

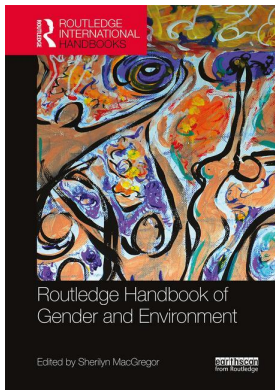
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22

GENDER DIMENSIONS OF
SUSTAINABLE CONSUMPTION*Ines Weller***Introduction**

Sustainable consumption and production patterns have been prominent issues from the very start of the sustainable development debate. In fact, *Agenda 21*, the plan of action adopted at the 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro stated that ‘the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries . . .’ (UN 1992:31). Although the urgent need for fundamental changes in consumption and production patterns, which would transform societies and push them in the direction of sustainable development, has been recognized since that time, particularly in the Global North, there are still very few signs that any such transformation is taking place. World energy consumption grows unabated as global carbon emissions continue to rise. The fundamental inequalities between the Global North and South also remain, despite very high rates of growth in the newly industrialized and developing countries of the Global South in particular (IEA 2013). In this context, and especially in the context of sustainable patterns of consumption and production, the attitudes and behaviours of private citizens and consumers, their perceptions of environmental problems, and associated use of resources all play an important role. Hitherto, however, these debates have neglected the significance of gender, gender relations, and gender justice for sustainable consumption.

In this chapter, I will focus on debates and research in Germany/Western Europe. I begin by introducing the definitions, objectives, and areas of responsibility of various actors for sustainable consumption. This compact overview focuses in particular on the relationship between production and consumption as gendered societal spheres. I then move on to consider the tension that exists between the theory of privatized environmental responsibility, on the one hand, which criticizes tendencies to overstate and moralize the power of private consumers to shape change and, on the other, women as change agents for more sustainable consumption. The next part of the chapter is organized around the distinction, which is useful for analyzing the gender aspects of sustainable consumption, between *explicit and implicit gender dimensions*. With reference to feminist theorist Sandra Harding (1986), I draw together the individual and structural levels of gender as explicit gender dimensions. Both of these are for the most part based on statistical data and empirical findings, particularly concerning gender differences and, in this respect, link

to ambivalence between the analysis of gender and gender hierarchies, on the one hand, and the reproduction of traditional gender images and dichotomies on the other. The discussion focuses in particular on the symbolic conceptual level of gender, which I consider in detail in relation to a specific example. The background is the feminist critique of the claim of the natural sciences to objectivity (Orland and Scheich 1995). Drawing on the example of a study on the volume of food waste, I draw attention to several gender-related 'blank spaces' and gaps in the data that have been produced in this field. This emerges more clearly from closer consideration of the treatment given to male-coded production and female-coded consumption.

Sustainable consumption: definitions, objectives, and actors

Definitions and objectives

A concise definition of sustainable consumption, which draws on the 1987 Brundtland definition of sustainable development, is 'The use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations' (Jackson 2006:5). So sustainable consumption should minimize or reduce the ecological and social problems associated with the production and use of goods. But because this definition is very abstract, the specific ways in which various aspects of consumption, such as food, mobility, or housing can be made more sustainable need to be identified. The concept of 'sustainable consumption and production' underlines the inextricable links and mutual relationships that apply within an overall system of consumption and production. Here, however, and in line with usage in Europe, I use 'sustainable consumption' to refer to both aspects (i.e., to include production). It must also be borne in mind that consumption encompasses much more than just buying. It includes other activities, such as obtaining information, using, and disposing of goods and the connected transports (Schultz and Stieß 2009).

The objectives of sustainable consumption are ecological, economic, and social. The overall ecological aims of sustainable consumption are to reduce the use of natural resources ('quantitative perspective') and to avoid adverse impacts on the environment over the course of the entire life cycle of products and services ('qualitative perspective'). Social criteria typically include health aspects, in particular, often relating to production-based occupational health and safety, as well as social justice and gender justice – although gender justice is not always included. Economic objectives tend to be defined rather more vaguely as, for example, fair prices or stable relations along the value chain. The sustainable consumption debate has so far concentrated on ecological objectives and much greater progress has been made in quantifying and specifying these objectives, in the form of indicators, for example, than social and economic objectives (see, for example, Fischer et al. 2012).

In the process of spelling out further what exactly is meant by sustainable consumption, three different components can be distinguished. The first involves redirecting demand and purchasing decisions toward resource-efficient and ecological products (i.e., consuming differently). Second, consumption decisions must take account of issues of social justice, especially the working conditions under which products are manufactured (i.e., consuming responsibly). Third, absolute levels of consumption must be reduced (consuming less). In other words, fewer goods should be purchased and fewer resources should be exploited in the process of using the goods that are bought (Jackson 2006; Weller 2008). These three components of sustainable consumption are also reflected in the three strategies of efficiency, sufficiency, and consistency. The efficiency strategy focuses on resource productivity (i.e., reducing resource throughput

and optimizing use). The consistency strategy focuses on qualitative changes in the resource base of production and consumption while the sufficiency strategy concentrates specifically on reducing levels of consumption and emphasizes new values in the handling of material goods in the sense of 'less is more'. Between the lines, discussions of these strategies are often based on the assumption – sometimes implicit, sometimes explicit – that different agents are responsible for different tasks. Producers are assigned primary responsibility for achieving efficiency and consistency; sufficiency, on the other hand, is something which consumers are expected to achieve by, for instance, bringing their behaviour into line with values such as moderation and restraint.

The way that responsibilities are assigned in the sustainable consumption literature has been widely criticized from a feminist perspective. An important line of criticism is that it cements the distinction between, on the one hand, the public sphere and the ascription of maleness to production and related resource efficiency, and the private sphere and the ascription of femaleness to consumption and linked issues of restraint on the other. This dichotomy, and the assignment of responsibilities implicit within it, has been criticized from the earliest days of feminist discussion of sustainability concepts (Weller et al. 1999). In fact, all three strategies are critically important for both production and consumption. In terms of sufficiency, it is reasonable, even at the production stage, to call into question the sheer volume of goods that are manufactured.

Actors and their responsibility for sustainable consumption

The most relevant actors in the project of achieving sustainable levels of consumption are, first, the economic players who, in their capacity as producers, decide which products will be introduced to the market and how they will be manufactured and designed. The next group of actors are retailers, the 'gatekeepers' who exercise considerable influence at the interface between production and consumption on the range of products that is offered to consumers. The state is seen as being responsible for creating a general framework that supports sustainable patterns of consumption and production. Consumers have only indirect influence, which comes from their decision to buy or not to buy certain goods. While this assignment of responsibilities is largely uncontroversial, there is still considerable disagreement about the degree of responsibility, which ordinary consumers have for their own sustainable consumption.

On the one hand consumers are regarded as important 'change agents' in modifying behaviour in the direction of sustainable consumption and are treated accordingly by environmental policy makers (Heidbrink et al. 2011). Proponents of the 'moralization of the markets' argument also work on the assumption that consumers have a high level of responsibility for the environment and that they are increasingly able to live up to this responsibility. This assumption can be traced back to a shift in values in society as a whole, as well as the increasing importance of post-material values in affluent capitalist countries (Stehr 2007). One of the factors underlying this position is the share of resources that societies use in the form of consumption; private consumption, for example, accounted for just over 50 per cent of GDP in Germany in 2014 and for 56.9 per cent in the Eurozone (Eurostat 2015).¹ Arguments also draw on the results of life cycle assessments,² according to which products use up more resources during their consumption than during their manufacture. Others take the view that private consumers generally have very little influence and, for this reason, warn against further privatization of sustainability (Grunwald 2012). Arguments along these lines point to factors such as the integration of patterns of consumption in supply systems that significantly constrain consumers' own ability to shape change (e.g., Southerton et al. 2004).

The proponents of this position also stress that the decisions that ultimately determine what impact products have on the environment are mainly taken at the beginning of the life cycle – that is, during production processes and in the course of product design, rather than when goods are consumed (Huber 2011).

The hypothesis of the ‘feminization of environmental responsibility’ was developed before, and largely in parallel to, these discussions. Drawing on the example of Germany’s waste management policies in the 1980s, Schultz and Weiland (1991) showed how the extra burden of work involved in the separate collection of waste in households was overwhelmingly placed on the shoulders of women.³ Bearing in mind the – perhaps modest – changes that have taken place in the traditional gender-specific division of labour in private households since the nineties, this hypothesis may now be referred to as the ‘feminization or privatization of environmental responsibility’. Its basic assumption is that debates about sustainable patterns of consumption and production tend to inflate private consumers’ scope of influence and turn their conduct into a private moral issue for individuals (Weller 2004). The hypothesis of the feminization of environmental responsibility was not only conceived for the countries of the Global North, but also for countries of the Global South, where it makes reference to the tendency to transfer more and more responsibility for the conservation of natural resources to women (Wichterich 1992; see also Arora-Jonsson in this volume). This imbalance is also problematic because it distracts attention from, and fails to take adequate account of, the other actors who are as relevant, and perhaps even more influential, in the development of strategies and concepts for promoting sustainable patterns of consumption and production than individuals. As a result the implementation of policies may fall far short of expectations, and objectives may only be partially met.

New research now appears to show that the influence of private consumers on sustainable consumption is rather limited. That consumers are limited both in the choices they can make and in their ability to shape change is attributed to the integration of patterns and everyday practices of consumption in complex systems of supply, values, lifestyles, and collective consumption practices. This means, for example, that consumers can only opt to use local public transport or electricity from renewable energy sources if such services are actually on offer and if they are compatible with their values and orientations. Practice theory⁴ also emphasizes that most everyday activities take the form of (often unconscious) habits and routines. From this perspective the difficulty in shifting existing patterns of consumption toward greater sustainability arises from the close interdependence of consumption practices and socio-material structures (Shove and Spurling 2013; Jaeger-Erben and Offenberger 2014). Strategies and steering instruments that take into account the interplay between business, consumers, and policy (the triangle of change) are therefore needed in order to bring about the necessary transformation.

My point is not to dismiss fundamentally and entirely the influence of private consumers. What is more important, however, is to consider in what ways, to what degree, and under what conditions private consumers or various groups of consumers are able to exercise influence. The expectation that private purchase decisions may offer a way of exercising political influence was also one of the fundamental ideas of the women’s movement in Germany after 1968. At that time, the idea that ‘the personal is political’ turned supposedly private consumption and private day-to-day behaviour into political issues. In more recent discussions, this idea has been expressed in the concept of ‘political consumerism’ that points out the dual role of consumers and citizens (or the ‘consumer citizen’; Micheletti and Stolle 2005; quoted in Schultz and Stieß 2009). One striking feature of this way of exercising influence, such as boycotts of genetically modified food, is the very high proportion of women taking part in these types of political consumption (Schultz and Stieß 2009). The significance of women as initiators of sustainable innovations is also

illustrated by the role played by two Dutch women in establishing the recycling of waste glass. In the 1970s these women, who were concerned about the increasing amounts of waste visibly accumulating in the world around them every day, introduced glass recycling containers in their communities. These containers caught on very quickly and are now regarded as the source of successful waste glass recycling in Europe (Oldenziel and Hård 2013).

Gender dimensions of sustainable consumption: conceptual framework

The relationships between the environment, sustainability, and gender have been studied and conceptualized in a number of different ways since the earliest days of the sustainability debate (see, for example, Braidotti et al. 1994; Katz 2006; Hofmeister et al. 2013). More recently the state of the art in research has been the subject of increasingly critical and controversial scholarly debate (see, for example, Arora-Jonsson 2011; Hawkins and Ojeda 2011). There is not a great deal of research in this area, but links between gender and sustainable consumption have attracted greater attention in recent years. Today, there is a growing number of gender analyses of sustainable consumption, even if these remain relatively few and far between (Vinz 2009). The first general surveys of this topic have also begun to emerge. At the European level, for instance, a review of the gender aspects of research and of policies to promote sustainable consumption in particular has now appeared (Schultz and Stieß 2009). A comprehensive analysis of these gender-related issues has also been produced at the national level for a priority funded study of sustainable consumption in Germany (Jaeger-Erben et al. 2012).

In my view, these various gender analyses and their findings can be categorized using the following three levels at which gender norms and relations can be observed⁵ (Harding 1986; Weller 2004):

- The individual level: These are studies and data that focus on potential differences in male and female (or men's and women's) consumption and sustainability-related attitudes, consumption behaviour, and the associated use of resources.
- The structural level: These studies primarily analyze the gender-specific division of labour and power, and their significance for sustainable consumption.
- The symbolic-conceptual level: These studies focus on perceptions and evaluations of the areas and spheres of society that were assigned and allocated by gender categories with the emergence of modern (natural) sciences and market economics (see, for example, Biesecker and Hofmeister 2010; Hofmeister et al. 2013). The treatment of such areas that have strong gender connotations, such as production (male) and reproduction or consumption (female), is especially relevant in connection with sustainable consumption. Cultural and historical studies of consumption in particular have shown that 'production and consumption are gendered'.

(Lubar 1998:7)

I combine these three levels of gender analysis and refer to them as having an 'explicit' or 'implicit' gender dimension; the first two encompass individual and structural gender dimensions, the last one the symbolic-conceptual level (Harding 1986; Weller 2004). The analysis of explicit gender dimensions is geared to the determination of gender differences on the basis of gender-specific disaggregated data at the individual and structural level. At the same time the importance of intersectional links between gender and other influencing factors, such as class, race/ethnicity, age, income, and life situation is growing in importance (see Winker and Degele

2009 for a discussion of intersectionality in feminist research). The analysis of implicit gender dimensions is geared to the symbolic-conceptual level of gender, and studies the ascription of gender in research on sustainable consumption and associated blind spots or imbalances. The analysis takes a critical look at the assumptions on which the findings are based. Also included are analyses of metaphors or the representations of masculinity and femininity on which debates about sustainable consumption draw.

Having provided a framework for understanding the gender dimensions of sustainable consumption, I will now discuss the findings of a selection of empirical studies that have focused on each of the three levels of analysis.

Explicit gender dimensions: the individual level

Attitudes about, and the willingness to take action on, sustainable consumption have been matters of study in research on the environment and sustainability in the social sciences for several decades. Summarizing the findings of a number of such empirical studies of gender differences, Schultz and Stieß conclude that '[w]omen tend to have a higher environmental awareness than men . . . , but they tend to feel less informed about environmental risks' (2009:30). This tendency is not, however, confirmed by all studies. The Eurobarometer surveys of attitudes of European citizens have produced conflicting findings on gender differences in attitudes toward the environment (e.g., EU 2008; EU 2009; EU 2014). In contrast, empirical findings on people's sustainability-related willingness to act and consumption behaviour are relatively consistent: As a rule, more women than men express a willingness to make sustainable consumption choices (BMU 2008; EU 2008; EU 2009; EU 2014). Significantly more women than men say they would be willing to take action in their day-to-day lives to protect the climate and environment (EU 2008). More women still express an interest in products that have eco-labels (BMU 2008), they purchase more organic foods, eat less meat, use local public transport more often, and drive cars less often than men (Johnsson-Latham 2007). A study by Johnsson-Latham (2007) aims to identify real gender differences in the environmental impacts of male and female consumption and distinguishes the ecological footprint of consumption according to gender in Sweden. It concludes that

Men on average consume more than women in a handful of major areas: eating out, alcohol, tobacco/snuff, transport and sport. Women for their part consume more on average than men in terms of consumer goods, including medical care and health, clothing and shoes, books and culture.

(Johnsson-Latham 2007:39)

Other studies of gender differences in the consumption-driven use of resources show, in particular, that the persistence of a traditional, gender-based division of labour has an impact on the use of resources, for example in terms of dietary styles and time patterns. On average, for example, men's diets contain more meat and are consequently associated with higher carbon emissions, whereas in contrast women's greater consumption of fruit and vegetables is associated with higher levels of water consumption (Meier and Christen 2012). A similar study finds that, on average, women spend more time on carbon intensive housework-related activities, whereas men engage in more carbon intensive leisure and transport activities outside of the home (Druckman et al. 2012). These and similar results have been summed up by Schultz and Stieß in their overview of sustainable consumption and gender as follows: 'Women consume in a more environmentally friendly manner' than men (2009:30).

However, these studies and their results are properly criticized for treating men and women as homogeneous groups and for inappropriately generalizing about ‘women’ and ‘men’ as a whole (Arora-Jonsson 2011). There is also a danger that focusing on ‘women’ and ‘men’ as homogeneous groups might reinvigorate traditional gender stereotypes in the context of sustainable consumption. Schultz and Stieß (2009) are also critical of this generalization and point to initial studies of the influence of gender with other factors that have arrived at differentiated findings on the differences and similarities between various groups of men and women. As far as diet is concerned, for example, some ways of life and lifestyles clearly attach greater importance to ecological and sustainable consumption than do others. These differences are also apparent in their relevant gender composition (Stieß and Hayn 2005; Schultz and Stieß 2009). Fischer has also shown that, when seeking advice on the insulation of buildings, there are marked differences in the information which men who have a technical background (and may also know about insulation) expect to be given and the information which men and women with no such previous knowledge wish to receive (Fischer 2011). As far as the integration of users in the development of sustainable products is concerned, it has been shown that it is not only important to achieve the right balanced gender composition, but also to ensure a sufficiently diverse range of participating user groups (Jaeger-Erben et al. 2012). The individual dimension of gender in intersectional connections with other categories of difference provides further and differentiated insights for research on sustainable consumption.

Most empirical (single) findings on gender and sustainable consumption are available at the individual level. These suggest that a sensitive awareness of environmental issues and of sustainability-related behavioural changes fit better into ‘female’ than into ‘male’ gender constructions. However, the significance of these findings for sustainable consumption is ambiguous. On the one hand, they reveal the still largely untapped and socially disregarded potential for moving consumption behaviour toward greater sustainability offered by people with ‘female’ life experience and background. They also reveal gender differences that are of relevance for research on sustainable consumption and especially on the development of strategies to support sustainable consumption, such as concerning patterns of consumption and the resources such patterns use up. On the other hand, there is a danger that the development of related gender-specific strategies may be used to maintain traditional notions of gender roles and to continue feminizing responsibility for the environment. Initial suggestions on how to deal with this tension advise addressing ‘specific gendered groups’ or ‘addressing the in fact existing gendered behaviours of men in private household and family contexts by putting them into a sustainability context (that means to search for sustainable consumption behaviours of men in household contexts and highlighting them)’ in order to escape the implicit assumption of and orientation toward responsibility of women for (sustainable) consumption (Schultz and Stieß 2009:63).

Explicit gender dimensions: the structural level

The background here consists of continuing gender inequalities, particularly in terms of income and access to resources such as time, the distribution of paid and unpaid work, and in the power to shape change in the context of sustainable consumption and production patterns. Even if gender roles have shifted in the past, particularly as regards childcare and certain aspects of household work, the basic pattern of gender-specific divisions of labour and power has not radically changed. Very little study has thus far been done on the consequences of this for sustainable consumption. For example, research on sustainable consumption has shown that the income levels of consumers are key factors influencing consumption and the use of resources in two different ways. Current

analyses show that more resources are consumed when incomes rise and that, conversely, fewer resources are consumed when incomes fall (UNEP 2010). This then also relativizes the influence of attitudes toward the environment and sustainable consumption values when it comes to making significant reductions in the consumption of resources. On the other hand, higher incomes also go hand-in-hand with a willingness to purchase more sustainable alternative products. The central importance of income levels for sustainable consumption raises the so far unanswered question as to what impact, on average, the higher incomes of men and the lower incomes of women have on sustainable consumption. While initial findings suggest that some women set ecological priorities despite having lower incomes, this claim still needs to be verified (Weller et al. 2010). More problematic for those groups in society who live in poverty, or are at risk of poverty, is their limited access to goods such as mobility or energy. These groups often include single mothers or older women who, as an ‘involuntary ecological avant-garde’ use considerably fewer resources but, from the perspective of social justice, can hardly be regarded as being sustainable (Weller et al. 2010).

Time is another scarce resource that is relevant to sustainable consumption. It is still very unclear how gender inequalities in the distribution of time budgets for paid and unpaid work affects sustainable consumption or in which ways sustainable consumption either saves or costs time. The importance of this aspect does, however, underlie the need for strategies that are designed to promote sustainable consumption to recognize and take account of the lack of time available to women, particularly in child-rearing phases, and of the precarious economic situations and time budgets of vulnerable groups (Schultz and Stieß 2009).

Studies of negotiation and decision processes relating to (sustainable) consumption in private households also belong at this, the structural, level of gender and sustainable consumption. There are some initial indications here that more egalitarian family roles can support sustainable consumption, but at the same time that negotiation processes in certain phases of life, such as after the birth of a child, can reinforce a traditional gender-specific allocation of tasks (i.e., in which responsibility for sustainable consumption is assigned to women; Empacher et al. 2002; Jaeger-Erben et al. 2012). On the other hand, there is evidence that biographical transitions and life events, such as the birth of children, illness or relocation, can offer significant ‘windows of opportunity’, which may support the perception and acceptance of more sustainable forms of consumption (Schäfer and Jaeger-Erben 2012).

The structural level also includes gender-specific analyses of participation and power to shape change in the context of sustainable development, both in terms of the design of (sustainable) products and as regards the development of concepts and instruments to promote sustainable consumption. To date, however, there are very few indications of direct influence being exercised by consumers and citizens. According to Franz-Balsen, there is an overall gender gap in participation throughout the EU and in the United States (Franz-Balsen 2014). In Germany, for example, several research projects have now examined the impact of new forms of participative product development and design, which take explicit account of gender, on patterns of sustainable consumption (Jaeger-Erben et al. 2012). Over the last ten years the significance of participation and new forms of governance has come increasingly to the fore in the sustainability debate. Nonetheless, there is still a very definite need for further research on the way in which gender relations are reflected in these participative approaches.

Implicit gender dimensions: the symbolic-conceptual level

Symbolic-conceptual gender dimensions include the feminist critique of the division of consumption and production: While in modern economic thought, consumption is constructed as a private activity of no economic value of its own and as a ‘female’ (feminized) task, production

is regarded as a highly relevant economic and public activity that carries 'male' (masculinized) connotations (Schultz and Stieß 2009; Biesecker and Hofmeister 2010). Against this background, consumption and reproduction appear to be private and 'female' matters that are overshadowed by and in many respects are the complete opposite of production. In the context of feminist economics the concept of (re)productivity has been developed as a feminist alternative that regards production and reproduction/consumption as parts of a single entity. From this theoretical perspective the focus is squarely on the (re)productive qualities of production and consumption processes (see the chapter by Mellor in this handbook). A conception of production and reproduction/consumption as part and parcel of the same thing highlights the invisibility and undervaluing of 'social female and natural (re)productivity' and also shifts attention to the economy in its 'entirety' and, in particular, to the relatively neglected area of care work (Biesecker and Hofmeister 2010). These theoretical considerations are linked to a paradigm shift in debates on and research into sustainable consumption and patterns of production. The focus moves to requirements and problems from the perspective of reproduction. This poses a huge challenge for research: to identify which products and services, in what quantities, are needed for a good and sustainable way of life.

Production and consumption can also be critically studied in terms of the relative impact they both have on the environment. In this context, criticism is concentrated on the way in which the resources and emissions resulting from production and consumption are accounted for. This must be seen against the background of the life cycle assessments that have grown in importance in recent years. While the original purpose of life cycle assessments was to compare the environmental impact of two or more product alternatives, they are now also used to determine resource intensity, carbon emissions, and environmental impacts along the entire life cycle of products. They are also used to determine how much of each of these inputs and releases are related to production, consumption, or the use of products. In this context, the life cycle assessments of products such as food and clothes have been shown to differ considerably in terms of the relative impact on the environment of production, consumption, and use. These differences can be ascribed in particular to the differing assumptions about user behaviour that find their way into life cycle assessments. The use phase is treated paradoxically, however, in what is otherwise supposedly objective, scientifically derived economic data. On the one hand, the significance of the use phase is played down by falling back on simplified and apparently plausible assumptions about average patterns of use without verifying these empirically. On the other hand, there is a tendency to overstate the environmental impact of the consumption phase (Weller 2004; Weller 2012).

I will use the example of a German study of food waste to illustrate how supposedly objective figures can implicitly gloss over certain aspects or present an unbalanced picture. This becomes especially obvious when a critical approach is adopted to their use as a means of perceiving the use phase and, in comparison, the production sphere. This study was undertaken against the backdrop of recent policy debates concerning the growing quantity of food waste. The study was commissioned by Germany's Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) to determine the volume of such waste in Germany more accurately and to develop measures to reduce it. The study found that 61 per cent of food waste comes from private households, while only 5 per cent comes from wholesale and retail trade, and 17 per cent comes both from large-scale consumers and the food industry (Kranert et al. 2012). According to this calculation, private consumers generate 81.6 kilos of food waste per person each year on average. Of this total, around 53 kilos of food per person and year is considered to be entirely or at least partly avoidable. In this context, private households appear to be places in which food is wasted. The figures appear unambiguous: the lion's share of waste

is shown to be the responsibility of private consumers. But it is worth looking at how these figures – which are taken for granted in public discussions of the study findings – are worked out in a little more detail.

First, it must be noted that the figures do not include agriculture. For pragmatic reasons, only the amount of food waste generated by the food industry, large-scale consumers, wholesale and retail trade, and private households was determined. The importance that agricultural production plays in the amount of food waste has been shown by a study by the UN Food and Agriculture Organisation (FAO). According to this study, relevant waste streams do indeed come from this sector, depending on the food group. The agricultural sector's shares of food waste vary from 2 per cent (grains) and 9.4 per cent (fish and seafood) up to 20 per cent (fruit and vegetables; FAO 2011). If this phase was included in the total amount of food waste, the percentage of waste generated by private households (as well as that of the other three sectors) would decrease significantly.

Second, with regard to life cycle assessment, it is important to note that the quality of the data for the four phases varies considerably and that the lack of reliable data has meant that extrapolated figures have been used with all the associated variation that goes with them. The authors of this study took this into account by, among other things, calculating minimum values, the median and maximum values for waste volumes in each of the four phases. However, only the median values were used to determine the share of food waste produced in each of the different phases. The following 'numbers game' illustrates the influence of the underlying data: If the maximum value is taken instead of the median for the data for the four areas, then the share of household-related food waste falls from 61 per cent to 50.3 per cent and the share of food industry-related waste rises from 17 per cent to 30.6 per cent. If, on the other hand, the minimum value is assumed for all four phases, the share assigned to households goes up to 70 per cent while the share of the food industry drops to below 5 per cent (our own calculations based on data derived from Kranert et al. 2012).

Third, there are grounds for looking critically at the differentiation between avoidable, partly avoidable, and unavoidable food waste. Avoidable food waste is defined as discarded food that 'was still fully fit for human consumption at the time of discarding or would have been edible if [it] had been eaten in time' (Kranert et al. 2012:13). Partly avoidable food waste results from 'different consumer habits', with bread crusts and apple skins are mentioned as examples (Kranert et al. 2012:13). Unavoidable food waste is defined as food that is inedible, such as bones, banana skins, or potato peelings. At any rate, this definition involves considerable room for interpretation, which in turn allows space for implicit moral judgements. This is reinforced by the fact that the distinctions between avoidable, partly avoidable and unavoidable food waste are usually only applied to private households (Kranert et al. 2012:151). This differentiation does not seem to be important and/or workable in the other sectors, that is, the food industry, wholesale and retail trade, and for large-scale consumers. In this respect, this study and the publication of its findings carry with them the risk that moral judgements and exaggerated claims will be made about private households' waste conduct. This detailed example is intended to illustrate symbolic-conceptual level gender dimensions and to demonstrate how critical analysis, particularly of the way in which gendered spheres of production and consumption are handled, can reveal 'blank spaces' and gaps in allegedly objective data.

A quite different perspective on implicit gender dimensions can be found in media analyses, which study how the social construction of gender is reflected in the way issues relating to sustainable development in general, and about sustainable or unsustainable consumption in particular, are communicated. For example, in her review of gender and (un)sustainability, Franz-Balsen refers to a gender study undertaken by Rogers that analyzed three advertisements to work

out the complex interrelations between gender and consumption using the example of meat: 'as a code for masculinity, sustainability as a threat to hegemonic masculinity, and masculinity as a threat to sustainability' (2014:1976). At the same time, she emphasizes the need to distinguish between individual men and women and hegemonic masculinity: 'when hegemonic masculinity is described, we are not talking about individual men or the male part of the population, but about an idealization of masculinity' (2014:1981).

Implicit gender dimensions have attracted less attention to date than explicit gender relations. They have also evoked little interest in the context of sustainable consumption. This is partly to do with the fact that they shed light on possible blind spots and imbalances in research on sustainable consumption. This means that they adopt a critical perspective which requires considerable explanation ('what's that got to do with gender?'). Nor are such findings very easy to translate into specific policy recommendations or strategies for action and therefore they do not correspond with the highly applied focus and ambition of research and debates on sustainable consumption.

Conclusion

The findings I have discussed in this chapter are still little more than a 'hotchpotch' of isolated insights into gender and sustainable consumption. No consistent view of the importance of gender perspectives for sustainable consumption has yet emerged. What is more, ambivalence about how to treat gender is also apparent. At the same time, gender dimensions clearly offer considerable potential for research and for policy or steering instruments for promoting sustainable consumption. The data and studies on explicit gender dimensions underline, for example, that it makes sense to consider the relevance of gender in intersectional connection ('intersectionality') with other social categories such as class, age, income, or ethnic background. This approach makes it easier to take account of an increasingly differentiated society and the preconditions, possibilities, and barriers that exist for various groups in society with regard to sustainable consumption and, consequently, to develop concepts that are better focused on specific target groups.

In addition, structural gender dimensions draw attention to the social and gender inequalities that are associated with sustainable or unsustainable consumption. What policy makers must do is design instruments and strategies in such a way as not to reinforce these inequalities but in a way that leads to more justice between men and women and between more and less privileged groups in society. A central prerequisite in this context is knowledge and awareness of these relationships. This in turn depends on empirically and theoretically sound gender analyses, and on the integration and inclusion of gender-analytic competence in environmental policy. Instruments that have already been introduced, such as gender impact assessments, may be useful in such analyses (Schultz and Stieß 2009). Little attention has so far been given in this connection to the interests that different actors and groups in society have in the transformation or the continuation of unsustainable patterns of consumption and production. The next immediate issue is how the various actors differ in terms of their power and ability to influence and shape the transformation or continuation of existing relationships, and how these reflect gender inequalities. At the symbolic-conceptual level, the close linkages between the social construction of gender ('doing gender') and consumer behaviour ('doing consumption') become apparent. Policies and strategies for promoting sustainable consumption thus face the challenge of understanding and reflecting patterns of behaviour and consumption in the context of social and individual notions of 'masculinity' and 'femininity'.

Notes

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- 1 The other half of GDP expenditure is due to government and investment.
- 2 Life cycle assessment (LCA) is a tool for the systematic evaluation of the environmental aspects of a product or service system through all stages of its life cycle.
- 3 A more recent study has shown that this has changed to the extent that couples are now more likely to perceive the separation of waste as a task that needs to be organized together, even if women are still more likely to take the initiative in these activities (Oates and McDonald 2006).
- 4 Practice theory is a sociological approach that is popular within research on sustainable consumption and driven by particular scholars like Elizabeth Shove, Alan Warde, and Gert Spaargaren (see, for example, Shove and Spurling 2013; Jaeger-Erben and Offenberger 2014).
- 5 This three-levels framework is based on an understanding of gender as a social construct rather than a biological condition – 'doing gender', not being a gender (see West and Zimmerman 1987). For the purpose of analysing gender, it is useful to distinguish three levels at which the processes of socially constructing gender can be observed.

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