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Consumer habits and sustainable consumption
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When you ask people if sustainable consumption is a good thing, you can expect an overwhelmingly positive response. Yet, as this *Handbook of Research on Sustainable Consumption* makes clear, there is still a long way to go. And this may even be the optimistic view: most people show little interest in making truly sustainable choices, but rather follow their natural tendency to focus on short-term benefits and tangible outcomes, which more often than not do not contribute to a sustainable lifestyle. The content of the present volume is a testimony to the complexity and difficulty of sustainable consumption. While realizing that our focus only represents a thin slice of a much richer reality, this chapter focuses on individual consumers, and in particular on consumer habits and sustainability. We first address the question: what is meant by sustainable consumption? We then discuss the process of making sustainable choices, and define and position the concept of habit. Finally we turn to the important question of behaviour change and prospects for interventions to promote more sustainable lifestyles.

<a>15.1 WHAT IS SUSTAINABLE CONSUMPTION?

Sustainable consumption is a loosely defined concept, which encompasses a large variety of behaviours and domains. A plethora of labels can be found that seem to be considered as more or less synonymous with sustainable behaviour, such as pro-environmental, ecological, green or ethical behaviour. In defining sustainable consumption, we may adopt various approaches. A 'high-level' approach is the notion that sustainable consumption contributes to, or at least does not jeopardize, the survival of future generations. This was implied in the definition of sustainable consumption as stated in the seminal Brundtland Report released by the World Commission on Environment and Development (WCED 1987): 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (p. 43).

Obviously, the WCED definition does not answer the question of which behaviours should or should not be considered as sustainable consumption. A more pragmatic approach is to define specific behaviours or behavioural domains as sustainable. For instance the Department for Environment, Food, and Rural Affairs (Defra) in the United Kingdom defined specific sustainable behaviours, organized in broader categories, such as using energy and water wisely (for example, line-drying laundry), travelling sustainably (for example, combining trips) and being part of improving the environment (for example, volunteering) (Defra 2008). The benefits of such lists are that citizens and policy makers are provided with concrete examples of behaviours, which might be improved. The downside is that such lists might be incomplete, become outdated, or are influenced by other policy agendas than promoting sustainability.

Finally, sustainability might be defined by what 'ordinary people' are telling us. For example, we posed this question in interviews with UK citizens (Roy and Verplanken 2014). What came to our interviewees' mind most rapidly was recycling, with an emphasis on minimization of waste. Another immediate association was preserving resources for future generations. Sustainability also represented addressing the negative impact humanity is having on the natural world and the depletion of natural resources. However any impact was seen as rather abstract, far away and set in the future. One interviewee expressed this as follows:

<quotation>As we know, some of the rain forests, which have a big effect on weather patterns and wildlife, are disappearing, and we may not see the full impact that this has during our lifetime, but things are changing at the moment but certainly for the next generation to come if things aren't looked at and sorted out, if you like, now, then it will have an effect on later generations.</quotation>

This illustrates the fact that phenomena such as climate change may be subject to temporal and spatial discounting; due to the large perceived psychological distance, risks are perceived to be less urgent and there is less involvement of motivating emotions (e.g. Gifford 2011; Spence et al. 2012).

In a survey among students in the USA and the UK, we asked which worries they had about the natural environment (Verplanken and Roy 2013). The top five worries mentioned were global warming and climate change; pollution and environmental damage; extinction of species and biodiversity; resource depletion and lack of renewables; and deforestation. This study also demonstrated that habitual worrying about the environment was constructive, rather than pathological, as it was associated with pro-environmental attitudes and behaviours and with a personality structure characterized by imagination and an appreciation for new ideas.

An indication of how people think about sustainable living might also be obtained from how they mentally organize sustainable behaviours. We asked a sample of citizens how often they performed a set of 25 sustainable behaviours. When presenting the questions, the behaviours were grouped into five domains: energy saving, waste reduction, water conservation, transport and miscellaneous behaviours. However a cluster analysis of participants' responses revealed a different organization than the way the behaviours were presented, namely into sustainable technologies, sustainable energy use, sustainable food and shopping, sustainable environments and sustainable gardening (Figure 15.1).

<INSERT FIGURE 15.1 AROUND HERE>

Figure 15.1<em>*Mental clustering of sustainable behaviours*

It is important to note some caveats. Firstly, behaviours vary widely in their actual contribution to sustainability (Whitmarsh 2009). It is extremely difficult for the ordinary citizen to have accurate views on sustainability, for instance comparing the impact of switching off lights with buying locally produced food or a flight to Spain. Also, whereas some choices may be carefully considered, most behaviours are performed relatively mindlessly, and considerations about sustainability may then not easily appear in one's consciousness. We will elaborate on this in the next section.

<a>15.2 TO THINK OR NOT TO THINK ABOUT SUSTAINABILITY? THAT IS THE QUESTION

In order to change behaviour into a more sustainable direction, an important question is whether or when people consider sustainability as an attribute of their choice alternatives. We have known for a long time that people do not follow normative 'rational' decision rules, but often ignore information, take short cuts and use their intuition in arriving at choices (e.g. Slovic et al. 2002). For instance given a choice between products which vary in a number of attributes, a rational decision rule would be to weigh each attribute by its importance or impact, consider the values of each choice alternative on all attributes, combine these values with the weights of the attributes, and choose the alternative which has the highest weighted value. If sustainability is one of the attributes, this decision rule would take sustainability into account, no matter whether its weight was large or small. However we seldom or never follow this rule, but rather use less elaborate and thus less effortful decision strategies. A large number of such 'short cuts' have been described in the decision making literature (e.g. Payne et al. 1993). For instance the elimination-by-aspect rule drops alternatives that do not meet a set criterion on the most important attribute, and then continues this process with the second most important attribute, and so on, until one alternative remains. Following the lexicographic decision rule the decision maker first establishes the most important attribute, and then chooses the alternative that scores best on that attribute. The satisficing rule is even simpler, and considers alternatives one at a time in the order they occur, and settles for the first alternative that meets a certain need, that is, 'is doing the job'.

What these cognitively 'easier' decision rules have in common is that if sustainability or sustainability-related attributes are not considered as top priority (for example, compared to price, comfort or quality), such attributes may not feature *at all* in consumers' decision making. This is more likely in busy or otherwise pressing choice environments. For instance, while energy labels may have some effect on making more sustainable choices (e.g. Grankvist and Biel 2006), such effects may quickly vanish when choices are made under time pressure, due to the use of the more heuristic-based decision rules (Verplanken and Weenig 1993). Only if sustainability is considered as an important attribute (e.g. Honkanen et al. 2006), or is linked with important values (e.g. Honkanen and Verplanken 2004), it may play a role in the decision making process. Verplanken and Holland (2002) found that more environment-friendly choices were made if environmental values were central to a person's self-concept and these values were cognitively activated. However, such conditions are relatively rare, and can only be found among segments of the population that are genuinely committed to the sustainability agenda (cf. Verplanken and Roy 2013; Verplanken and Svenson 1997). On the other hand, under certain conditions, such as when sustainability features are prominently presented, it is not impossible that sustainability will play a more significant role in heuristic forms of decision making (Bradu et al. 2014).

Another perspective on the question of whether (if, when) people will consider sustainability can be found in so-called dual-process models, which became popular in social and consumer psychology during the 1990s (e.g. Fazio 1990; Ouellette and Wood 1998; Petty and Cacioppo 1986; Strack and Deutsch 2004; see Chaiken and Trope 1999). These models describe behaviour in terms of two different operating systems, which may guide behaviour. In one system behaviour is a function of motivated processing or intention, which is thus characterized by deliberation, conscious decision making; in other words, willpower. These processes are relatively elaborate and cognitively effortful, and are typically portrayed in socio-cognitive models of behaviour (e.g. Ajzen 1991). Alternatively, behaviour may unfold in cognitively less demanding and more spontaneous ways. A variety of such spontaneous processes have been proposed, for instance automatic elicitation of strong attitudes (Fazio 1990), salient context cues (Petty and Cacioppo 1986), schema-based impulses (Strack and Deutsch 2004) or habit (Ouellette and Wood 1998), to which we will turn in the next section. The key to the question of which process will prevail (conscious deliberation or a spontaneous reaction) is whether there is sufficient motivation and cognitive capacity to deliberate or process information. In general, high motivation combined with sufficient cognitive capacity lead to more elaborate, deliberate and effortful processes. A lack in motivation and/or capacity leads to the cognitively less demanding spontaneous responses. Following our previous reasoning with respect to decision rules, as sustainability is very often a secondary attribute of products and services, it will be most likely only be considered under conditions of high elaboration, that is, high motivation and sufficient cognitive capacity. And again, such conditions are less prevalent compared to the default condition where either motivation or capacity, or both, are lacking.

A logical conclusion that may follow from a dual-process analysis is that interventions may be developed that 'kick' people from spontaneous to deliberate modes of processing. In fact, some of the successful interventions in the sustainability domains can be interpreted along these lines (e.g. Bamberg 2006; Eriksson et al. 2008; Fujii and Kitamura 2003).

<a>15.3 THE CASE OF HABIT

Many of the behaviours which individuals or households are engaged in and are relevant to the sustainability agenda are executed repetitively and routinely. During the last decade the insight has gained ground that this has consequences for behaviour change (e.g. Verplanken and Wood 2006). Based on a meta-analysis on the relationship between past and future behaviour, Ouellette and Wood (1998) proposed a dual-process model in which past behaviour may guide future choices via the deliberate route through intentions or, when behaviour has been repetitively conducted, via a spontaneous route through habituation (e.g. Verplanken 2006).

Habits comprise a form of automaticity in responding which develops as people repeat actions in stable circumstances (e.g. Verplanken and Wood 2006). Habit can be characterized by three important 'pillars' (e.g. Verplanken 2010). The first, obviously, is repetition, which has always been the key feature to define habit. Repetition is not only a key feature of habit, it is also what makes a habit significant with respect to its impact: the cumulative effect of repetitive behaviours performed by large numbers of people is what creates problematic levels of unsustainability. There is no harm whatsoever for the environment in making the occasional leisure trip by car, but there is an impact on the environment when large populations habitually commute by car instead of using alternative modes of transport.

The second pillar is automaticity. This may be broken down into a number of features, that is, lack of awareness and conscious intent, mental efficiency and limited feelings of control (e.g. Verplanken and Orbell 2003). The automaticity pillar represents how habits make up our everyday experience of behaviour as being fluent and not consisting of discrete 'choices', which in fact we are constantly making. We may experience this when we are not able to perform our usual habits, for instance when we are shopping in a different supermarket than we are used to, and realize we have to 'work' on finding the products we usually grab in a more or less mindless fashion. Habituation frees up mental resources, and makes it possible to do or think about other things, while executing the habitual act. Another aspect of automaticity is that strong habits may lead to 'tunnel vision': individuals are less likely to attend to new information, even if this might lead to more optimal choices, such as when an efficient bus line is introduced (Klöckner and Verplanken 2013; Verplanken et al. 1997). Habits may also lead to perceptual biases, such as overestimating disadvantages of non-habitual alternatives (Fujii et al. 2001).

The third pillar is not so much a feature of habit itself, but one of the context in which habits are executed: while habits form by repetitive associations between the behaviour and features of the performance context, once habits are formed these features may automatically trigger the habit, that is, without the need to deliberate or make a conscious decision (e.g. Orbell and Verplanken 2010; Wood and Neal 2007). Another way of looking at this is from the perspective of locus of control over behaviour. When behaviour is guided by attitudes and intentions, control is largely located within the person; it is the person's motivation or willpower which make things happen. When behaviour is triggered by context cues, as in the case of habits, control has somewhat shifted from the person to the environment; it is no longer a person's willpower which makes things happen, but the cues that have been empowered to trigger the habit.

In line with Ouellette and Wood's (1998) analysis of the relationship between intention, past behaviour and future behaviour, intentions and habits are often found to be in competition: when habits are strong, intentions are not an active force, and vice versa (e.g. Danner et al. 2008; Ji and Wood 2007; Triandis 1977; Verplanken et al. 1998). For instance Verplanken et al. (1998) assessed intentions and habit strength of car use, and assessed actual car use from travel diaries which were kept by participants during the course of a week. They thus demonstrated that intentions predicted car use well when car use habit was weak, but that intentions were uncorrelated with behaviour when car use habit was strong. In the previous section we concluded that if sustainability is to feature in people's choices, this is more likely to happen through a more effortful and deliberate choice process than through a heuristic choice process. The presence of strong habits thus does not bode well for sustainable choices.

In addition, there is another issue related to habits, which particularly may form a barrier to sustainability. Many habits are goal-directed, and the activation of a goal (for example, going to work) may automatically trigger a habit (for example, taking the car; Aarts and Dijksterhuis 2000). The problem with many behaviours that are relevant for the sustainability agenda, such as those related to transportation, energy use, shopping or waste, is that unless an individual entertains sustainability as a core value central to their self-concept, the goals that are associated with these habits are not to create a more sustainable world, but rather to accomplish other ends, such as efficiency, reducing costs or increasing comfort (e.g. Hansla et al. 2013). And because these habits are performed without much deliberation, the chances are high that the sustainability argument will not feature in individuals' decision making.

<a>15.4 CHANGING BEHAVIOUR: THE HABIT DISCONTINUITY HYPOTHESIS

The classical approach of general information campaigns aimed at raising awareness and changing attitudes and values in an undefined population, in the hope that behaviours follow suit, has not been convincingly effective in producing significantly higher levels of sustainable consumption (e.g. Weenig and Midden 1997). Although the quality of the 'package' delivered in an intervention (for example, information, specific directives, activities) is of the utmost importance, interventions may prove more effective if these are tailored to the targeted audience or the dynamics of the context in which change is projected (e.g. Hawe et al. 2009). A variety of such approaches are available in the sustainability domain, such as those using segmentation and phase models to identify sections of the population, which might be more receptive to interventions (e.g. Bamberg 2013; Dahlstrand and Biel 1997), or social networks as vehicle for change (e.g. Weenig and Midden 1991).

The present analysis of (un)sustainable behaviours as habits may lead to another approach, one that capitalizes on the timing at which interventions are delivered, and in particular on circumstances where habits are temporarily broken or suspended, which was denoted as the 'habit discontinuity hypothesis' (Verplanken et al. 2008; Verplanken & Wood 2006). Such discontinuities occur in many forms and varieties during the course of an individual's life, such as leaving school for further education or work, starting a family, moving house, changing job or retirement. These transitions come with relatively sudden changes in the way people organize their lives. Habits are part of this shake-up. Old habits may not be applicable in the new situation, or not in the form in which they have always been executed. New behaviours may have to be negotiated and established. Such discontinuities may provide unique opportunities for interventions; there may be brief windows in time during which people have to reorientate themselves, and find new solutions or ways of doing things. Interventions might be more effective when aimed at such discontinuities (Bamberg 2006; Jones and Ogilvie 2012; Thøgersen 2012; Verplanken and Roy 2014; Verplanken and Wood 2006; Verplanken et al. 2008; Walker et al. 2014; Wood et al. 2005).

In a survey among commuters, Verplanken et al. (2008) provided circumstantial evidence for a habit discontinuity effect in a cross-sectional study. These authors assessed the strength of participants' pro-environmental values, whether they commuted by car or alternative transportation, and how long ago they had moved house. Not surprisingly, participants with strong pro-environmental values were less likely to commute by car. However this relationship was only found among those who had moved house in the previous year. These results were at least compatible with the hypothesis that context change may make people think and,in this case, consider their pro-environmental values in assessing their options (cf. Verplanken and Holland 2002).

In terms of actual interventions, some research has focused on interventions that were delivered in the aftermath of 'naturally' occurring discontinuities. For instance Bamberg (2006) provided a free transportation ticket and personal schedule information of public transportation to people who recently had relocated. Compared to a no-intervention control group, the intervention resulted in a strong increase in the use of public transport from pre-relocation to post-relocation. While this study did not include a comparison with residents who had not relocated, the results are in line with the habit discontinuity hypothesis. Walker et al. (2014) followed commuters who had switched away from car use to more sustainable travel modes after an office relocation. They demonstrated how the new habit strengthened, while the old habit decayed in strength, over a four-weeks period after the relocation.

Thøgersen (2009) demonstrated that significant proportions of car drivers who had expressed an intention to use public transport in the future, and were given a free one-month travel card on public transport, indeed switched to this mode of transportation compared to a no-intervention control group. A secondary analysis of these data took into account whether or not participants had recently changed either residence or workplace (Thøgersen 2012). This analysis revealed that, in line with the habit discontinuity hypothesis, the intervention effect could only be detected among those who had recently undergone such a transition.

A rigorous test of the habit discontinuity hypothesis was provided in a field experiment conducted in Peterborough, UK (Verplanken and Roy 2014). In that study, 400 households were given an intervention promoting sustainable behaviours. The intervention consisted of a household visit and interview, free sustainable items, tailored advice and general information. Another 400 households served as a no-intervention control condition. In both groups half of the households had moved house in the previous six months, while the other half had not. Movers and non-movers were matched on key features, while a clustered randomization procedure was used to designate the intervention and control households. Self-reported frequencies of 25 behaviours were assessed at baseline and eight weeks later. At baseline a host of traditional determinants of behaviour were measured as well, such as intentions, perceived control, habit strength, personal norms and environmental values.

There were two key results in this study. One was that after controlling for all baselines assessments, there was support for the habit discontinuity hypothesis in the form of a small but statistically significant interaction effect between having received an intervention and recently having moved house; the intervention was more effective among those who had recently moved house. The second key finding was revealed when we analysed in more detail when exactly people had moved house; the discontinuity effect appeared to be confined to those who had moved house in the previous three months. No effects were found for participants who had

relocated six months earlier or longer ago. This study thus provided proof of concept for the idea that interventions provide more value for money when delivered to people who have recently moved house.

If habit discontinuity effects prove to be robust in future research, an important question will be how long exactly a window of opportunity exists. While Verplanken and Roy's (2014) study suggested that this window existed during the first three months after moving house, which also happened to be the time frame in Thøgersen's (2012) analysis, this is by no means set in stone, and may be different in other contexts. It is also not unthinkable that a window of opportunity opens before the actual discontinuity takes place, for instance when commuting options are considered in order to decide on a location. Jones and Ogilvie (2012) found evidence to suggest that a window only opened some time after participants had moved; commuters in their study started to review their commuting options after moving house or workplace, and only made changes months later. The bottom line for sustainability interventions which capitalize on habit discontinuities is that it is imperative to investigate when and for how long the period exists during which people are most likely to consider more sustainable alternatives.

<a>15.5 UPSTREAM INTERVENTIONS

An alternative for interventions that target individuals' behaviours are so-called 'upstream' approaches (e.g., Maio et al. 2007; McKinlay 1993; Verplanken 2011; Verplanken and Wood 2006). These involve large-scale macro-level policy changes, such as tax and other economic incentives (for example, road pricing, congestion tax), transformations of the infrastructure or physical environments (for example, closing city centres to private automobiles, building energy-efficient homes), restricting the availability of options (for example, abolishing traditional light bulbs or the use of certain chemicals in food production systems), or directly regulating behaviour (for example, enforcing speed reductions). Such interventions obviously take time and require political willpower. The latter is particularly difficult when a politician's survival depends on local support.

Some large-scale upstream interventions, such as mandatory seatbelt use, smoking bans and abolishing traditional light bulbs, have been extremely successful not only in terms of behaviour change, but also by receiving wide public acceptance (e.g. Poortinga et al. 2013; cf. Eriksson et al. 2010). Upstream interventions may have implications that go further than mere behaviour change. One is that such interventions may influence social practices, such as the way we commute or do our shopping, in which habits are embedded (e.g., Kurz et al. 2014; Shove et al. 2012). Also, while the traditional thinking about behaviour change has often been to target attitudes and values in order to change behaviour, this process may well be reversed. When upstream interventions successfully change behaviour, we may capitalize on that by designing interventions that bring people's attitudes and values in line with the (already changed) behaviours. Behaviour change may thus be consolidated. This may even lead to spillover effects to other behaviours which were not targeted in the first place, although this is still a somewhat elusive phenomenon (e.g. Poortinga et al. 2013; Thøgersen and Ölander 2003).

<a>15.6 FINAL REMARKS

The notions that our habitat is vulnerable and resources are finite have been widely accepted in our societies. Compared to where we were 40 or 50 years ago, much progress has been made in raising this awareness and in taking measures to mitigate these risks. There has also been tremendous progress in technological developments, which have contributed to more sustainable ways of living, producing and consumption. However the world population has also grown massively, perhaps partly because of the technological advancements, and thus continues to put enormous pressure on our ecosystems. Although many people believe that action is needed to achieve a more sustainable balance, it is also clear that sustainability has never gained a key position in the decisions of the majority of consumers or, for that matter, businesses and governments. Consumers are driven by tangible personal benefits that are more certain, rather than invisible long-term risks; businesses are driven by profit; and policy makers by the next election. However there are individual citizens, green movements, ethical businesses and a handful of responsible politicians who are genuinely concerned, and who do prioritize sustainability (Nilsson et al. 2004; Verplanken and Roy 2013). These are the forces that have to carry the sustainability agenda forward. It is hoped that when our great-grandchildren look back at the beginning of this century, they will feel proud that these people never lost hope.

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