
Research on sustainable consumption: introduction and overview

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Research on sustainable consumption (SC) sets out to understand (and promote) the types of consumption behaviours that are conducive for a sustainable development. While deeply embedded in the fields of consumer research, environmental and ecological economics as well as psychology, many more disciplines and research fields have profoundly contributed to the advancement of the field in recent years, among them: environmental sociology and its perspective of social embedment of individual behaviour in social settings and contexts; behavioural economics and its empirically based acknowledgment of consumer biases, heuristics and context dependencies; the political sciences and their view of the consumer as an active citizen consumer; applied philosophy and its theoretical insights regarding the ethical core of the concept; sustainability marketing and its expertise on how to convey the message to consumers and on how to make sustainable consumption attractive; innovation studies and their view on consumers as co-innovators and co-producers; systems analysis and its unescapable reference to the complexities and interconnectedness of the ecological, economic and social systems in which consumption takes place; and historical studies that remind us of the roots of sustainable consumption and its interdependencies with cultural and technological pathways. Last but not least, identifying and designing policy measures promoting sustainable consumption have been on the agenda for consumer policy studies since the mid-1990s. The *Journal of Consumer Policy* (which we co-edit) has been at the forefront of this discussion. Effective policy making requires an empirically robust evidence of actual consumer interest and needs, on behavioural tendencies and on probable impacts of policy tools as well as an understanding of the theoretical models that best predict behaviour.

Hence, research on sustainable consumption abounds in theories and methodological approaches that have been mostly developed and refined in neighbouring fields and applied to the field of SC. While having advanced tremendously in the two decades since its inception (which we think is the 1992 Rio Conference), it is still a young research field and ultimately still in its infancy. We think that this is a good moment to pause for a stocktaking exercise and to compile original contributions from leading experts in the different fields as sketched above. This is what this book aims to do: presenting a selection of highly relevant research that explores the key issues within sustainable consumption practice, policy and research from a multitude of disciplinary perspectives. In many cases, this is frontier work, and we appreciate the fact that what the authors deliver is first rate.

We have organized the chapters as follows: After this introduction, we start with the epistemology of the field and how it calls for interdisciplinary and transdisciplinary research (Part I). We then group chapters on major disciplinary approaches to SC

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(Part II), followed by a part on diagnostic research, namely methods and measurements and their consequences for problem diagnosis (Part III). In Part IV, we compile concrete cases and issues of SC applied to the consumption domains of transport, housing and food as well as to public health. Part V features chapters on cross-cutting issues such as consumer habits, responsibility and socialization; while Part VI compiles contributions on different policies for SC. We finalize the book with a group of chapters suggesting and discussing key future directions for research on sustainable consumption (Part VII). In the following, we turn to a brief discussion about individual contributions to this book.

I.1 OVERVIEW OF THE BOOK

I.1.1 Part I

The opening chapter by Sylvia Lorek and Philipp J. Vergragt sets the stage by conceptualizing sustainable consumption as a systemic challenge that calls for inter- and transdisciplinary research and research questions. The aims of Chapter 1 are to document the unsustainability of present prevalent consumption patterns in what they call the ‘overdeveloped’ world, and to explore in more detail how a transition towards a more sustainable consumption system could be achieved. Consumption is viewed as part of a larger system of investments, production, trade, consumption and waste, and with comprising material, economic, cultural, institutional and power aspects. The chapter starts off by presenting empirical data that illustrate how unsustainable consumption actually is today and what problematic consequences so-called ‘green consumerism’ brings along. The authors present consumption as part of a complex, interacting system and argue that systemic change is needed that encompasses simultaneous changes in culture, production processes, consumption patterns, lifestyles, economics and politics. In closing, they elaborate which actions could contribute to such systemic change, and what the role of research could be to support such actions.

Similarly, Chapter 2 by Oksana Mont and Eva Heiskanen calls for a more systemic perspective, in their view based on industrial ecology and circular economy thinking. In ‘Breaking the stalemate of sustainable consumption with industrial ecology and a circular economy’ the authors share recent emerging ideas for alternative ways to organize our economy and society and explain why and how nature with its closed cycles is a source of inspiration for the evolving concepts of industrial ecology and circular economy. While the principles of industrial ecology and specifically the circularity idea have been mostly employed by the production side, implications for sustainable consumption and lifestyles have remained largely unexplored to date. This chapter focuses on the changes that need to take place in different stages of the production–consumption continuum in order to enable a shift from the currently linear economic system to a circular economy. In addition, it offers a discussion on the implications this shift might have for sustainable consumption and lifestyles and their institutional conditions. In particular, the chapter highlights the importance of emerging trends, such as collaborative consumption and the sharing economy, in changing the notion of social status and promoting less commoditized personal identity. It also reflects on the importance of the vintage economy and craft consumers in shaping values that may facilitate sufficiency and a circular economy.

Finally, the authors discuss the roles of various stakeholders in supporting the bricolage of emerging sustainable lifestyles from fragmented existing practices and initiatives to promote a circular economy.

I.1.2 Part II

Part II of the book compiles explorations of different social sciences disciplines and research traditions in SC research. Widening the perspective from individual behaviour to the historical dynamics of practices can illuminate the changing resilience of human societies in the face of disruption and transition to new resources. Yet, the history of consumption in general – and the history of sustainable consumption in particular – have been understudied research fields for too long. Chapter 3 by Heather Chappells and Frank Trentmann is one of the few academic contributions to date to systematically explore sustainable consumption in history, with the subtitle: ‘Ideas, resources and practices’. It places sustainability in a historical context and follows the career of the concept from the eighteenth century to the current paradigm of sustainable consumption and production. The increasingly integrated and global vision is examined alongside the local realities of sustainability challenges in three domains: water, energy and waste. Sustainability is presented as an evolving crisis concept, which has focused human efforts on conservation of resources and the revaluing of waste. Current approaches to conservation during energy crises and droughts are located in a longer history of tension between conservation, efficiency, and rising consumption and material flows. The chapter examines the emerging significance of consumers and their practices in recent responses to droughts in Britain and energy crises in California, to consider lessons for resilience and more sustainable demand management in rich societies. Those high levels of household waste, we learn, are persisting alongside greater recycling and reuse points to the limits of technological solutions or appeals to individual conscience. The chapter shows how deeply consumption is rooted in the social organization of daily life.

According to Linda Steg in Chapter 4, ‘Environmental psychology and sustainable consumption’, sustainable consumption is often associated with some behavioural costs and additional effort. Despite this, many consumers engage in sustainable consumption. She argues that consumers are more likely to engage in sustainable consumption when they strongly endorse biospheric and altruistic values, while strong egoistic and hedonic values are likely to inhibit sustainable consumption. Next, she discusses different processes through which values can affect sustainable consumption. Yet, we are reminded that strong endorsement of values may not be sufficient to promote sustainable consumption. Importantly, values need to be activated in order to be influential and steer decision making. The chapter discusses various situational factors that can activate and deactivate relevant values, thereby increasing the likelihood of sustainable consumption: value primes or value-related symbols, value-signalling behaviour of others that reflect the level of support for norms, cognitive demands in situations, and situational factors that affect the costliness of sustainable consumption. Her reasoning suggests that three strategies can be employed to promote sustainable consumption: strengthening biospheric or altruistic values, targeting situational cues that activate and support biospheric and altruistic values and/or deactivate egoistic and hedonic values, and targeting process variables through which values affect behaviour.

In the sociology of sustainable consumption, practice theoretical approaches provide an alternative to the cultural theory model of consumption dominant in sociology and related disciplines at the end of the last century. In Chapter 5 on theories of practice and sustainable consumption, Daniel Welch and Alan Warde take up the cudgels for practice theory and give an analytic account of the nature of the impact that theories of practice have had on approaches to sustainable consumption. The chapter briefly outlines the potential contribution of the practice theoretical approach to consumption in general. It then contrasts two major research programmes – exemplified by Spaargaren at the University of Wageningen and Shove at Lancaster University – which have applied theories of practice in different ways to research into sustainable consumption. According to the authors, the cultural theory model (which emphasises the conspicuous, communicative and symbolic aspects of consumption) offers only limited resources for the study of environmentally significant consumption. Practice theoretical approaches, by contrast, seem to afford distinctive understandings of the place of consumption in the accomplishment of everyday routine activities, that is, which activities have profound environmental impacts. The two exemplar programmes draw on differing theoretical resources and address different empirical foci, demonstrating the range of practice theoretical approaches applicable to the study of sustainable consumption. Finally, these points of departure between the two positions are used to suggest further avenues for sustainable consumption research informed by theories of practice: the relationship between consumption and production; the relationship between collective agency and everyday routines; and the relationship between the everyday performance of practice and the macro-institutional context.

In Chapter 6 on sustainability marketing, Ken Peattie focuses on the potential of a firm's marketing and commercial communication as a driver for more sustainable consumption; according to him, the most powerful and pervasive influence on consumer behaviour in relation to sustainability. Although frequently blamed for driving consumption to unsustainable levels, marketing surely has the potential to contribute to the development of more sustainable systems of consumption and production. The chapter considers how the relationship between marketing and sustainability has evolved, and how the next steps towards more sustainable marketing and consumption may be achieved. It reviews the ways in which marketers seek to understand consumers' willingness to adopt pro-sustainability behaviours, and the ways in which marketing variables can be manipulated to engage consumers with more sustainable market offerings. Finally, it reviews the future opportunities for research into sustainability marketing and how marketing scholarship and practice can contribute to the transformation of our societies to create substantively more sustainable ways of living, producing and consuming. Issues of ethics are also touched upon.

Sustainable development is at its core an ethical concept and applied philosophy has an important role to play in the research on sustainable consumption. In Chapter 7, 'Ethics and sustainable consumption', philosophers Lieske Voegt-Kleschin, Christian Baatz and Konrad Ott provide a philosophical-ethical perspective on sustainable consumption. They start by outlining a concept of sustainable development based on an understanding of sustainable consumption as 'encompassing behaviour that reduces pressure on humanity's environmental and social base of livelihood, that respects other individuals' ability to live a decent human life and that does not overburden its

addressees'. Subsequently, they introduce the distinction between weak and strong sustainable consumption and argue in favour of the latter. They then turn to (what in their view constitutes) the ethical core issue regarding sustainable consumption, namely: is it legitimate to claim that individuals need to consume more sustainably? The authors answer this question in the affirmative and distinguish three equally important, complementary individual duties: duties to comply, to promote and to contribute one's fair share. Finally, they turn back to the claim that such duties must not overburden individuals. The authors close by explaining why ethics cannot (exactly) delimit an individual's duties, while stressing that this does not yield individual duties the least bit less binding.

I.1.3 Part III

Part III of the book consists of two chapters covering diagnostic research, that is, debates on methods and measurements of the relative (un)sustainability of consumption and production as well as on the options for and pitfalls of using these tools for evidence-based policy making and priority setting in sustainable consumption policy.

In Chapter 8, Kjartan Steen-Olsen and Edgar G. Hertwich evaluate life cycle assessment as a means to identify the most effective action for sustainable consumption. The chapter explains how everyday activities and purchases of private households adversely affect the environment through a highly complex web of interactions within and between the natural and man-made systems. In the effort to introduce behavioural change to reduce household environmental impacts, the authors argue, it is important for all to understand what types of activities and purchases affect the environment to a higher or lesser degree. Following Steen-Olsen and Hertwich, this understanding seems to be currently lacking. Instead, individuals tend to have black-and-white views of what activities are 'green', or not. Life cycle assessment (LCA) is proposed as an analytical tool well suited to compare product systems in terms of environmental impacts. By establishing a consistent framework to quantify the cumulative impacts of consumed products or services throughout their lifetime, including effects far upstream in the supply chain, LCA seems to offer fair evaluations of alternatives that without the life cycle perspective cannot be meaningfully compared, such as electrical versus petrol-powered cars. Previous research consistently highlights food, transport and housing as the most important consumption categories in this respect, issues and domains that are taken up in Part IV of this book. The authors address each in turn, summarizing some key findings of LCA research, and discuss the potential as well as the limitations of LCA as a guide for society towards a sustainable future.

Another diagnostic question is how priorities for sustainable consumption policies can best be determined. In Chapter 9, Arnold Tukker explains how environmental effects of economic activities are ultimately driven by consumption of households and governments. First, he explains, almost all consumption activities have direct environmental impacts. But second, consumption activities also have important indirect effects – such as the environmental impacts related to the production of food. Tucker sees essentially two ways of calculating such life cycle impacts of final consumption: via life cycle assessments, and via environmentally extended input–output analysis. The author shows that virtually all studies done for developed economies identify food consumption, the use of transport and activities in the home (housing, heating and leisure via electrical

appliances) cause around three-quarters of the total life cycle impacts of consumption. Hence, he argues, these areas should be given priority by sustainability policies, either by cleaning production or greening products, or by more consumption-oriented measures like shared use of products and facilities, spending money on low-impact consumption activities, or even restructuring patterns of consumption and production in such a way that a higher quality of life can be realized at lower levels of economic expenditure.

I.1.4 Part IV

In Part IV of this book, we compile contributions focusing on those most impacting consumption domains depicted above – namely travel, housing and food – as well as on the intersection of sustainable consumption and public health.

Fast, motorized transportation of people and cargo is essential in contemporary societies with their specialization of functions at different locations. Yet, the resulting unprecedented increase in motorized travel has both local short-term and global long-term detrimental effects on the environment, which must be mitigated. In Chapter 10, titled ‘Unsustainable travel becoming (more) sustainable’, Tommy Gärling and Margareta Friman review research assessing the effectiveness, public attitudes towards, and political feasibility of measures that limit local and global damage to the environment caused by automobile use. These measures include clean automobile technology, rebuilding the environment to increase accessibility by walking and bicycling, improving public transport, and reducing automobile use by implementing prohibition, pricing and information measures. The authors’ conclusion is that no measure is sufficient alone but that several need to be combined. In particular, it is not even in the longer term likely that clean automobile technology, increasing accessibility by rebuilding the environment or improving alternative travel modes will suffice unless governments also implement measures that reduce automobile use. Since scientific evidence indicates that voluntary information and pricing measures may achieve 5–30 per cent reductions in urban areas, the often heard counter-argument from interest groups that automobile use cannot be reduced should not be taken seriously.

Next to travel (and interconnected), housing is essential from a sustainability perspective, both because this sector in itself stands for much of the resource consumption, and also because housing is central for the way consumption and production are organized in a society. In Chapter 11, Kirsten Gram-Hanssen puts housing in a sustainable consumption perspective. Policies related to sustainability in the housing sector have had a tendency to focus either on more efficient technologies or on changing user behaviour. In this chapter it is argued that technologies and the way people live in houses and use these technologies have to be dealt with in a much more integrated way than is done today, and that recent approaches of practices theory can help in the understanding of these relations. The author shares different approaches to sustainable housing development that have been promoted by both grass-roots initiatives and technological top-down approaches. The issue seems to be that policy initiatives have to understand the special meanings which people attach to housing: houses do not just provide shelter; they also form the basis for a home which represents security, familiarity and identity, and thus, according to the authors, any policy for a sustainable-consumption perspective on housing must also reflect this meaning of the home.

For the food domain, Achim Spiller and Sina Nitzko explore the role of meat in sustainable consumption in Chapter 12 titled 'Peak meat'. The chapter is based on the fact that global demand for meat and meat products is increasing, and with it the importance of the development of sustainable meat consumption. Besides social, economic, ecological and health-related criteria, ethical and animal welfare-related aspects play an additional role in the evaluation of sustainability of animal products. Following the 'less but better' approach discussed in this chapter, more sustainable meat consumption can be achieved by reducing the amount of meat consumed combined with enhancing the quality of the meat. In line with this, a typology of consumers that differ in their qualitative (ethical quality) and quantitative meat consumption is presented. Based on a consumer survey of a sample of the German population, the consumer types are validated and described. Furthermore, potential and existing policy measures to promote sustainable meat consumption in different target groups are suggested. The authors conclude by discussing challenges for the future development of more sustainable meat consumption.

Acknowledging that the consumption of meat accounts for a large proportion of the ecological footprint of contemporary Western diets, the following chapter also calls for a reduction in meat consumption to make a substantial contribution to a more sustainable food system. Muriel Verain, Hans Dagevos and Gerrit Antonides focus in Chapter 13 on 'flexitarianism' and the range of sustainable food styles it brings along. Flexitarianism displays itself in various ways of moderating meat consumption and appears to be acceptable for a large number of Dutch food consumers. What factors motivate flexitarianism, and what varieties of flexitarian food styles can be distinguished? The authors report on an empirical survey that has been conducted among 1312 Dutch consumers to identify clusters with different consumption styles with respect to meat. Differences across the clusters were found with respect to meat consumption, preferred societal actions to reduce meat consumption, and food neophobia. It is concluded that flexitarianism as a sustainable food style can take several forms. Several meat consumption reduction strategies to approach the different types of flexitarians are discussed.

Closely linked to modern Western food styles, obesity has increased tremendously worldwide, and the trend is still ongoing. In Chapter 14, Wencke Gwozdz discusses the nexus of obesity, sustainability and public health. The chapter acknowledges that the key drivers of obesity are not yet fully understood, yet consequences should have become obvious. Surely, the effects of obesity are not socially, economically or ecologically sustainable. Ecologically, current food production and consumption systems are responsible for a large share of greenhouse gas emissions. Economically, obesity is unsustainable with regard to health care systems and labour markets. And socially, obese consumers experience co-morbidities of obesity, an impairment in everyday life, discrimination and an overall reduced quality of life. The high prevalence of obesity and its unsustainable effects have led public health authorities worldwide to put obesity high on the policy agenda, and to make it an integral part of some nations' sustainability strategies. Promoting healthier lifestyles, including diets and physical activity of consumers, is one goal of public health, and if successful will have the power to reduce the unsustainable effects of obesity.

I.1.5 Part V

In Part V of the book, we group chapters that cover a range of cross-cutting issues. Chapter 15 by Bas Verplanken and Deborah Roy focuses on consumer habits and sustainable consumption. It looks into what sustainable consumption means to consumers, why consumers make unsustainable decisions, and into potential avenues for promoting sustainable consumption. After reviewing some approaches to define sustainability, empirical evidence is presented showing how sustainable behaviours are cognitively clustered into sustainable technologies, sustainable energy use, sustainable food and shopping, sustainable environments and sustainable gardening. The authors continue to discuss the question why sustainability has such low priority in consumer decisions. Drawing on the decision making process literature, it is argued that unless sustainability is a top priority, linked to central values or prominently displayed it is unlikely to play a role at all due to the heuristic nature of most choices. The chapter then discusses the habitual nature of most consumer decisions and the consequences this has for making (un)sustainable choices. The authors focus in more detail on the habit discontinuity hypothesis, which states that behaviour change interventions are more effective when these capitalize on contexts where old habits are broken or suspended during life course changes, such as moving house or the transition to retirement. Finally, they address ‘upstream’ approaches to behaviour change, such as macro-level policy measures, transformations of the infrastructure or physical environments, or direct regulation of behaviour.

While academics and the press have paid significant and deserved attention to the issue of corporate social responsibility for a shift towards a more sustainable global economy, some have argued that there has been insufficient focus on the responsibility of the consumer. Michael G. Luchs and Rebecca A. Miller explore this issue in Chapter 16, titled ‘Consumer responsibility for sustainable consumption’. In an effort to inform and promote future research on consumers’ responsibility for sustainable consumption, they introduce a simple five-item scale of ‘consumers’ felt responsibility for sustainability’ (CFRS) that builds on Schwartz’s concept of activated personal norms as ‘felt obligation’. The chapter aims at demonstrating the value of the CFRS scale in predicting sustainable consumption behaviours. They also explore consumers’ conception of sustainability as well as their beliefs about the distribution of responsibility for sustainability amongst consumers, companies and governments. In addition, the authors describe preliminary results of research that explores the antecedents of CFRS using established constructs related to consumers’ mind set, ideology and values, and demographics. The chapter concludes with a discussion about how a greater focus on consumer responsibility in general can advance research on sustainable consumption.

In the context of need for individual behavioural change, knowledge about family socialization and sustainable consumption is essential for developing effective policies. In Chapter 17, Ellen Matthies and Hannah Wallis develop two perspectives on sustainable consumer socialization, taking into consideration the level of impact and people’s intentions to engage in sustainability. The first perspective focuses on how consumption behaviours that are particularly relevant in terms of environmental impact are transferred or have the potential to be transferred from parents to their children. The second perspective considers the transmission of pro-environmental values and norms within

families. Earlier research has found relevant socialization influences from parents to children in a variety of domains, such as choice of travel mode and purchases of organic products and food. Adolescents appeared to be less influenced by their parents with regard to saving electricity. Thus, the transfer of specific consumption behaviours and the transmission of behaviour-specific norms seem to differ with respect to the domain of action. Studies indicate that communicating about the problems that are addressed by sustainable actions in families and children's observations of their parents' actions influence the socialization process. The authors close with suggestions on how to apply this knowledge to practical consumer socialization.

I.1.6 Part VI

The following Part VI compiles chapters on promising policy instruments and tools that are applied to promote sustainable consumption. It spans from traditional instruments such as labelling and consumer information to more recent tools such as 'nudging'.

In Chapter 18, 'Carbon triage: a strategy for developing a viable carbon labelling system', Sharon Shewmake, Mark A. Cohen, Paul C. Stern and Michael P. Vandenbergh focus on carbon labelling as a way to fill gaps in governmental efforts to reduce the impact of human activity on global climate. Carbon labels can provide information that allows producers and consumers to develop and choose lower-impact products, but they have not become widespread, in part because of difficulties in developing valid and reliable labels for the universe of products. This chapter suggests a triage approach in which labelling begins with products that meet four criteria: magnitude of footprint, feasibility of assessment, and producer and consumer responsiveness. It presents an example of carbon labelling triage in the food industry and discusses three implementation issues: governance of the labelling system, geographic considerations and the content of carbon labels.

Caroline L. Noblet and Mario F. Teisl present a broader review of research on eco-labelling as sustainable consumption policy in Chapter 19. They start from the insight that the sustainability issues currently faced transcend region, place and generations; thus individuals must often rely on externally provided information to align their choices with their preferences. The wide-ranging use of eco-labels in the market suggests that they are perceived as an effective method of providing information to consumers, ultimately impacting upon consumer behaviour. The success of labelling programmes is contingent upon use of the labels in consumption decisions. Noblet and Teisl review factors influencing the decision to purchase eco-labelled products including characteristics of the individual, the programme and the product. Moreover, the potential for eco-labels to promote sustainability objectives is reviewed, including the benefits and limitations of eco-labels within the context of sustainable consumption.

Behavioural economics has been a late but crucial contributor to policy promoting sustainable consumption. In Chapter 20, 'Behavioural economics, consumption and environmental protection', one of the founding fathers of behavioural economics, Cass R. Sunstein, explains how behavioural economics, consumption and the environment can cooperate for the purpose of sustainable consumption. For a long time behavioural economists have shown that consumers may disregard the long term, display unrealistic optimism, ignore shrouded attributes, procrastinate, make mistaken judgements about

probability, and suffer from ‘internalities’ that occur when people make decisions that hurt their future selves. Moreover, choice architecture, understood as the social or physical background, is always present and it can have major consequences for both consumption decisions and environmental outcomes. Small changes in the underlying architecture may have a large impact on consumer behaviour, potentially even larger than that of significant economic incentives. Such changes, he explains, may involve disclosure, warnings, default rules, increased salience, and use of social norms. We agree that in the domain of environmental protection, non-price interventions – preserving freedom of choice and avoiding people’s reactance – have considerable potential.

Financial incentives are a highly popular tool to steer sustainable consumer behaviour, but they are not always effective, and can sometimes do more harm than good. Jan Willem Bolderdijk and Linda Steg offer insights into the conditions under which financial incentives are more or less effective. In Chapter 21, ‘Promoting sustainable consumption: the risks of using financial incentives’, their central point is that the persuasive power of incentives does not depend only on their instrumental value, but also on how these financial incentives affect people’s underlying cognitions: money does something to people. Importantly, these cognitive responses may limit the persuasive power of incentives. Specifically, their instalment may lead consumers to adopt a business frame, disrupt the process of self-persuasion or taint the self-signal ensuing from the decision to act sustainably. This means that financial incentives can sometimes paradoxically discourage the very behaviour they are meant to encourage. Even when incentives are effective in promoting the target behaviour, they can still do more harm than good when they affect behaviour only temporarily, or simultaneously demotivate consumers to engage in other, more pertinent forms of sustainable actions that are not financially attractive. The chapter ends with discussing potential remedies against these risks, as well as directions for future research.

An instrument which impacts upon consumer behaviour indirectly is the corporate use of sustainability standards. In Chapter 22 on voluntary standards as enablers and impediments to sustainable consumption, Andreas Rasche discusses the role of voluntary standards for corporate sustainability and responsibility as enablers of and impediments to sustainable consumption. He starts by reflecting theoretically on the notion of standards, discussing different characteristics of this mode of regulation. Next he distinguishes different types of standards for corporate sustainability and responsibility. His subsequent analysis shows that standards enable sustainable consumption: firstly, by reducing information asymmetries, informing consumers about the social and environmental conditions under which products and services are created; secondly, by supporting the disclosure of firms’ sustainability-related information (potentially leading to increased consumer loyalty); and thirdly, by further institutionalizing the discourse around sustainable consumption. The chapter also emphasizes that voluntary standards can impede sustainable consumption, the three reasons being: (1) the coexistence of a variety of competing initiatives in some sectors (for example, fair trade coffee) is likely to confuse consumers; (2) consumers may question the credibility of selected standards, since highly public scandals have revealed the limits of auditing and monitoring practices; and (3) while many standards are designed as multi-stakeholder initiatives, only few of them directly involve consumer representatives, leaving the impression that some standards define practices for consumers but not with them.

In parallel with policies for sustainable consumption gaining momentum, research into the barriers and drivers of more sustainable consumer behaviour has created a huge body of scientific evidence. However the impact of this knowledge on policy making has remained surprisingly small. In Chapter 23, ‘Step across the border: knowledge brokerage for sustainable consumption’, Gerd Scholl explores the reasons for the gap between science and policy on sustainable consumption and discusses ways to bridge it. After a brief overview of policies and research relevant to the field, different factors shaping the science–policy gap are presented. The concept of knowledge brokerage, which is essentially an approach to reduce the gap, is then introduced as a structured process of exchanging knowledge and creating links between different communities and of building capacities to perpetuate cross-community exchange. How this can look in practice is illustrated by the example of a European pilot project that experimented with and developed new integrative modalities of knowledge brokerage at the science–policy interface of sustainable consumption. The chapter concludes that conflicting time-frames and diverging agendas between science and policy still seem to be a major obstacle to more evidence-based policy making on sustainable consumption, and it suggests ways to overcome this mismatch by improving the availability of evidence (on demand) and by facilitating knowledge collaboration between the two communities. Recommendations for further research that can be derived from this conclusion cover topics such as cross-country analyses of different knowledge brokerage cultures, and explorations of the potential of social media for knowledge brokerage, amongst others.

I.1.7 Part VII

The final part of the handbook looks into future directions for research on sustainable consumption. In Chapter 24, ‘Decoupling resource consumption and economic growth: insights into an unsolved global challenge’, Peter Hennicke and Dorothea Hauptstock argue that the decoupling of resource consumption from economic growth (that is, less used natural resources per unit of economic output) and impact decoupling (that is, reduced environmental impact of resource use and economic activities) are necessary conditions for sustainable development. The chapter demonstrates that a ‘resource efficiency revolution’ in combination with ‘sufficiency policies’ could be a promising step towards a solution. This might create much technological optimism. However we are reminded that there is much evidence that technological progress has to be accompanied by radical socio-economic transformation and new patterns of sustainable production and consumption to break the nexus between gross domestic product (GDP) growth and the use of nature. Thus, the authors call for more research on the social context of implementing ‘greentec’ and of the socio-economic drivers of ‘lead markets’ (for example, for energy and resource efficiency, sustainable mobility, recycling technologies or renewable energies). The authors conclude with a brief outlook on how the rapidly growing ‘new consumer classes’ (for example, in China and India) might change the overall picture dramatically.

Contemporary economic policy discourses are heavily oriented towards competition and efficiency, using modern conceptualization of the market as an institution for resource allocation and governance. Market-based policy approaches are considered necessary with sufficient instruments to achieve environmental goals while leaving

individual freedom largely unaffected. In Chapter 25, 'The role of consumer sovereignty in sustaining the market economy', Wolfgang J. Fellner and Clive L. Spash challenge this neoliberal position in general and the underlying concept of consumer sovereignty specifically. According to the authors, this concept encapsulates the idea that individual consumption is the only source of value and consumers are able to enforce their interests on producers via their power in the market place. Despite the concept of consumer sovereignty having huge importance in contemporary economic theory and policy, its meaning remains opaque. The authors explore how consumer sovereignty has been employed for political instrumental, market ideal and economic instrumental reasons by classic liberals, neo-Austrian and neoclassical economists, respectively. They go on to show that the concept of consumer sovereignty depends upon a series of problematic assumptions and fails to bear much relationship to reality. The theoretical basis of consumer sovereignty on individual preferences proves problematic, not least due to its ethical presumptions. Environmentalists search for what makes a just and sustainable society, and neoliberalism is answering with the rhetoric of consumer sovereignty. This chapter shows why that answer needs to be rejected and why environmentalism actually means critically rethinking the role of markets in society.

New types of markets – and therewith new roles for market actors – are currently developing within the so-called 'sharing economy'. 'Collaborating and connecting: the emergence of the sharing economy' is the title of Chapter 26 by Juliet B. Schor and Connor J. Fitzmaurice. The authors show that while sharing is a long-standing form of exchange, new forms of sharing have emerged. What is innovative about today's sharing is that it is a market form in which strangers – rather than kin and communities – exchange goods and services. We learn that the contemporary sharing economy creates new ways of provisioning goods and services and opportunities for what the authors have called 'connected consumption', relying on peer-to-peer relationships rather than existing market actors to mediate exchanges. Schor and Fitzmaurice suggest that participation in the sharing economy is motivated by economic and ecological concerns, as well as a desire to increase social connections. However, they question how effective the sharing economy has been in meeting these goals. They emphasize the importance of digital technologies, facilitating the emergence of 'circuits of commerce', in overcoming the trust and reputational barriers that once restricted sharing to kin and community. Finally, Schor and Fitzmaurice suggest that the market orientation and organization of sharing economy platforms – as well as whether exchanges are monetized or non-monetized – are critical characteristics shaping these platforms and their potential to provide truly alternative economic arrangements.

In the final chapter in the book, American sociologist Maurie J. Cohen discusses the recent rise of numerous social innovations. Chapter 27, 'Toward a post-consumerist future? Social innovation in an era of fading economic growth', envisages such developments as incipient signals of a transition toward a heretofore inadequately theorized stage of social evolution, but contends that any such shift will invariably be a protracted and halting process. The author explains that while four decades have passed since social theorists first contemplated the waning of consumer society in the Anglo-European countries and Japan, this prospect was deferred in the early 1980s by new public policies favouring economic deregulation, trade liberalization and militarization. The political consensus that championed these strategies – and sustained lifestyles predicated on mass

consumption – is said to have now broken down, and consumer-propelled economic growth is again becoming difficult to maintain. Cohen concludes that the reversal of once-favourable demographic, economic, social, cultural and environmental trends is undermining the pillars of consumerism today.

I.2 SYNTHESIS AND LIMITATIONS

Together, the contributions to this book show that research on sustainable consumption is not only a young field, as we wrote earlier but is also a multifaceted, multidisciplinary, challenging and thriving field of research that has attracted brilliant scholars from all corners of the social and behavioural sciences. The research reported in this book spans from micro- to macro-level perspectives, from the past to the future, from what is to how to obtain what should be, from determining optimal individual choices to individuals' ethical responsibility for making these choices. More specifically, it spans from understanding the implications of the individual consumer's motives and constraints for the sustainability of choices and behaviour to attempting to grasp the complete system of production and consumption and its implications for sustainability. It spans from studies of the history of (un)sustainable consumption to systematic attempts to project the future of sustainable consumption. It spans from research attempting to build a better understanding of sustainable and unsustainable consumption (at the micro, various meso and the macro levels) to research on the most effective ways of changing lifestyles and creating more sustainable consumption patterns. It spans from research on measuring the sustainability of consumption options to research on the ethical responsibilities of individuals regarding the sustainability of their consumption choices.

However, despite its wide coverage, this book by necessity gives only a selective representation of current research. When deciding which specific topics to cover within the broad research field of sustainable consumption, we worked within the page constraints of a book in this series. In addition, even though we are thrilled by and grateful for the very positive responses we received to our invitations to contribute a chapter for this book, it is obvious that not everyone we invited was able to participate. These two limitations mean that there are important issues in sustainable consumption research that are not covered in this book. For example, we would have liked to have also included chapters that more systematically presented research on structural factors that limit consumer choices and thereby determine the sustainability of these choices, including research on the structural importance of prices (Ackerman and Gallagher 2000; Kågeson 1993; Pierce and Shoup 2013), including 'perverse subsidies' (Myers and Kent 2001; van Beers and van den Bergh 2001); research on how the law facilitates or impedes sustainable consumption (Garver 2013; Michalena and Frantzeskaki 2013; van Rijswick 2012), including mandatory standards (Boström and Klintman 2008); and research on the importance of the physical surroundings and infrastructure for sustainable consumption (Otnes 1988). One of us recently wrote an integrative review of how these and other factors contribute to unsustainable consumption (Thøgersen 2014).

As readers can confirm by checking the reference lists of the chapters of this book, research on sustainable consumption is published in core journals of the various disciplines, as well as in dedicated sustainability-oriented journals with a disciplinary or

cross-disciplinary coverage, in policy-oriented journals and in books (like this one). These publication platforms have helped to establish and consolidate the research field, as well as to disseminate research results to other stakeholders within and outside research.

I.3 FUTURE RESEARCH

As we write this in autumn 2014, three global work groups are in the process of publishing their contributions to IPCC's 5th assessment report on climate change. In the first two of three reports, Working Groups I and II (WGI and WGII) conclude that human activity is the main cause of global warming (with a certainty of more than 95 per cent) and that profound effects are already being felt around the world, but the effects are likely to get much worse (Field et al. 2014; Stocker et al. 2013). The report from Working Group III (WGIII), on mitigation of climate change, deals among other things with sustainable consumption and consumption growth (Edenhofer et al. 2014). This report concludes that, under conservative assumptions, interventions securing that we stay within atmospheric concentrations of carbon dioxide equivalent (CO₂eq) that are considered safe with regard to climate change entail an annualized reduction of consumption growth by 0.04 to 0.14 (median: 0.06) percentage points for the rest of this century, relative to annualized consumption growth in the baseline that is between 1.6 per cent and 3 per cent per year. This estimate does not include benefits of reduced climate change or co-benefits and adverse side-effects of mitigation. Consistent with research reported in the current book, WGIII judges that emissions can be substantially reduced through changes in consumption patterns, especially with regard to transport, energy use in buildings, and food (changing diets, reduced food wastes).

However it is symptomatic that the IPCC team assesses that the strength of the evidence this judgement is based on (only 'medium') and the level of agreement in the scientific community (also 'medium') is lower than for the key evidence presented in the reports from WGI and WGII. Behavioural science research has had, and still has, a relatively low priority among governments and other funders of sustainability research in general and climate research in particular. Until now, the focus has primarily been on creating sufficient certainty about the problem: that is, input for policy priorities and decisions about whether mitigation interventions are needed at all. There are good reasons for that, but it is now high time that research priorities and policy attention change and focus much more on mitigation, including how to make consumption more sustainable.

As written in an editorial in *Nature* when the WGI report was released, 'it is abundantly clear that the IPCC has done its job and is delivering what international policy-makers need to do theirs . . . What is missing . . . is not science but political ambition' (Anonymous 2013). To advise them in 'doing their job' as effectively as possible, international policy makers need stronger, more unambiguous and more coordinated evidence from behavioural science research. Again, policy makers hold the most important key to this: sufficient research funds. However, behavioural scientists also carry their share of the responsibility by making their research more relevant and more accessible to international policy makers, including being better at coordinating our research and

disseminating research evidence to policy makers and other key stakeholders. This volume is a small contribution towards this direction.

The development of research on understanding and promoting sustainable consumption, the research field covered in this book, has been facilitated by discipline-oriented scholarly associations creating subsections for this kind of research, and more recently by the creation of targeted cross-disciplinary communities such as the Sustainable Consumption Research and Action Initiative (SCORAI), the Virtual Community on Sustainability and Consumption, and the Global Research Forum on Sustainable Production and Consumption (GRF-SPaC).¹ Conferences, symposia and online dissemination activities organized by these communities are of tremendous importance for the coordination and dissemination of this research. These voluntary organizations of researchers also increase the vitality and dynamics of the research field, including exchange and testing of the newest results and ideas, and establishing collaborative research networks and projects. Hence, they are perhaps the best indication of the strong sense of responsibility that (also) behavioural researchers feel for contributing the needed evidence for deciding, designing and implementing effective mitigation action, regarding climate change as well as the other serious environmental threats that we are currently facing (Rockström et al. 2009).

In closing this introduction, we wish to express our deepest gratitude to the authors for giving their precious time and intellectual effort to our vision of this handbook. It was a real pleasure to edit it, not least due to the highly professional and always patient compliance with our many requests, suggestions for revisions, restrictions on (already carefully crafted) text length, and tight deadlines. We do owe a lot to our colleagues who have all contributed not just to this book but also to the advancement of research in SC in the past two decades. We hope that this handbook will prove valuable reference for policy makers and academicians interested in research on sustainable consumption.

NOTE

1. See SCORAI.org, badm.au.dk/sustainabilityandconsumption, and grf-spc.weebly.com.

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