in class-based, capitalist societies; 2) studies of neoliberal environmental governance, which frames sustainability in terms of "free" and "apolitical" market choice and neglects the powerful structural underpinnings that drive consumerism; 3) studies in science and technology studies which reveal how our efforts to account for climate change and environmental impact can shift the burden of environmental degradation in a global economy and environmental system. The paper concludes with an analysis of the implications of each area of research for policy and practice.

Diana Ivanova¹, Richard Wood¹, Edgar Hertwich²

Spatial Distribution of EU Household Carbon Footprints: Regional Analysis of Footprint Determinants

¹Norwegian University of Science and Technology (NTNU), ²School of Forestry and Environmental Studies, Yale University

We analyzed the spatial distribution of household carbon footprint across EU regions. Our study provides useful environmental detail on the average household carbon footprint (HCF) across small territorial units, i.e. the EU's Nomenclature of territorial units for statistics abbreviated NUTS. We applied reported household expenditure from Household Budget Surveys from various EU states to get insights about the nature and level of consumption. Consumption statistics are generally reported using the UN's Classification of Individual Consumption According to Purpose (COICOP). Though the level of consumption and geographical detail varies across the EU countries, our analysis captures well the potential regional differences in the consumption of carbon intensive products such as meat consumption, home energy, air and road travelling. We further matched the expenditure data with products' emission intensities from the global multiregional input-output (MRIO) database EXIOBASE 2.3 and traced the origin of the consumed products. We further reported the distribution of average household footprints across consumption categories (e.g. food, mobility, shelter). The regional analysis is useful to identify the most emissions-intensive locations within the same country and enable comparison between actual performance and environmental goals. We further developed an econometric model to evaluate the importance of potential footprint determinants such as economic development, population density, urban structure and geographic conditions.

J

Suez Jacobson¹

The Role of Jesuit Education in Transforming Economics as Usual

¹Regis University

This paper uses the Pope's recent encyclical as a foundation to discuss how Jesuit education can challenge economics as usual and reports the results of a classroom exercise to reduce consumption. The Jesuit Father Kolvenbach writes, "Every branch of human knowledge raises questions today about meaning, ethical behavior and moral responsibilities." However, many claim that finance and economics are outside the purview of ethics and morals. The mainstream theory is that the interaction between consumers maximizing individual utility and corporations maximizing profit results in an equilibrium that even if some liberals say it's hard to defend on the basis of equity, wins handily on the basis of efficiency, and so is justified. This is the "culture," as Father Kolvenbach would call it, that Jesuit principles seek to change. The Jesuit call to be in "community" challenges our materialistic, economic beings. In Pope Francis' recent encyclical on the environment. He reminds us that our community includes the natural world. In paragraph 68 he writes: "The laws found in the Bible dwell on relationships, not only among individuals but also with other living beings." In paragraph 84 he writes: "The entire material universe speaks of God's love, his boundless affection for us. Soil, water, mountains: everything is, as it were, a caress of God." Pope Francis also writes eloquently about creation and our obligations as part of the creation community, and he relates that to the accepted economic paradigm in paragraph 225, "Nature is filled with words of love, but how can we listen to them amid constant noise, interminable and nerve-wracking distractions, or the cult of appearances?" Business as usual flies in the face of fundamental Jesuit principles. Again to quote Pope Francis, paragraph 27, "We all know that it is not possible to sustain the present level of consumption in developed countries and wealthier sectors of society, where the habit of wasting and discarding has reached unprecedented levels."

Mikko Jalas¹, J. Juntunen
Accounting for Everyday Life

¹Aalto University School of Arts, Design and Architecture

Time use survey data has been used to model household activities beyond market transactions. Accordingly, measures such as the “goods intensity of household activities” and the “energy and carbon intensity of household activities” have been derived. This paper builds on this approach by using time use data to model the direct and indirect energy use of households. Relevant questions that arise include that of whether changes in total energy consumption are due to changes in activity patterns, changes in the energy intensity of activities, or due to demographic changes. Beyond the empirical work, the paper suggests that time use approaches provide tools to counter the economizing of everyday life activities and point towards less growth centered paradigms.

Michael Jørgensen¹, Charlotte Jensen¹
A Critical Perspective on Circular Economy as Strategy for Sustainable Development

¹Aalborg University

It is increasingly acknowledged that the linear 'take-make-dispose' economic model is reaching its limits, and initiatives to develop alternative economic models are emerging. Circular economy is currently getting a lot of political attention, because it promises an industrial system that is restorative by design. However, circular economy is not without shortcomings, in the pursuit of a sustainable society. We encounter risks by promoting circular economy, if focus merely is on closing existing material flows and not questioning why we produce what, where products are produced (since globalized outsourced cheap production might challenge take-back schemes and repair), and when and why products become waste. This paper discusses and proposes three types of re-designs needed to specify circular economy models within institutional and regulatory contexts. The suggestions are based on case studies from cooperation with companies about possibilities for applying circular economy as element in their business strategies: 1) re-designs of products and services, 2) re-designing of value chains and 3) internal organizational redesign of businesses. Keywords: circular economy, sustainable business, institutional lock-in and path dependency

K

Emily Kennedy¹, John Parkins², Josée Johnston²
Small-p Politics: Pleasurable, Convivial, and Pragmatic Civic Engagement in the Eat-Local Movement

¹Washington State University, ²University of Alberta

The power and importance of civic action makes this a topic of central interest across sociology. Although overt forms of action such as protests attract a great deal of public and scholarly attention, it is crucial to bear in mind that democracy also unfolds in the acts of everyday life, though these practices may not always look 'political'. Some scholars are pessimistic of such non-traditional political practices while others are optimistic that these acts might strengthen democracy. Using a case study of eat-local initiatives involving in-depth interviews with 57 leaders of local food initiatives in three Canadian cities, we observed our participants placing a high value on such non-traditional practices. They described a pleasurable, convivial, and pragmatic approach to political engagement that we name "small-p politics". We offer a theoretically and empirically-informed anatomy of small-p politics. Based on our empirical data, as well as an in-depth review of literatures on

political culture, we contend that everyday small-p politics: a) is a site of cultural change that eschews overt confrontation, b) rejects traditional political activity even while engaging in public life, and c) tends to focus on generating consumer support while missing larger topics like inequality and unsustainability in the food system. This research advances debates on the relative merits and drawbacks of non-traditional politics by demonstrating activists' misgivings of traditional politics and justifications for drawing upon political practices that resist a straightforward categorization as "political".

Noel Keough¹, Geoff Ghitler¹

Inner City Industrial Districts as Sites of Sustainable Consumption, Production and Reproduction

¹University of Calgary

It has been said that we make our places and then our places make us. If so, then the consumer oriented resource intensive cities we have created can be redesigned to be non-consumptive sustainable places. This paper proposes a conceptual model of a city-district that can persuade us away from individual lifestyles defined by hyper-consumption and resource and energy intensive modes of city infrastructure provision. It also turns on an ecological conception of a city as a self-generating industrial ecology where mixed uses satisfy sustainable production, consumption and reproduction. The exploration of the conceptual model is set in a typical inner city industrial district on the cusp of change - Manchester District, Calgary, Alberta. The concept incorporates the idea of low-or zero carbon cities and fair share ecological footprint; harvesting of food, water and energy; and production for local consumption. The concept also addresses an Achilles heel of most sustainable city concepts - affordability and equity - through the exploration of non-market opportunities including Community Land Trust. Manchester is a 100 hundred year old, 5 square kilometer low intensity, predominantly light-industrial inner city Calgary district with a population of approximately 500 people located 2 kilometres from the City Centre. The design exercise is to imagine a mixed-uses city district of 100,000 residents and 30-40,000 jobs. The design strategy: scale up and integration of already existing discrete solutions. The Manchester energy strategy begins with a determination of energy demand (electricity, heat, light and motive power) and its internal provision via insolation, wind, biomass and industrial waste and waste heat. The backbone of the transit system will be a wind-powered streetcar and Light Rail Transit systems. The harvesting of local water flows will be optimized by determining how much water demand can be met through the deployment of aggressive rainwater capture and recycling. Manchester will achieve zero waste to landfill by diversion of solid waste to industrial processes (energy production and materials) or to reuse and recycling. Organic waste will be eliminated through a comprehensive composting program. Industrial activity will be managed through a public or cooperatively operated district logistics and management facility. Its role will be to create an industrial ecology integrating the reproduction, consumption and production in the district. The paper will also discuss barriers to the realization of the Manchester vision.

Leslie King¹, Julie Busa²

**When Corporate Actors Take Over the Game:
The Corporatization of Organic, Recycling and Breast Cancer Activism**

¹Smith College, ²Mt Holyoke College

Increasingly, social change endeavors are shaped by corporate interests, and environment-related movements may be particularly susceptible to such 'corporate takeover'. This can be seen in the examples of breast cancer activism, organic food, and recycling. In each case, corporatized versions of 'activism' tend to promote individual acts, primarily in the form of consumerism, rather than encouraging collective, political change. In our study, we examine

how movement actors initiate ideas and practices; how those practices become linked to corporations; and how government action/inaction contributes to broadening corporate influence. In doing so, we demonstrate three distinct paths to corporatization: direct, via philanthropy, and via government. Highlighting the specific processes by which corporations come to dominate fields that initially were largely social change movements organized by activists can contribute to the interruption of such processes, allowing us to imagine strategies through which activists might forestall corporate takeover.

Sharon Klein¹, Dan Mistro¹
Community Energy and Service Learning
¹University of Maine

Community energy is a growing movement in the U.S., which has heretofore not been highlighted in academic research. Our research examines the effectiveness of one type of community energy efficiency project with growing momentum in Maine - Window Insert Builds (WIB), grassroots community efforts to build wooden inserts wrapped in transparent plastic that fit into existing window frames and help reduce heat loss. Window inserts are expected to reduce energy and fuel use significantly, but this reduction has not yet been measured. This study helps quantify energy savings and associated economic, environmental, and community effects of window inserts and WIBs. The study also helps characterize motivations, attitudes, prior knowledge, and energy behaviors associated with window insert customers (people who buy the inserts) and WIB volunteers (people who help recruit customers, measure windows, build and/or deliver inserts, and coordinate the WIB). In addition, we examine the role of service learning in the WIB and in advancing sustainable energy knowledge.

Mai Kobayashi¹, Rekha Chhetri²
Bhutan's Gentle Transition: Organic Agriculture and the Changing Face of Seed Procurement and Food Security in The Himalayan Kingdom

¹Kyoto University, ²College of Natural Resources, Royal University of Bhutan

Efforts towards agricultural modernisation in Bhutan officially started in the 1960s after the opening of its borders to the outside world. Since then, national and international governments and organisations have provided extensive material and technical assistance in an effort to increase and diversify agricultural production. Heavily subsidised support has been offered to farmers throughout the country by way of the national government. Farm machinery, irrigation systems, synthetic fertilisers, pesticides, cultivation methods and new varieties of vegetables and fruits, have been supplied, leading to a fundamental shift in how Bhutan's agricultural landscape is organised. While a transition towards market-oriented entrepreneurial systems of agriculture is being encouraged on one side, the Bhutanese government has also chosen to take advantage of the still largely subsistence based forms of small scale farming by implementing a national policy to promote organic agriculture. The announcement by Bhutan's Prime Minister at the Rio%2B20 conference of its commitment to become 100% organic by 2020 caught the attention of many worldwide. This paper looks at how the various government led efforts towards sustainable agricultural development is influencing the perceptions and choices farmers make on the ground. In particular, emphasis will be placed on how traditional economies of reciprocity around seeds co-exist with the newly forming market economies. Research is based on the analysis of a household survey and personal interviews conducted in western Bhutan, between January and March, and again in October of 2014.

L

Xiao Lin¹, Peter Wells¹

A Case Study of Electric Bicycles in Nanjing: Sustainable Transport Consumption Behaviour and Socio-Technical Transitions

¹Cardiff University

In this paper, e-bike sector in China is studied with the purpose of addressing the questions: what are the reasons for the adoption of e-bikes, and how do consumers think about their future transport mode choices? A survey was conducted in Nanjing in order to understand the characteristics of e-bike users and other mode users (e.g. pedestrians; car drivers) and to explore themes such as use anxiety, reasons for e-bike use, user preference, attitudinal questions, and safety issues. The survey results are discussed in the paper to establish how far we are able to characterise e-bike use as part of a wider, embedded, socio-technical transition. Further, a General Linear Model of e-bike future choice and a Logit Model are adopted to analyse mode choice behaviour based on the survey data. The General Linear Model shows that the probability of choosing e-bikes is positively associated with household ownership of e-bikes, household ownership of bicycles, e-bike price, feelings of freedom, pro-e-bike attitudes and demands for flexible trip patterns. Negative factors are household ownership of cars, user anxiety of e-bike performance, and having had an experience of an accident. The survey also explored hypothetical mode choices if for some reason e-bikes were no longer available (e.g. as a result of government ban) and found a ranking of alternative modes are as follows: bus, metro, private cars, walking and bicycle. The Logit Models show that the alternative mode choice is significantly related to income. The lower income responders tend to use walking and bus, while higher income responders prefer metro and private cars. Through the analysis of the survey results we conclude that 1) E-bikes have already reached the regime level as an established mode; 2) The "Motorcycle Ban Policy" made a potential contribution to the uptake of e-bikes but the policy is not a prerequisite; 3) E-bikes serve as an intermediate mode on Nanjing's motorisation pathway, especially, for the career-age commuters; 4) The reasons for e-bike spontaneous emergence are that e-bikes satisfy the demand of personal motorised mobility with advantages of flexibility, freedom, low cost, and effort saving, which are well embedded in social practice; 5) E-bike safety issue is the main concern of different groups of users; 6) Battery technology could be a barrier to further e-bike uptake. As yet, we cannot conclude that e-bikes are deeply embedded as a transport mode despite their popularity.

Haokun Liu¹, Peter Wells¹, Daniel Newman¹

**Rethinking Socio-Technical Transitions and Social Inequality:
Make Cleaner Technologies Affordable and Accessible**

¹Cardiff University

In the recent past, burgeoning transport is evident at different spatial scales from long-haul air travel through to urban commuting. At the same time, new barriers to personal mobility are erected against 'Generation Y' or people get trapped as victims of transport poverty. Socio-technical transitions studies have brought a 'lens' to explain socio-technical changes from a hybrid perspective of social science and evolutionary theory. At first glance, many transport innovations could have a positive impact on society and environment, however some social actors could be excluded from these technology waves. There is evidence to suggest that younger generations are delaying obtaining a driving licence or not getting one at all; and that people at a lower income level travel much less than those who have higher real income. In parallel, there is evidence that elite travel has turned into a booming industry, and a concern that the first ultra-low emission zone (ULEZ) to be introduced to London will have different implications for the wealthy and the poor. Undoubtedly these social inequalities and the conflicts they give rise to could exert a profound influence on mobility transitions, but the theory has tended to lack a content from critical or radical

social science. We will look at practices and perceptions of different social actors to explore the nature of sustainable mobility and how to make these from rhetoric to reality. Finally, we will suggest to put more attentions on these social inequalities and find solutions to bring these cleaner technologies to the broader social context.

Michael Luchs¹

Consumer Wisdom:

A Modern Virtue for a Qualitatively Better and More Sustainable Economy

¹College of William & Mary

There is a growing recognition that consumer lifestyles in developed economies are not globally scalable due to resource and other constraints. Further, the mainstream consumerist lifestyle has been shown to detract from individual and societal well-being given its negative impact on financial health, emotional health, and social connections. The objective of this research is to study a nascent, contrasting phenomenon of Consumer Wisdom. Our thesis is that a growing group of 'wise consumers' in society have a significantly lower 'market footprint' and yet also enjoy an enhanced quality of life. Our research, which has been funded by the Templeton Foundation, through the University of Chicago, will establish an empirically-grounded understanding of Consumer Wisdom - both the practices of wise consumers and the underlying values that motivate them. Synthesis of this fieldwork will lead to a robust, grounded theory of Consumer Wisdom and illustration of its practices.

M

Ahmad Mahdavi¹

Exposure to Toxics: Regulatory Status in Developed Vs Developing Countries

¹University of Tehran/ Sus. Ag & Environ.

Consumers all over the World are now exposed to a wide variety of toxic compounds in their daily life via food, washing and cleaning products, pesticides, toys, house dust etc. Toxic exposure in rural parts is greater because of using pesticides and other chemicals. The toxic exposure is surely higher in developing countries due to lack of information, lack of regulation and additional problems like dust and other medical geology related pollution like arsenicals in water. More recent problems like exposure to Genetically Modified food (GM) and nanoparticles are making the situation more complex. These all exposure scenarios faced man with a dangerous multiple and cumulative exposure to different types of toxic pollution. Now in our daily life we are facing with millions of chemical compounds plus their metabolites and high possibility of synergistic effects between them and the final outcome is higher rate of cancer. Now bits and pieces of these chemical compounds and their metabolites are found in all waters and land, in all niches and habitats threatening the whole life system and in particular birds and Sea mammals, some of them already extinct. Exposure scenarios to be discussed: Ever increasing use of pesticides/ chemical fertilizers/ GM and other toxic in food/ feed products; tens of millions of toxic chemicals and their metabolites are now creating a scary polluting situation for consumers in 21 Century; plastics/ plastic debris now a big polluting issue in marine system are entering our food web; multiple/ cumulative exposure and synergism resulting in higher rate of cancer; More exposure of people in developing countries as compared to developed world due to: Toxic trade from North to South, less knowledge and information about consumer products, lack of regulation, reading the label first not follow; toxic waste etc. Regulatory scenarios to be discussed: Strong regulations and enforcement in developed world in synchrony with industry; regulations stop at the border; weak regulations and lack of enforcement in most developing countries; less active NGOs and community workers in developing countries as

compared to developed world; health and environmental regulations in a very bad situation in Middle Eastern countries.

Mari Martiskainen¹, Eva Heiskanen²
Politics of Grassroots Innovations

¹University of Sussex, ²University of Helsinki

Grassroots innovations have been conceptualised as civil society led networks and initiatives that aim to address the sustainability of food, energy and transport. Initiatives such as community energy projects, community gardens, food networks and car sharing clubs for example provide thriving spaces for sustainable consumption, and innovations which combine technological and social innovations. These initiatives are often driven by social good, rather than by pure monetary motives. Much of previous research in grassroots innovations has focused largely on conceptualizing such initiatives, and analysing their development as well as potential for replication and diffusion; there has been less research in the politics involved in these initiatives. This article examines grassroots innovations as forms of political engagement that have their historical footing in 1970s social movements and the desire to provide for example alternative energy options. By using an example of UK community energy initiatives addressing fuel poverty, the paper argues that while present-day grassroots innovations appear less explicitly political than their predecessors, they do represent a form of political participation. We argue that grassroots innovations such as community energy initiatives have political dimensions that go beyond their immediate communities, and that these projects, whether deliberately or unknowingly, create forms of political engagement.

Steven McGreevy¹
**Sustainable Food Consumption and Agrifood System Transition In Asia:
Introducing the FEAST Project**

¹Research Institute for Humanity and Nature

Rates of consumption throughout Asia have increased dramatically in recent decades and swelling urban populations look to extend this trend into the future. Some have argued that the region itself may well be the proving ground in determining the fate of global environmental sustainability. While sustainable consumption-focused research on Asia as a whole is warranted, this task is complicated by a range of diverse socio-cultural systems, ecological characteristics, and stages of economic development. Keeping these contexts in mind, we highlight the importance of food consumption, not only as a medium via which the sustainability of food provisioning, human health, and everyday praxis can merge, but as a vehicle for shaping public discourse toward new food policy and, more broadly, agrifood systems transition. After a review of the literature on sustainable food consumption in Asia, we identify themes and areas of opportunity for research as a basis for the creation of a new research project (beginning April 2016) at the Research Institute for Humanity and Nature, "Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition" or the FEAST project. The project composition, rationale, and proposed activities and approaches, as well as opportunities for collaboration with the SCORAI community are presented.

Ruth McManus¹
Bio-cremation in the United Kingdom: Case Study of a New Eco-Technology

¹University of Canterbury

Broad social changes towards sustainable and efficient technologies of disposal are emerging worldwide and various countries position themselves as "clean & green" within

this discourse. In relation to bodily disposition, fire-cremation technologies are becoming problematic through their use of fossil fuels, emissions and shifts in attitudes and technologies toward green alternatives. Now there is a desire for and the technological capability to offer a real third alternative between burial and cremation - alkaline hydrolysis or bio-cremation. This paper outlines preliminary research findings to examine existing networks and interactions currently underpinning bio-cremation. The project is about how social, political and cultural effects shape the uptake of eco-technological innovation.

Lucie Middlemiss¹

What Does Fuel Poverty Do?

A Critical Analysis of the Change in Definition of Fuel Poverty in the UK

¹University of Leeds

A household is fuel (or energy) poor when it is unable to afford the level of energy services required to allow its members to live a decent life. In consumption terms, this means that a household underconsumes energy, with resulting health and social impacts. Under the UK coalition government (2010-2015), John Hills' review produced a new working definition of fuel poverty. In Europe, the UK is widely considered to be leading this agenda, and the Hills definition has been adopted by several governments. The change in definition is an interesting moment in the idea of fuel poverty, which will have an impact on fuel poverty policy and action in multiple nations. In this paper, I analyse this change to the definition of fuel poverty using a framework derived from Nicholas Rose's work on subjectivity. The objective here is to understand the politics of fuel poverty through this change in definition, more specifically to understand how this change intersects with broader energy and poverty politics. My analysis will uncover how the fuel poor are understood as subjects of policy, how fuel poverty is problematised and explained and which authorities are called on in the process, how this aligns with broader government strategies, and how this is enacted through technologies of government. The material under analysis here is the Hills review itself, and surrounding documentation, including policy documents arising from the review, responses from external parties and key publications that influenced the direction of the review. The use of a critical lens results in some interesting insights. The distinction between poverty and fuel poverty made by Hills (and many others), has an impact on the strategies and technologies used by government to address this issue. Energy efficiency measures are favoured over measures that address income inequality. The attempt to reduce the effects of energy prices on the official measure of fuel poverty (in a context in which prices doubled from 2005-2011) belies a reluctance to challenge the liberalisation of the energy market. The austerity maxim of 'helping those most in need' is also highly evident in the review, suggesting that a present day need to reduce costs is being written into the longer lasting conceptualisation of the problem. This paper's key contribution is to offer a critical analysis of a policy that addresses underconsumption. This reveals a host of political judgements or assumptions about the relative importance of poverty, environment and economics.

Jason Murphy¹

Communicative Capabilities and the Basic Income Guarantee

¹Elms College

Some scholars who argue for deliberative democracy and some who argue that government should promote human capabilities have shown skepticism towards a basic income guarantee, or "BIG". Basic Income, funded by taxes on consumption and pollution as well on wealth inequality, is an interesting tool in fighting pollution and poverty at the same time but it still must answer the charge that it is exploitative of taxpayers or insulting to

recipients. This article ends by raising serious questions about the job as the route by which the majority of people are expected to access resources.

N

Paul Nieuwenhuis¹
Towards Sustainable Consumption of Automobility

¹Cardiff University

The car is probably the consumer product with the greatest environmental impact. The debates surrounding sustainable automobility almost exclusively regard the car as a transport mode, yet the functionality of the car extends well beyond its transport role into cultural, social, psychological and institutional realms. Without addressing these other aspects, automobility is unlikely ever to become sustainable. Much of the environmental impact of the automobile may be attributed to overproduction prompted by the current dominant mass production system. At the same time, overconsumption prompted by our inability to develop longer term relationships with most of our objects, including 'consumer durables', is interwoven with this overproduction. In order to address this complex set of issues, this contribution will draw on a higher level analysis of the automobility system, combining a deep insight into the car industry with aspects of design, consumption and more recent thinking about our relationship with the objects around us, drawing on the work of thinkers such as Morton (2010, 2013), Bogost (2012), Vogel (2015) and the lesser known work by Spyker (2007). The basic notion being that if we gain a better understanding of our place on this planet and how this relates to the place of other entities on this planet, we may also gain a better understanding of our relationship with our objects and how we can enhance such relationships into more durable relationships, thereby reducing the need for their premature replacement, thus consuming fewer, higher value objects.

Christopher Nowlin¹
The Return of American Consumers to the Soil

¹Langara College

Americans became habituated to spending considerable time and money buying conveniences and luxuries once the "machine" era took hold in the early 20th century. Young people fled the labor of farm life for the expanding commerce of cities. Mass production required mass demand, so after the Great Crash J. M. Keynes gave his full blessing to the proposition that spending money, not saving it, was critical to economic prosperity. Ever since, Americans have been spurred on by their political leaders to mass consume. American consumer habits can shift if the pre-industrial importance of agriculture to American life is incorporated into urban commerce. This process is underway. Emulation of productive, conspicuous gardening is outpacing emulation of wasteful, conspicuous consumption. Entrepreneurs are creating viable economies around urban produce. Continuous consumption is critical to these markets but it is more socially healthy consumption than that of the 20th century.

O

Juudit Ottelin¹, Jukka Heinonen², Seppo Junnila¹
Polarizing Evidence of the Connection Between Compact City and Carbon Footprints

¹Aalto University, ²University of Iceland

Compact cities are expected to reduce greenhouse gas emissions. Reduced automobile dependency and short distances result in lower driving related emissions. Some studies have also suggested lower emissions from housing energy, due to smaller apartments. At the same time, dense urban areas are associated with agglomeration economies. Increasing population correlates with the increasing productivity of a city. Furthermore, population and dense urban areas also correlate positively with wages and housing prices. This is interesting from the greenhouse gas perspective, since income is the main driver of a person's carbon footprint, and economic growth the main driver of global GHG emissions. This paper illustrates how the compactness of a city is connected to the GHG emissions from transport and housing, income and total carbon footprint of the residents of the city. The study includes 20 largest cities in Finland. The carbon footprints are calculated with an environmentally extended input output analysis based hybrid life cycle assessment method. Regression analysis is utilized to test the impact of various compact city related variables, including population, population density, population living in the inner urban area of the city and the share of the population living in the inner urban area. The results of the study demonstrate that income is best explained by the population of the city, which is associated with all the other compact city variables. However, the share of the population living in the inner urban area explains better the total carbon footprint. All the compact city variables correlate positively with carbon footprint, when income is not controlled, but assumed to be driven by the same variable. However, the emissions caused by motor fuel consumption decrease with increasing density, regardless of which compact city variable is used. At the same time, the emissions caused by other travel, including public transport and holiday travel, increase. More research is needed to elaborate, whether compactness of a city or avoidance of urban sprawl alone have any impact on productivity and income, or if all these variables are simply driven by the population, or other variables omitted here. However, if we wish to build compact cities specifically for the possible economic benefits, we have to understand that this is in contradiction with the environmental goals.

Monique Ouimette¹
Preference or Performance?

Scented Products and Challenges in Adapting to Workplace Fragrance Restrictions

¹Boston College

Synthetic fragrances, ubiquitous in consumer products ranging from soap to trash bags, have become a contested topic in daily life. Recent work implicates several fragrance chemicals in negative health impacts (e.g. Fisher, 1998; Meek et. al, 2011; Bickers et al., 2003) and persistence in the broader environment (e.g. Klaschka, 2012; Peck & Hornbuckle 2006; Villa et al., 2012). In response to health and environmental concerns, workplaces around the United States have started to implement fragrance-free policies. Based on more than 50 employee interviews, this paper examines challenges to modifying consumption practices to comply with workplace fragrance policies. Such policies are implicit interventions into employees' personal care and laundry routines because they add a dimension for employees to consider when purchasing products - how much scent products will continue to emit after they are used - in addition to factors such as price and efficacy. Challenges to modifying consumption behaviors to comply with workplace fragrance restrictions fall into two categories: preferences for product scents and performance-based considerations. Underlying preference-based challenges are moral connotations associated with scents (Largey & Watson 1972; Synnott 1991; Low 2006) while performance-based concerns are influenced by convenience considerations (Shove 2003). Given the ubiquity of fragrances in consumer products, the findings have implications not only for workplace fragrance policy implementation but also for other interventions aimed at reducing consumption of scented products.

André Paz¹, Roberto Bartholo², Ivan Bursztyn², Cristine Carvalho²
Ilha Grande: Webdocumentary as a Social Technology for Sustainable Consumption

¹Federal University of Rio de Janeiro State (UNIRIO), ²Federal University of Rio de Janeiro (UFRJ)

Ilha Grande is a major touristic destination in the state of Rio de Janeiro, Brazil, due to its beaches, forests and protected areas. The tourism on the island is characterized by practices of mass tourism and consumption, with negative implications for the environment and the communities. However, some community-based initiatives, from lodging to restaurants, present themselves as more sustainable alternatives. In these cases, the relationship between tourists and hosts goes beyond the strictly commercial interaction. On the other hand, in recent years, a wide range of interactive narrative in digital platforms emerged in the world - the webdocumentaries. Part of them is associated with social projects, due to the potential for social mobilization tools. The Technology and Social Development Laboratory (LTDS), of the Federal University of Rio de Janeiro (UFRJ) held a webdocumentary on the island as a digital platform that aims to empower community-based tourism initiatives. The platform puts internet users / tourists in direct contact with community initiatives. It was held in partnership with the Voz Nativa project, by NGO Terra Azul, which supports entrepreneurship on the island. The paper discusses the design and implementation of webdocumentário "Ilha Grande: each beach, an island; each island, a story", as an experiment to develop a dedicated social technology to community-based tourism initiatives, from the perspective of sustainable consumption.

Maria Petrova¹
**How Communities Doing "ENUF" Succeed in Adopting Wind Energy:
 Case Studies from Massachusetts**

¹University of Massachusetts Boston

The successful implementation of renewable energy projects in the United States and other countries depends on understanding the views of local stakeholders, their motives for support or opposition, and the discourses of public participation. Understanding community concerns about projects and processes of implementation is important because projects that encounter community resistance typically do not get sited at all. This review maintains that policy makers will not achieve acceptance for siting projects unless they do "ENUF" -- Engage, Never use Nimby, Understand, and Facilitate. Three Massachusetts wind energy projects are analyzed through the lenses of the "ENUF" framework. The results of the surveys and interviews show that when policy makers and developers are not perceived by local communities to be doing "ENUF," their projects do not achieve community acceptance, and ultimately, fail. Suggestions for the successful implementation of the "ENUF" framework are proposed, as well as suggestions for the effective implementation of renewables in general.

Maria Petrova¹
Renewable Energy Values: What Are They and How Can They Be Measured?

¹University of Massachusetts Boston

Increased environmental awareness coupled with the energy crisis of the early 1970s has pointed attention to the importance of understanding citizen views and opinions of energy and the environment. Scientists have proposed several ways for operationalizing environmental values and attitudes. Two of these are the Postmaterialism approach and the

New Environmental Paradigm (NEP). While Postmaterialism suggests that environmentalism is an expression of postmaterialist values, values that favor quality of life and self-expression, the NEP approach assesses a person's ecological worldview or concern, defined as "beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature." Taking a similar direction, this paper proposes a framework for measuring renewable energy values and poses the question - what values lead to renewable energy adoption? It also proposes a framework for operationalizing and measuring those values, and tests it based on data collected in three Massachusetts towns via surveys and community interviews. The implications of operationalizing renewable energy values are discussed and recommendations made for policy makers.

Prakriti Prajapati¹

Virtual Water Exports in the context of India's Beef Industry

¹Ashoka Trust for Research in Ecology and the Environment, Bengaluru, Karnataka, INDIA

Water is an important resource. There exist regions around the globe with varying endowments of water. Indeed, trade among them is viable virtually (through embodied water in products). India has been among the top net virtual water exporting nations (Hoekstra 2011), showcasing the improper pricing of this precious resource. It is projected to become water insecure by 2025 and water scarce by 2050. Beef embodies the highest amount of water among majority of agro-food commodities. With the boom of Indian meat industry spearheaded by beef exports, this rate of water usage is bound to rise. Global and local water stress thus, is only going to worsen. With a wide variety of stakeholders, from general public, farmers, meat exporters, government and foreign consumers, it is imperative to understand the long term and short term implications of such adverse virtual water flows. This paper assesses and evaluates the quantum and direction of virtual water exports from India along with identifying the most water thirsty products exported, using an extended Input Output Matrix. Water Footprint Accounting Method is employed to supplement and granulate these findings. Beef, rice, wheat and maize have been found responsible for most of the virtual water exports from India. The paper discusses economic, political, ecological and cultural implications of this trade in detail. This paper assesses and evaluates the quantum and direction of virtual water exports from India along with identifying the most water thirsty products exported, using an extended Input Output Matrix. Water Footprint Accounting Method is employed to supplement and granulate these findings. Beef, rice, wheat and maize have been found responsible for most of the virtual water exports from India. The paper discusses economic, political, ecological and cultural implications of this trade in detail.

R

Brent Ranalli¹

Common Wealth Dividends and Sustainable Consumption

¹The Cadmus Group

Over two hundred years ago, Thomas Paine proposed the creation of a trust--paid into by landowners, and paying dividends to all--to provide justice and a measure of economic security to commoners excluded from access to the commons. Today, variations on this idea are receiving considerable attention. Since the early 1980s, for example, the Alaska Permanent Fund has paid an annual dividend to all Alaska residents out of invested state oil revenues. Carbon cap-and-dividend proposals currently under debate would implement Paine's principle on a national or even international scale. This talk will provide an overview of the principle of common-wealth dividends and the history of its study and

implementation, and will examine the implications of common-wealth dividends for patterns of consumption, production, and employment. The questions will be considered theoretically, and available empirical data (most importantly, from Alaska) will also be examined.

Robert Rattle¹

The Political-Economy of Media and Communication Through the Lens of Climate Change

¹Sault College

The potential for new practices of digital media to contribute to life experiences, expectations, desires and aspirations in meaningful ways that conventional markets and material consumerism manifest through capitalism have been unable to achieve suggests there is enormous scope for these emerging practices to intensify contemporary capitalism, class struggles, neoliberalism and wealth inequalities. This potential posits social, political, economic and cultural manifestations that remain largely unexplored, unquestioned, and unacknowledged, particularly where they can enhance comfort, convenience, and everyday life. Environmental and social actors have become adept adopting and adapting new media and communication technologies to advance their cause with remarkably little critique of the political economy of these actions. In particular, new practices (e.g. social media, sharing economy, open data, collective intelligence, etc.) distract attention away from the political nature of media and communications, emulsifying into the power struggles that define the very essence of what supports and maintains the structures which environmental and social actors seek to transform. Nowhere are these tensions more obfuscated than in the climate change debates. Economic, technological and political determinism predominantly define these approaches, as evidenced across the full environmental and social justice spectrum of climate change activism. While many climate change campaigns and strategic alliances suggest a bias towards the political economy of growth economics and technological determinism defined by neoliberal policies, the use of media and communications in campaigns also tend to embed ideological messages and hand over power to the political economy of communication technologies with complete disregard to their degree of neutrality. As Kevin Anderson of Manchester's Tyndall Centre for Climate Change Research noted, "Today, after two decades of bluff and lies, the remaining 2°C budget demands revolutionary change to the political and economic hegemony." That transformation is unlikely to appear through a media and communications regime that reifies the consumer ethic, class struggle and capitalist value. This presentation will explore these tensions between media and communications and sustainable consumption through climate change activism.

Jonathan Rubin¹, Paul Leiby²

Economic Incentives for Vehicle Automation and Implications for its Likely Features

¹ University of Maine, ² Oak Ridge National Laboratory

There is substantial interest in automated vehicles, and growing attention to what they might mean for energy consumption, travel demand, and land use forms. This paper builds on prior explorations of the factors that drive the (energy-related) features of road vehicle automation (size and speed of vehicles, travel patterns in selected transport sectors) and develops a more integrated accounting of the economic incentives that motivate its use in different markets. It considers how economics can inform our expectations regarding the nature and implications of automated vehicles, and whether they lead to expanding consumption or greater sustainability. The desired nature and use of automated vehicles may depend on the strength of demand from certain demographics (e.g. an aging

population) and income groups (who may be more interested in either basic mobility or luxury travel).

S

Marlyne Sahakian¹, B. Bertho¹, & S. Erkman¹ **Contesting Social Norms through Emotions: Conceptual and Methodological** **Handles for Understanding How Practices Might Change over Time**

¹University of Lausanne

Can emotional energy (Collins 2004) play a role in how practitioners are recruited to new practices (Spaargaren 2011)? Is there a link between emotional energy and social norms, understood here as shared ways of doing and tacit knowledge (Warde 2005)? These are the main questions behind a research project currently underway in Western Switzerland. Our hypothesis is that norms are tied to emotions through feelings of 'outgiveness' or 'rightness' (Schatzki 1996). Contesting social norms might lead to changing practices over time (Sahakian and Wilhite 2014, Wilk 2002, Bourdieu 1997). We begin with a historical case study that considers the diffusion of household appliances in post World War II Europe, leading to changing activities and energy demand. Based on an analysis of academic literature, and marketing and press materials, we uncover how appliances were positioned explicitly as a form of women's liberation and patriotic capitalism. However, women were also made to feel shameful and guilty for not acquiring these 'modern' accessories. We suggest that emotional energy may have played an important role in how new practices developed in relation electric appliances. We then shift to an ongoing research project in Western Switzerland, focused on understanding how changes in social practices and related energy demand could be possible. Through interviews and observations, we focus on specific household practices - such as cooking and cleaning - to understand how these relate to social norms around the following: gendered relations in the home; notions of modernity and progress; perceived standards around hygiene and cleanliness; time as a resource and the quest for convenience; and aspirations towards the 'good life'. Further, we grapple with the norms around emotions, or 'feeling rules' (Hochschild 1979), which tell us what and how to feel, with what intensity and duration. At this stage of our research project, we will have initial results to share and would very much appreciate feedback from participants on our conceptual and methodological approach - towards understanding strategies for successful transitions.

Marlyne Sahakian, Béatrice Bertho, Juliette Jeannet, and Suren Erkman¹ **Disconnect! Changing expectations around information communication technology** **products and services in Western Switzerland**

¹University of Lausanne

This paper is part of a broader research project (2015-2017) focused on household electricity consumption in Western Switzerland, based on relating energy consumption to social practices and norms. Here, we explore notions of expectations, entitlement and excesses around the use of Information Communication Technologies (ICT) by households, focusing on both products (e.g., phones, computers, screens, video games, televisions, etc.), and services (e.g., access to music, films, social networks, information, etc.). We reveal how expectations can change over space and time, in relation to inter-generational dynamics, life courses, or changes in geographic settings, and how some of these expectations will no doubt evolve into feelings of entitlement. We also consider how people experience mandatory or voluntary ICT restrictions in connectivity. We uncover tensions around ICT usage, and discuss what this means in terms of opportunities to reduce or restrict energy consumption. While we recognize that the use of certain electronic devices,

such as smart phones, may not be significant in and of themselves in terms of energy usage per unit, we see their active and standby usage as part of a growing trend worldwide (OECD/IEA 2014). ICTs are on the one hand touted as promoting greater sustainability, but also noted for direct and indirect energy consumption (Hilty and Aebischer 2015; Grant, Seager et al. 2010). ICTs are also relevant in relation to their “pervasive integration” across everyday practices (Røpke, Christensen et al. 2010), as our research also demonstrates. We consider ICT a particularly fruitful area to explore as social norms around (dis)connecting seem to be far from static: what is deemed acceptable or not in terms of ICT access and restrictions is an ongoing field of inquiry.

Chelsea Schelly¹

Individualism and Symbiosis: The Dance at Dancing Rabbit

¹Michigan Technological University

This paper examines the alternative technologies and alternative practices that organize life at Dancing Rabbit Eco-village, an intentional community in rural Missouri that has been actively pursuing alternative and sustainable lifestyles since 1997. This paper also discusses the motivating orientation shared by community members, and considers how this shared motivating ethic shapes decision-making and social practice. At Dancing Rabbit, community members are not motivated by environmental values or concerns, narrowly conceived. Instead, they share a broader orientation that recognizes the symbiotic relationship between human and natural systems (as well as within natural systems and within human systems) while also valuing liberal individualism. The alternative technology choices, forms of economic and material organization, and social culture of the community are all shaped by this shared orienting ethic, which involves a "dance" between valuing connection while also honoring individuality. This case study demonstrates that successfully pursuing radically sustainable lifestyles is motivated by considerations beyond environmental concern, including concern for human quality of life and pursuit of socially valued forms of organization and practice. Thinking about sustainable futures based on a broader set of orientating ethics may increase the viability of alternative lifestyles, and this specific case also demonstrates the dynamic dance involved in pursuing alternative forms of community based on shared, but sometimes contradictory, orientations.

Chelsea Schelly¹

**Pursuing Sustainable Consumption through Diverse Alternative Economies:
A Comparative Examination of Two US Intentional Communities**

¹Michigan Technological University

When thinking about how to pursue sustainable consumption, many scholars explicitly recognize the need to change economic organization and activity. Whether through de-scaling, steady state, or plentitude economics, various bodies of work offer useful perspectives on the relationship between economics and sustainable consumption. This paper works from the ground up, looking at two successful intentional communities in the United States. While both demonstrate potential futures for more sustainable models of consumption, these communities are organized based on radically different economic models. Twin Oaks is a labor and income sharing community, while Dancing Rabbit Eco-village requires individual households to meet their own subsistence needs through economic activity. Based on ethnographic research, interviews, and participant observation, this paper offers two reflections. First, the economic organization in each community seems to shape - although, importantly, not determinately - other institutional and cultural arrangements, from housing arrangements to social norms. Second, both communities are arguably successful and thriving, demonstrating the potential to pursue more sustainable consumption patterns through diverse forms of economic organization. This suggests, as

these communities themselves acknowledge, that perhaps the most valuable tool for pursuing sustainable consumption is to allow for flexible experimentation in alternative forms of organizing residential life.

**Ulf Schrader¹, Daniel Fischer², Laura Stanzus¹, Sonja Geiger¹, Paul Grossman³
Closing the Gap Between Sustainable Attitudes and Sustainable Consumption
Behavior Through Mindfulness Meditation**

¹Technische Universität Berlin, ²Leuphana University of Lüneburg, ³European Center for Mindfulness

Mindfulness can be defined as "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn 2003). Mindfulness oriented meditation is deeply rooted in Buddhist tradition but has gained new momentum in recent years. It has been seen as a possible cure for diseases of modern times like negative stress and burnout, and thus as a way to increase well-being. While some might consider mindfulness an esoteric topic, it is one of the most dynamically growing fields in academic research. A Scopus database research reveals that in 2014 alone nearly 1000 articles about mindfulness were published in acknowledged academic journals - while it was less than 100 ten years ago (and is still less than 200 for sustainable consumption). An important finding of the reported studies is that mindfulness might have the potential to close the attitude-behavior gap, which has been shown e.g. for the intention to stop smoking or the intention to do more sports. It is still open if these findings could be transferred to sustainable consumption. For this paper, empirical studies, which have dealt with the nexus of mindfulness and sustainability related behaviors, have been identified, reviewed, and systematized. This serves as a basis for conceptualizing a broad intervention study with a specifically designed mindfulness training for pupils, students, and employees. This study should answer the question if mindfulness meditation could help to close the gap between sustainable attitudes and sustainable (more sufficient) consumption behavior.

**Ulf Schrader¹, Marc Schmidt-Keilich¹, V. Muster
Sustainable Embedded Lead-Users:
Involving Employees as Customers in Sustainability Innovation Processes**

¹Technische Universität Berlin

Sustainability innovations might facilitate the adoption of more sustainable lifestyle and are thus an important way towards sustainable consumption. The "open innovation paradigm" (Chesbrough 2003) suggests that the integration future customers already in early stages of the innovation process creates chances for both, companies and customers. This has been proven especially for so called "lead-users" (von Hippel 1986), i.e. users who foresee future market needs and who would benefit especially from new market solutions. While von Hippel originally tested his concept in business-to-business sectors, it has been transferred - among others - to consumer oriented sustainability innovations as well. In this field, too, it has been shown, that lead-users are more likely to contribute to creative and promising innovations than non-lead-users (Schrader & Belz 2012). Nevertheless, company representatives involved in the cited study suspect that the effect is not worth the immense effort of selecting, involving, and preparing external lead-users before they might be useful in innovation processes. A possible solution for this challenge would be to integrate internal lead-users, i.e. employees with lead-user characteristics from beyond the R&D department. Schweisfurth (2012) has discussed this by using the term "embedded lead-users". However, this concept has not been applied to sustainability innovations yet. Thus, this paper will present the Sustainable Embedded Lead-User as a new concept which might support successful sustainability innovations. By involving employees as customers in sustainability

innovation processes - and not as representatives of their departments - the approach combines HR and innovation management with sustainable consumption. Doing this, it might be possible to reduce the challenges of external lead-user integration and create additional chances by empowering sustainability oriented employees.

Rachael Shwom¹

Investigating Paths to Sustainability for the Food Energy Water Nexus & Industrialized Household Consumption

¹Rutgers University

A new integrated research agenda focused on the critical problem of maintaining the earth's ecosystems while managing the world's increasing food, energy, and water (FEW) use is emerging. The interconnections between the food, energy, and water production and consumption and the social ecological systems they are embedded within has been termed the FEWS nexus. While much attention has leaned towards managing production systems for FEWs interconnections, in particular agriculture, the question of the role households can play in transforming FEWs systems should not be overlooked. This paper applies the work on household metabolism to household FEWs consumption to help assess how 1) household consumption may be shifted towards more sustainable patterns that account for interconnections in the system and 2) anticipate how changing household consumption patterns may aggregate and interact with the broader social, economic, and ecological contexts in which households are embedded.

Dennis Soron¹

Culture, Practice, and the Sociology of Sustainable Consumption

¹Brock University

In order to move beyond the narrowly individualistic and rationalistic model of consumer behaviour embedded in much environmental policy discourse, Dale Evans and Tim Jackson argue, proponents of sustainable consumption need to draw more fully upon the sociological literature addressing consumption, its varied drivers, and the complex roles it plays within contemporary life. Unfortunately, as they acknowledge, sociological theories of consumption have historically "tended to shy away from an explicit concern with 'sustainability', eschewing in particular its normative agenda." For all of the useful conceptual resources they provide, such theories have tended to be narrowly focused upon the culturally expressive, identity-oriented and communicative nature of everyday commodity consumption. In the process, Alan Warde suggests, they have relied excessively upon "models of voluntary action contextualized by webs of cultural meanings which constitute symbolic resources for individual choice". To this extent, Dale Southerton and his colleagues argue, many sociologists and sustainable consumption advocates alike have been hobbled by "a view of the autonomous consumer exercising relatively unconstrained lifestyle choices" that fails to appreciate "how consumption is socially constrained and embedded within routine and normative practices of everyday life". The recent 'practice turn' within the sociology of consumption, as represented by the work of Southerton, Warde, Elizabeth Shove, Gert Spaargaren and many others, has done much to theoretically and empirically reinvigorate this sub-field and greatly deepen its engagement with urgent questions pertaining to sustainable consumption. Taking a broad theoretical view of trends within the sociology of consumption over the past couple of decades, this paper offers an appreciative critique of the above-noted 'practice turn', highlighting both its most significant contributions to the sociology of sustainable consumption, and some of its unresolved

problems in conceptualizing the dynamics of consumer culture, collective agency and institutional power.

Joachim Spangenberg¹, Sylvia Lorek¹
More than Efficiency: Towards Sufficiency Policy
¹Sustainable Europe Research Institute SERI Germany

Our societies are characterised by a permanent drive towards "more, faster, higher and further". Efficiency strategies are indispensable for buying time, but they are too narrow to overcome that orientation (actually they are part of it) and their achievements tend to be overcompensated by economic growth. Sufficiency is the refusal to follow this imperative any longer, against the pressure to increase consumption to keep up with the Jones', against increasing labour intensity eroding good work and minimising the quality of personal services, for urban spaces free of advertising and commerce where citizens of all age groups can spend time together without spending money. "Stop, it's enough" could be the joint battle cry of consumers, workers and environmentalists once they realise that our societal orientation is wrong, cannot be healed by fixing some bugs but requires a turnaround. Broad and radical change instead of incremental improvements is the message of sufficiency.

Jennie Stephens¹, Elizabeth Palchak¹
Fossil Fuel Divestment:
Analysis of Organizational Discourse Responding to a Growing Social Movement
¹University of Vermont

A social movement to divest from fossil fuels has been growing rapidly in the past five years. Fossil fuel divestment campaigns are emerging in countries around the world and are particularly visible on college and university campuses. Beyond higher education, several foundations, companies, public entities, pension funds, and many individuals are also divesting from fossil fuels through fossil-fuel-free investment portfolios. As pressure to divest increases, higher education organizations are responding in different ways. This paper reviews this dynamic movement through analysis of the justifications of colleges and universities that have made public statements regarding divestment; we analyze both those that have committed to divestment as well as those that have declared publicly that they will not divest. This analysis of the framing and discourse used to defend divestment decisions among both organizations that are committed to divestment as well as organizations that are not committing to divestment, reveals dynamic communication strategies and evolving institutional priorities as the fossil fuel divestment movement expands and the transition to more renewable-based energy systems accelerates. The divestment movement is shifting cultural assumptions regarding fossil fuel reliance and highlighting the potential for intentional consideration of broad social impact of investment decisions.

Jennie Stephens¹, Brock Gibian¹, Sonya Ahamed¹, Elie Jordi¹, Richard Watts¹
Energy Innovation in Vermont's Renewable Energy Transition:
Collective Action Integrating Social and Technical Change
¹University of Vermont

The transition away from fossil fuels toward more efficient, renewable-based energy systems includes much more than a technological substitution; this transition also involves deep social, institutional and cultural change in how individuals, households, communities, and organizations relate to and use energy. Although recognition of the social dimensions of the energy transition is growing, analysis and examples of cultural change in energy are

limited. A unique collaborative culture in the state of Vermont provides a valuable model of a coordinated effort to support social as well as technical energy innovation. This northeast state has adopted a comprehensive energy plan that includes a goal of achieving 90% renewables in all sectors (electricity, heating and transportation) by 2050. As the state works toward achieving this goal, an innovative, networked, state-wide, inclusive effort has created an open, creative, and innovative environment for individuals, communities and organizations to engage with and promote action toward the shared vision. A high-level of collaboration within the state of Vermont is fostering collective action and energy innovation. Contributing to transition theory, this paper reviews the state of Vermont's renewable energy transition with a focus on innovative strategies that are facilitating institutional and cultural change as well as technical change.

John Stutz¹
Quantifying Sufficiency
¹Tellus Institute

A procedure for quantifying sufficiency in resource use consistent with the standard treatment of efficiency will be explained. Applications of the procedure involving electric usage in buildings and fuel use for transport will be developed. Linkages to issues of rebound, footprint analysis and other topics of current concern will be discussed.

T

Norie Tamura¹
Eco-labeling and Local Fishery in Japan:
A Case Study from the First Japanese MSC Certified Fishery
¹Research Institute for Natural Capital Co.,Ltd

Marine product eco-labeling is a method to enhance fishery resource management in commercial way. The Marine Stewardship Council (MSC) is one of the most well-known eco-labeling schemes in the world and its profile increased further when Walmart adapted it as part of their procurement policy in 2006. Kyoto Danish Seine Fishermen's Federation (KDSFF) was the first group to be MSC certified in Japan. KDSFF is an independent fishermen's association consisting of all Danish Seine net fishermen in Kyoto Prefecture and they have worked on voluntary, sustainable marine resource management since 1949. The reasoning behind the drive for MSC certification was to increase KDSFF's profile and profits by branding their seafood with the highest international certification standard available. Eight years have passed from their 1st certification in 2008 and KDSFF has not obtained the expected results. The perception of marine product eco-labeling in the Japanese market remains low and KDSFF has not benefitted from price premium nor seen profits increase. On the other hand, the maintenance cost is for MSC certification is expensive and the science-based requirements for audits are beyond the fishermen's ability to handle on their own. Marine product eco-labeling is a method presumed to lead to sustainable seafood consumption and it is also an effective way to encourage a more sustainable fishing industry that typically targets specific, sometimes threatened, species intensively to sell on the global market. However, from KDSFF example, it is difficult for local fisherman in Japan to be motivated by an ecolabeling scheme such as MSC, because of the pressures of continuous self-regulation and associated costs. We propose to improve the scheme in three ways: 1) to raise public perception of the label and sustainable seafood consumption, 2) to evaluate not only quantitative management enforced by the government but also qualitative efforts management taken by local, small-scale fishermen, 3) to reduce certification cost to reasonable level.

Vanessa Timmer¹, Kira Matus², Jay Golden³, Louis Lebel⁴
**The Relationship Between Mega-Cities and the Sustainability of Production
Consumption Systems**

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Drawing on new data and analytics, this paper examines the relationship between production-consumption systems (PCS) and mega-cities and their influence and impact on each other. It explores this relationship in the context of advancing the global sustainability of natural and human systems - meeting the needs of present and future generations while substantially reducing poverty and conserving the planet's life support systems. This article analyzes the conditions under which PCS initiatives taken by actors within cities around the globe advance sustainable PCS, both within and beyond their geographical boundaries. The analysis provides insight on the capacity for innovation and urban governance of sustainable PCS, especially the different roles of public actors and governments at multiple levels, private industry, and civil society. It specifically examines distinct PCS initiatives and their institutional arrangements in four mega-urban regions around the globe: manufacturing eco-industrial parks in Tianjin and in Brazil; electricity production in London from imported biomass; and the retail of certified and sustainable foods in Bangkok. It addresses two primary research questions: Q1 What is the impact and influence of PCS on the sustainability of cities and cities on the sustainability of PCS, including the implications for surrounding rural and global hinterlands? Q2 What governance structures and processes within mega-cities advance sustainable PCS, and which governance mechanisms in PCS are the most promising for improving future sustainability of mega-cities? Overall, the problem that this paper will work towards solving is how different governance approaches around PCS may enable or constrain urban sustainability. The study is expected to make a significant novel contribution to knowledge of how PCS and mega-urban regions interact to influence sustainability, both within urban regions, and with the global hinterlands which supply them and receive their wastes. The analysis and illustration of the influence of systems of governance is expected to lead to a set of specific propositions inspire and guide further research around this novel topic.

Vanessa Timmer¹, Lars Mortensen²
**Implementing the Sustainable Development Goals:
Implications for Sustainable Consumption and Production**

¹One Earth, ²European Environment Agency

Lars Mortensen explores the implications of the Sustainable Development Goals and the process of their implementation on the goal of advancing sustainable consumption and production. The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what these did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

Kazuaki Tsuchiya¹, Yuji Hara², Steven McGreevy³
Who Feeds Us?

Building GIS-Integrated Analytical Toolkits for Food Systems Localization

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Food system localization is one of the prevalent strategies for sustainable food consumption and can contribute to GHG emission reduction, organic waste recycling, community

development, strengthening local economies and social and human well-being. The implementation of policies, planning and strategies to support local food systems is currently limited partly due to a lack of comprehensive toolkits to understand how current food systems in local communities affect the environment and society therein and beyond. Here, we propose analytical toolkits for analyzing current and potential food systems and envisioning potential pathways for sustainable food consumption and production. The toolkits consists of four components: 1) Food flow analysis to gain insights into how local food-related actors behave within current socio-economic and environmental contexts, 2) foodshed mapping at local scale (e.g. municipality or urban region) to visualize potential reliance on local production, 3) investigation of local farmland management and its transition in order to understand difficulties and opportunities in continuing farming activities near consumers, and 4) consumer survey for understanding preferences and obstacles in adopting local foods as part of their diets. Geographic information system (GIS) is the core methodological approach in these analyses to integrate multiple data sources from production, consumption and retail sectors. We use empirical examples from Japan, Thailand and the Philippines to illustrate how these four components are applied in on-site practices.

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Xinfang Wang¹, Dana Abi Ghanem¹, Carly McLachlan¹
High-energy Consuming Practices at Home:
An Empirical Study in the North West England

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Energy consumption at home varies significantly among different households, even within those of similar compositions. The paper aims to explore high-energy consuming practices in heating, lighting, cooking, cleaning and use of appliances in householders' daily routines. It further analyses why some householders perform various practices at home more energy intensively than others. A total of 25 qualitative interviews were conducted in the North West of UK. The interview sample covered various types of household composition and dwelling, socio-economic status, and energy use levels. Several themes emerge, where cost, convenience, comfort, as well as the practical and discursive consciousness of householders play an important role in shaping how and why they use energy in their homes. Householders also emphasized the role of home insulation and the availability and efficiency of appliances in energy consumption. In addition, householders differed in the dominant meaning of their home, which affects the time they spend at home and their activities. Where for some people, home is a simple shelter; for others, it's a space for family get-together, or as a continuous projects to work on. Recognizing that high-energy consuming practices have more potential to reduce energy involved than less energy-intensive ones, a deeper understanding of the performance of high-energy consuming practices will provide valuable insights and facilitate energy reduction more efficiently and effectively in the home.

Nichole Weber¹

Labeling Genetically Modified Foods: Contested Sites of the Food Value Regime

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The recent entrance of biotechnologies with genetically modified organisms (GMOs) into the human food supply has been challenged at multiple levels. Internationally, food markets, particularly within the European Union, have required strict labeling of GMOs (Evenson & Santaniello, 2004). In the United States there is a documented willingness of GMO consumption from consumers, while GMO crop production has substantially increased

(Chern & Rickertsen, 2002). Shurman (2004) provides a framework using opportunity structures to understand the tactics of social movements in Europe in resisting GMOs through a strategic organizing aimed at vulnerabilities in the agri-business industry. Other research has documented the successes of social movement resistance to particular biotechnologies in Canada (Andree 2011). This well documented rift between agribusiness and the 'anti-GMO' (Shurman, 2004) camp can be viewed as contested area encompassing economic production and, conversely, concerns of environment issues, transparency, and lifestyle. Instigated by the anti-GMO camp initiatives for mandatory labeling of GMOs were taken to ballot in Washington State, California, Oregon and the New England states of Vermont, Maine and Connecticut, with successful passing of mandatory labeling laws in the New England states. In this exploratory analysis, I use a combination of discourse analysis and archival research to better understand the multilevel interplay of strategic social movements, industry ties to the broader economic and political milieu, and the industry tactics in value alignment with consumers in each state. This research moves to progress a nuanced understanding of strategic industry response to align with consumer and deepen and understanding of failures to increase transparency. Andrée, P. (2005). The genetic engineering revolution in agriculture and food: Strategies of the 'Biotech Bloc'. *The Business of Global Environmental Governance*, 135-166. Andrée, P. (2011). Civil society and the political economy of GMO failures in Canada: a neo-Gramscian analysis. *Environmental Politics*, 20(2), 173-191. Chern, W. S., & Rickertsen, K. (2002). Consumer acceptance of GMO: survey results from Japan, Norway, Taiwan and the United States. In 2002 World Congress of Environmental and Resource Economists. Evenson, R. E., & Santaniello, V. (Eds.). (2004). *Consumer acceptance of genetically modified foods*. CABI. Schurman, R. (2004). *Fighting "Frankenfoods": Industry opportunity structures and the efficacy of the anti-biotech movement*.

Daniel Welch¹, Luke Yates¹

Seeing the Wood for the Trees: Theories of Practice and the Problem of Scale

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Theories of practice have proved generative for the study of sustainable consumption (Cohen et al, 2013; Welch and Warde, 2015) and social change (Shove et al, 2012; Warde, 2014). However, advocates of practice theoretical approaches to sustainability acknowledge that extant studies commonly focus on local or small scale phenomena, without adequately articulating these sites of consumption with the larger configurations which practices compose (Schatzki, 2014; McMeekin and Southerton, 2012). Tentative developments have been made in this area (e.g. Shove et al, 2012; Watson, 2012). However, practice as unit of analysis is not well suited to the kind of configurational analysis needed to address the larger entities and phenomena with which sustainability transitions are concerned; and practice theoretical accounts of 'scale-making' are weak (Welch, 2015). This paper seeks to do two things. Firstly, it unpacks the problematic of scale in theories of practice: how a "flat ontology" (Schatzki, 2002; 2010) might account for how 'macro' phenomena arise from the 'micro' foundations of practices. Secondly, it reflects on how theories of practice might inform the understanding of the kind of large scale configurations of practice, or socio-technical regimes (Geels, 2011), commonly understood as central to societal transitions to sustainability (Geels, et al., 2015).

Dan Welch¹, Luke Yates¹

**The Practices of Collective Action:
Practice Theory, Collective Actors and Social Change**

¹University of Manchester

This paper develops theories of practice towards an appreciation of how collective action, particularly that of social movements and bureaucratic organisations, shapes large-scale social change or sustainability transitions. We begin by reviewing theories of practice as applied to specific instances of social or socio-technical change (e.g. Shove and Pantzar 2005, Shove et al 2012). We argue that work has tended to downplay the role of collective actors, strategic action and purposive collective projects. Work from social movements studies, organisation studies and transition studies, on the other hand, tends to take the category of the collective actor as unproblematic and presupposes their strategic activity as a primary motor of social change. We argue for a practice theoretical account of social change and transition dynamics which does not bracket out the roles of collective actors, strategic action and purposive collective projects. At the same time we suggest an account which: foregrounds social practices in the dynamics of collective agency itself and the kinds of activity they enjoy beyond strategic action alone (Yates 2015); and problematises the model of the "modern agentic actor" (Meyer and Jepperson 2000). Lastly, we address how collective action and the everyday performances of practices are articulated in relation to social change. Social movements studies offer evidence of everyday life as a ground for the formation of collective identities that give rise to social struggles (Melucci 1996), and sociology documents how the outcome of periods of contentious action are sedimented into everyday life. This account provides a more nuanced understanding of collective actors, and the complex dynamics between everyday life and collective action pertinent to the understanding of socio-technical change.

Peter Wells¹

Contestation over the On-Demand Distributed Economy and the Post-Consumerist Consumption of Convenience

¹Cardiff University

This paper argues that the shift away from mass commodified consumption does not so much indicate a new post-consumer nirvana as herald an escalation of the vulnerability of production systems to the fluctuations of market demand as late-configuration becomes a meaningful substitute for centralised but distant manufacturing, and for logistics and stocks systems. The on-demand economy privileges the consumer over the producer, but also over the worker. Hence the 'flipside' of the on-demand consumer is the on-demand (zero hours contract) worker. On-demand via peer-to-peer Internet platforms also provides a mechanism for individuals to achieve the extraction of extra value out of spare capacity, but essentially as a form of self-exploitation. The paper presents a narrative account of on-demand from a consumption and then a production perspective, and then considers the implications for a sustainable post-consumerist society. It is concluded that while there may be potential benefits from on-demand relations of production and consumption, in a late-capitalist context the principal impact is to accelerate the rate at which natural resources are converted into financial resources. There is however also a sub-narrative implied in this paper concerning the meaning and value of the academic endeavour, particularly as it relates to issues of sustainability, in which it is held that increasingly prescriptive rules with regard to publishing are unhelpfully restrictive.

Peter Wells¹

Hyper-mobility, Immobility and the Multi-Scalar Crises of Neo-Liberal Capitalism

¹Cardiff University

The purpose of this paper is to bring together in stark juxtaposition the issues of immobility and mobility, and to argue that these are experienced differentially via the medium of wealth - and hence are innately politicised. Taking an eclectic and anecdotal historical perspective the paper will explore the overlapping shifts in the cultural meaning and

definition of mobility, from mobility as freedom, to mobility as elite luxury pleasure, to a functional means to an end, and more radically to propose an emergent agenda of mobility as waste. The paper is intended as an exercise in provoking further thought, and to that end lacks original empirical evidence. Rather, drawing on secondary sources in a comparative analysis, the paper seeks to explore the theoretical treatment of mobility in sustainability thinking. The paper offers a deliberately binary view of the differences between 'mass' and 'elite' mobility to argue that much of elite mobility is indulgent waste, while mass mobility is often waste that has been designed into everyday lives. The paper reviews potential barriers to change and proposes five conclusions.

Peter Wells¹, Liqiao Wang¹
**Autonomous and Connected Cars:
Safety, Commodification, Sustainable Mobility, or Terminal Baroque?**
¹Cardiff University

This paper seeks to explore theoretically and empirically how different interests are being pursued through the autonomous car concept, with scant hope for sustainable mobility in post-consumer society. Autonomous cars, variously defined (self-driving cars; driverless cars), are the contemporary subject an early-phase hype cycle and unresolved discourses of contestation. As such, the industry collectively has not coalesced on an agreed vision or meaning for autonomous cars, and neither has much of civil society. This paper identifies from secondary sources four broad though not entirely distinct claims that autonomous cars: ? Will achieve a quantum reduction in traffic deaths and injuries, and thereby enable the continuation of mass motorisation ? Will destroy brand differentiation and render cars a commodity, but possibly increase rather than decrease demand ? Will enable sustainable mobility via e.g. car-sharing schemes or route optimisation ? Will result in baroque complexity in the search for cocooning experience in a manner that speaks to the bifurcation of wealth in contemporary societies While the concept is also being promoted as the next great arena for governments to support their automotive industries now that low-carbon has (apparently) been done, connected autonomous cars fail adequately to resolve the many societal and environmental problems car ownership and use creates. The disparate views of new entrants (Google), incumbents (the established vehicle manufacturers) and intermediary types (Tesla; Bolllore) reveal very different visions for the future of the industry and of personal mobility.

Christopher Whynacht¹, David Levy¹
**Transporting Value Regimes to a Post-Consumerist World:
A Multi-Level Perspectives Approach to Institutional Transitions**
¹University of Massachusetts Boston

Transitioning beyond the consumer society will entail a massive transformation in current economic and social institutions. Institutional theorists investigate this type of change from a social and organizational perspective. Conversely, the socio-technical transitions approach often uses a more materialist perspective. Our work seeks to integrate these two approaches as we investigate the value regime which underpins the consumer society. Transforming the consumerist value regime will require societal and technological innovation, so the mechanisms of this transition will have to address both material and social dimensions. The automotive and transportation sectors are likely to remain a part of any post-consumerist world. Thus we have chosen the case of developing low emissions vehicles intended to address climate change as a backdrop to demonstrate how integrating socio-technical transitions and institutional theory can both shed insight into broad institutional transformations.

Christopher Whynacht¹, Benjamin Lichtenstein¹
Achieving Prosperity for All: Social Dimensions of a Sustainable World

¹University of Massachusetts Boston

Transitioning beyond a consumerist society includes two necessary, but perhaps not sufficient, elements which we contend are essential to deem the transformation sustainable. The first is adopting social norms that value one's ability to live a meaningful and prosperous life, rather than by the possession of material goods. This will assist in reducing our ecological footprint to fit within sustainable planetary boundaries without decreasing quality of life. The second element involves reducing global inequalities, such that all people can enjoy a reasonable standard of living. A post-consumerist transition that increases socioeconomic inequality and creates hurdles that prevent the poorest in society from increasing their personal prosperity is not an optimal outcome. In this paper, we draw from research in ecological economics, socio-technical transitions, entrepreneurship, and complexity theory to provide examples and proposals to achieve a sustainable post-consumerist society.

Marc Wolfram¹
**Cities Shaping Grassroots Niches for Sustainability Transitions:
Conceptual Reflections and an Exploratory Case Study**

¹Yonsei University

This paper discusses the role cities play in the emergence and formation of grassroots socio-technical niches for sustainability transitions. Drawing on research engaged with strategic niche management, grassroots innovations and urban social innovations, it conceptualizes the interdependencies between urban contexts and grassroots niche dynamics, and explores a critical case in point: Current efforts in the city of Seoul to create, diversify and network social innovations in urban neighborhoods. The analysis illustrates the specific characteristics of innovative place-making activities in urban environs, and how empowerment, proximity and institutional thickness enable them to meet key conditions for niche formation in terms of networking, shared expectations and social learning. In conclusion, four issues are highlighted that appear to decisively impact on the shaping of urban grassroots niche and related sustainability transition pathways: 1) Urban empowerment capacities, 2) Embedded holistic innovation, 3) Novel community-oriented governance modes, and 4) Urban niche/regime translations. These issues thus require particular attention in future research and policy in order to guide the coevolution of cities and urban grassroots initiatives towards sustainability.