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## How May Consumer Policy Empower Consumers for Sustainable Lifestyles?

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**ABSTRACT.** Consumer policy can empower consumers for changing lifestyles by reducing personal constraints and limitations, but it should also attempt to loosen some of the external constraints that make changes towards a more sustainable lifestyle difficult. In terms of reducing consumers' subjectively felt restrictions on their ability to change lifestyle, the two approaches are equivalent. Policies that increase a feeling of empowerment may also have a positive effect on consumers' motivation to make an effort, thus amplifying its effects. In this paper both types of constraints on lifestyle changes in a sustainable direction are discussed as well as policies for reducing constraints. Possible motivational effects of the proposed policies are also outlined.

At least judged by its outcome, it seems that consumers in the rich parts of the world make less of an effort at changing their lifestyle in a sustainable direction than is desired by society and than is in their own collective long-term interest. "Sustainable" here refers to a level and pattern of consumption which meets the needs of the present without compromising the ability of future generations to meet their own needs (World commission on Environment and Development, 1987). It is generally agreed by the international community that current lifestyles by affluent consumers (in both rich and poor countries) are not sustainable (Sitarz, 1994; United Nations, 2002). The issue was given top priority at the World Summit in Rio in 1992, but progress towards sustainable consumption has been disappointingly slow. For instance, in a report issued by United Nations Secretary-General Kofi Annan in preparation for the Johannesburg Summit, it was concluded that "Progress towards the goals established at Rio has been slower than anticipated and in some respects conditions are worse than they were 10 years ago."<sup>1</sup> This in spite of consumers having an obvious long-term interest in sustainability, an interest often expressed by consumer organizations (e.g., Consumers International, 2002) and in surveys measuring the general population's environmental concern (e.g., the

European Opinion Research Group, 2003). What can be done about the slow progress towards sustainability depends on the reason(s) why so little is happening.

Three main groups of actors influence the sustainability of private consumption: consumers, governments, and business. For each of them, the apparent lack of effective action for sustainability may be attributed to motivational as well as ability-related factors. In this paper, the focus is on understanding and influencing consumer actions. However, in order to understand the constraints that consumers must live by, references to the two other groups of actors are unavoidable.

It is often argued that consumers themselves can make a difference with regard to – and should therefore carry their fair share of the responsibility for – the sustainability of their consumption pattern (e.g., Norwegian Ministry of Environment, 1994; Sitarz, 1994). This is based on the observations that private consumption accounts for a large share of resource use and of the emission of pollutants to the environment, and that consumers do have some discretionary power with regard to the size of their individual contribution to resource use and pollution (e.g., Ölander & Thøgersen, 1995). In line with this reasoning, Hansen and Schrader (1997) argue that consumer policy, and the consumer model on which it is based, should be revised to reflect that consumers have an, at least partial, ethical responsibility for the consequences of their actions.

Although the case for consumer responsibility is strong, it is important that it is not used to justify “blaming the victim” strategies, that is, blaming consumers for unsustainable lifestyles when “macro conditions exist which can be blamed for contributing to the problem or constraining the effectiveness of individual efforts (e.g., companies that do not provide ecologically friendly products, government inactivity)” (Roberts & Bacon, 1997, p. 89). In fact, hardly anyone will deny that there are external conditions affecting the effectiveness of an individual consumer’s actions, if and when he or she strives for sustainability. The relevant external conditions are an extremely diverse set of factors, perhaps their only commonality being that on their own, individual consumers can do nothing about them.

Some relevant external conditions, such as the climate, even governments and industry can do little about and others, such as culture, city layout, and infrastructure, they can only influence in the long run. However, there are other important external conditions

which governments and/or industry control to a much higher degree, such as the quality of public transport, the supply and relative prices of environment-friendly products, and the availability and use of eco-labelling schemes. Hence, governments and businesses are responsible for much of the external conditions limiting an individual consumer's freedom to choose and act, and therefore they also carry part of the responsibility for sustainable consumption (and production) (e.g., Stern, Dietz, Ruttan, Socolow, & Sweeney, 1997). Most governments,<sup>2</sup> at least in the industrialized countries, also acknowledge their responsibility. However, analyses of their praxis reveal that although some governments do better than others, in general governments' verbal commitment as expressed, for instance, at international conferences and summits is only reluctantly and to a limited extent transformed into action (e.g., Lafferty & Meadowcroft, 2000).

Unlike governments and (large) businesses, nothing consumers do or could do as individual actors makes any difference for the sustainability of private consumption. What matters is what large groups of consumers do. The situation facing a consumer requested to act in an environmentally responsible way is often characterized as a social dilemma (Dawes, 1980): It is not individually rational for a consumer to sacrifice short-term advantage for the common good, but if too few make the needed sacrifices, everybody end up worse off than if they all contributed. Luckily, people often do not act in the way predicted by rational choice theory, but rather often seem to follow prescriptive norms about what one ought to do as a citizen (Biel, 2000). However, experimental evidence shows that individuals are less likely to make sacrifices for the common good, the more uncertain they are that others will contribute as well (Van Dijk, Wit, Wilke, & Budescu, 2004). An obvious reason is that uncertainty about others' contributions reduces faith in the common good ever being obtained (Wiener & Doescher, 1991). In addition, research on the impact of norm misperception suggests that uncertainty about others' contribution also weakens prescriptive norms about what one ought to do (e.g., Neighbors, Larimer, & Lewis, 2004).

In addition to external constraints and social uncertainty, it is well documented that individual consumers must live with personal constraints and limitations that influence their effectiveness in any conscious attempt to change lifestyle. Individual consumers have limited resources in terms of finances, time, cognitive capacity, and

knowledge, and in everyday life lots of activities and goals compete for the same limited resources. These personal resource limitations constrain the amount of effort an individual can be expected to spend on achieving any one goal, including the change to a sustainable lifestyle, and they influence the likelihood of success in any (difficult) endeavour.

The effort also depends on the consumer's motivation, and not all consumers are equally motivated to change their lifestyle in a sustainable direction, of course. Some are so engulfed by their own private life projects that they have no room for concern for the environment (or other societal problems) and many would hate to give up specific environmentally harmful practices, such as driving a gas-guzzling SUV or visiting far-away vacation spots by airplane. Both European (Thøgersen, forthcoming) and North American (Dunlap, 2002) opinion polls strongly suggest that the level of environmental concern is currently not the most important limiting factor for changing the consumption pattern in a sustainable direction, however. As I will argue later, a feeling of helplessness or at least lack of self-efficacy with regard to solving the problems seems to be of greater importance for the level of individual motivation. Therefore, the main focus here is on constraints that might limit consumers' ability to adopt a sustainable lifestyle and on ways to reduce important constraints.

A consumer empowerment approach to consumer policy is characterized by a strong focus on reducing constraints at the individual level.<sup>3</sup> Although this makes a lot of sense also when the goal is to change lifestyles in a sustainable direction, the options are wider. In particular, consumer policy should also attempt to loosen external constraints and to remove "perverse" incentives (Myers & Kent, 1998) that make changes towards a more sustainable lifestyle difficult. In terms of reducing consumers' subjectively felt restrictions on their ability to change lifestyle and their perceived self-efficacy, the two approaches (individually and externally focused, respectively) are equivalent. If part of what is lacking is motivation, it also seems reasonable to speak about making the consumer empowered to fulfil his or her responsibilities. In this perspective, empowerment is not only a question of capabilities, but also of motivation. Basically, a person's feeling of empowerment has implications for how hard he or she will strive to solve environmental and ethical problems through his or her own behavioural effort (e.g., Ajzen, 1988; Geller, 1995; Guagnano,

Stern, & Dietz, 1995; Ölander & Thøgersen, 1995). Hence, policy that increases a feeling of empowerment (or self-efficacy) may also have a positive effect on consumers' motivation to make an effort (e.g., Pelletier, Dion, Tuson, & Green-Demers, 1999), thus producing activation that goes beyond that directly attributable to loosened constraints.

In the following I will first summarize evidence documenting individual and external constraints on lifestyle changes in a sustainable direction. Next, I discuss policies for reducing the constraints on individual consumers. And, finally, I discuss possible motivational effects of the proposed policies.

#### EXTERNAL CONDITIONS CONSTRAINING LIFESTYLE CHANGES

Consumers do not have complete freedom to choose the lifestyle they want, including a sustainable lifestyle (OECD, 2002). The choice options are constrained physically by conditions determined by nature (e.g., the climate), by the societal infrastructure, by available product and service alternatives, and by scientific uncertainty about what *is* actually the most sustainable among competing options. Choices are also constrained by the way relevant information about alternative options is – or is not – communicated to consumers, by a plethora of direct and indirect subsidies for products and services, which function as incentives for an unsustainable lifestyle, as well as by cultural meanings and social norms conditioning how the individual perceives the world. In order to illustrate the importance of external constraints for consumer decision-making and behaviour, rather than providing a comprehensive overview, I will discuss two important classes of constraints in the following: cultural meanings and norms, and infrastructure and the supply of environmentally friendly alternatives.

##### *Cultural Meanings and Norms*

Consumers perceive the choices available to them and their own behaviour through cultural “lenses” (Triandis, 1994). The dominant culture in the rich part of the world has been described as a consumer culture (e.g., Featherstone, 1990; Gallagher, 1997; Lury, 1996), meaning that the purchase and consumption of marketed products not

only, or not predominantly, serve as a means to satisfy basic needs, but rather as a means to create identity (Dittmar, Beattie, & Friese, 1995; Lunt & Livingstone, 1992; Michaelis, 2000), distinction (Bourdieu, 1984), and status (Hirsch, 1976). For some consumers shopping is a favourite leisure activity (Bloch, Ridgway, & Nelson, 1991) or even something they do compulsively (Faber, O'Guinn, & Krych, 1987) as a sort of addiction (Elliott, 1994; Scherhorn, 1990; Scherhorn, Reisch, & Raab, 1990).

Fuelled by technological change, the striving for identity, distinction, and status through the purchase of marketed products gives rise to changes in the consumption pattern and growth in total consumption. As time goes by, increasing incomes and falling prices make former status symbols available to the general public and they lose their ability to create distinction. This has been the fate of former luxuries, such as computers, mobile phones, and even cars. For the upper classes, this process creates a perennial demand for new ways to keep the distance to the masses (Featherstone, 1990). For the general population, however, the former status symbols may retain that character, but now with a slightly different emphasis. For instance, in earlier times to be a car-owner gave rise to respect and envy. However, because it has become a norm to own a car in many parts of the world, *not* owning one is now often interpreted as a sign of deep poverty (Sandqvist, 1997). Of course, the dominant consumer culture is not an unbreakable straitjacket. There are consumers who consciously rebel against it and attempt to live a simpler life (e.g., Assar & Bobinski, 1992; Leonard-Barton, 1981). However, they seem to be a small minority (Etzioni, 1998). Many more are concerned about the consequences of our affluent lifestyles (e.g., Bentley, 2000; Ray, 1997), but seem relatively helpless when it comes to doing something about it.

An important part of culture is made up by the norms that people live by, either because they are prescribed or are determined by custom. What most people do sets a standard of comparison (a descriptive norm, cf. Cialdini, Reno, & Kallgren, 1990), which influences the behaviour of individual members of society (e.g., Larimer, Turner, Mallett, & Geisner, 2004). Descriptive norms influence behaviour in at least two ways: (a) through influencing the individual's faith in the good being achievable (Wiener & Doescher, 1991) and (b) through influencing his or her perception of the social approval/disapproval of a certain behaviour (Neighbors et al., 2004). Because they are to some degree inferred from what most people do, social norms are difficult to

change. The reversal of social norms about smoking in a number of countries during the last couple of decades shows that it is not impossible, but the change in smoking norms was achieved only after a focused long-term effort by many organizations and public authorities using a combination of various instruments, including information about smoking-related problems and legal regulation banning smoking advertising and restricting where it was allowed to smoke. When it comes to pursuing the goal of sustainable consumption, on the other hand, government efforts have been much more reluctant (e.g., Lafferty & Meadowcroft, 2000). In fact, finance ministers and economists encourage citizens to consume more, nearly as a patriotic duty (Taylor, 2002), especially when the economy suffers from or is threatened by a recession (Durning, 1992). With this lack of governmental commitment, it is difficult to imagine a radical change in social norms supporting unsustainable consumption practices, such as car-driving, flight-based vacations, owning big homes, and eating meat.

#### *Infrastructure and Available Alternatives*

In the last 150 years, we have experienced an enormous growth in cities and in the spatial separation of the activities that make up everyday life (living, working, leisure, shopping), spurred by population growth, increasing costs of land and construction in inner cities as compared to transportation costs, and last, but not least, the diffusion of the automobile. The spatial separation of activities within the context of suburbanization is a major determinant of car use (Loukopoulos, 2004), one of the most problematic aspects of current lifestyles. Many people feel that they need a car in order to be able to function in a modern society; about 80% of motorists feel they could not adjust their lifestyle to being without a car, according to some studies (Ryley, 2001).

As regards everyday products, environmentally friendly variants such as organic food products or eco-labelled household chemicals are usually not as widely distributed as their conventional and more environmentally harmful counterparts. Hence, when doing one's everyday shopping, consumers usually have limited options for choosing environmentally friendly alternatives. Further, due to fewer economies of scale in production and distribution, "perverse subsidies" (Myers & Kent, 1998), and the frequent need to use more costly raw materials and processes, environmentally friendly products are usually more expensive than their conventional counterparts, which

may put them out of reach of households on a tight budget. Finally, it is not always easy to know which product alternative is the most environmentally friendly. There are sometimes environmental labelling and declaration schemes to assist consumers, but not always, and when there are, their effectiveness may be reduced by some manufacturers boycotting the schemes (e.g., Procter & Gamble is boycotting the Nordic Swan label for detergents in Denmark), by the schemes being difficult to understand (Enger & Lavik, 1995; Van Dam & Reuvekamp, 1995), and by stories in the media about misuse and fraud that decrease trust in the schemes (Summers, 1996).

#### INDIVIDUAL LEVEL LIMITATIONS CONSTRAINING LIFESTYLE CHANGES

In addition to external constraints, consumers' freedom to choose the lifestyle they want is constrained by their own personal resources and limitations. I will go through some of the most important personal constraints below. All of the mentioned limitations could (and probably should) be targeted in an effort to empower consumers.

##### *Limited Time and Financial Resources*

It is well documented that budget and time constraints limit how much money and effort people invest in protecting the environment. This is reflected, for instance, in the finding that the purchase of more expensive environment-friendly products, such as organic food products, is positively correlated with income (e.g., O'Donovan & McCarthy, 2002; Wier & Smed, 2002). Also, many studies have found that willingness to pay for environmental quality increases with income (e.g., Alberini, Rosato, Longo, & Zanatta, 2005). Just like budget constraints, perceived time constraints have been found to reduce consumers' purchase of environmentally friendly products (Tanner & Wölfling Kast, 2003). Time concerns are also often used as an argument for travelling by car rather than by alternative means of transportation (e.g., Hjorthol, 2001). The higher time-pressure in families with children is presumably an important reason why they own more cars than families without children (e.g., Bjørner & Leth-Petersen, 2004). In fact, modern time-starved consumers not only buy cars, but also many other products and services for their alleged timesaving capacity (e.g., Michaelis, 2000), for instance kitchen equipment such as microwave ovens and services such as dining out.



*Limited Cognitive Capacity*

Limited cognitive capacity restricts the average person's awareness about and attention towards environmental problems. There are a host of issues and conditions which pose a problem to society or to groups in society, but which are not perceived as such by most members of the public (or most other social actors for that matter). Sustainability issues compete with other social issues – and with the many private issues that consumers need to deal with in their everyday life – for the limited consumer attention (Behr & Iyengar, 1985). Studies tracking issue salience and importance over time have found that even though the environmental issue has had an extraordinary staying power on the public agenda in the last three decades, issue salience has been gradually declining since the early 1990, both in Europe and North America (e.g., Dunlap, 2002; Thøgersen, forthcoming). Studies have also found that the salience of environmental issues depends on media coverage (e.g., Ader, 1995). However, since most mass media are commercial businesses their primary concern is to sell their products, and if stories about environmental problems are not perceived as newsworthy by the media, they are not brought. In fact, currently we seem to be in a phase where the media are much more interested in “counter-stories,” i.e., cases where environmental authorities or “green” companies have made mistakes or committed fraud, or where scientists, such as Bjørn Lomborg, claim that environmental problems have been exaggerated by the establishment (Thøgersen, forthcoming).

*Limited Energy for Volition and Self-Control*

Research on ego-depletion suggests that not only our cognitive capacity, but also the energy resource that we draw on for decision-making, self-regulation, and controlled processing, is limited (Baumeister, Muraven, & Tice, 2000). Because this resource becomes depleted when used, people have difficulties dealing with more than one new issue in need of decision-making at a time. This has implications for the speed of change one can hope for. It means that rather than extensive over-the-board changes in lifestyles, it is more realistic to expect that people who are motivated to change will attempt to change their lifestyle gradually, one step at a time. Further, this human limitation may explain certain temporal backlashes in individual-level

sustainable consumption. It has been argued that when the energy resource is depleted, consumers are more likely to fall prey to temptations and impulse buying (Baumeister, 2002). In this way, ego depletion may lead to behaviours which the individual will later regret, and to over-consumption, squandering, and waste at the societal level.

#### *Limited Knowledge About Problems and Solutions*

Appropriate knowledge is a prerequisite for environmentally conscious action. Even people who are aware of the fact that an environmental problem exists may be uncertain about what the problem exactly is, how it is related to their own behaviour, what can be done about it, and who should – and will – do it (e.g., Cope & Winward, 1991). There is plenty of experimental evidence (e.g., Biel & Gärling, 1995; Van Dijk et al., 2004) and field studies (e.g., Fortner et al., 2000) showing that under uncertainty people are less likely to make an effort for the common good. Further, studies have found that lack of knowledge about a specific environmental issue reduces the likelihood that a person moves from a positive attitude to actually deciding to do something about a problem (e.g., Thøgersen, 2000).

#### *Limited Skills and Task-Specific Knowledge*

Often sustainable lifestyle changes demand specific knowledge about how to perform the new activities. For instance, buying environmentally friendly products requires that the consumer is able to distinguish them from the less environmentally friendly. And because environmental friendliness is usually a credence characteristic (Bech-Larsen & Grunert, 2001; Hansen & Kull, 1994), this is often difficult. Sometimes there are eco-labels or declarations to assist the consumer, but then he or she must know and understand the label or declaration (Thøgersen, 2002; Van Dam & Reuvekamp, 1995). Other specific skills are needed for using and disposing of products in a sustainable way. For instance, in order to conserve energy in the house the consumer needs knowledge about optimal airing and perhaps about how thermostats function. How to adjust the tire pressure is only one among many skills needed in order to keep the gasoline consumption of a car at a minimum. And in order to secure maximum recycling of one's waste, detailed knowledge about the local recycling systems for various fractions, as well as a thorough understanding of how recyclable

fractions are defined, is needed. Studies both in the recycling field (e.g., De Young, 1988–1989; Thøgersen, 1994) and with regard to organic products (Thøgersen, 2000) have found that positive attitudes are sometimes not transformed into behaviour because of inadequate specific skills and knowledge.

#### HOW MAY CONSUMER POLICY EMPOWER CONSUMERS?

An important goal of consumer policy is to empower consumers to make informed choices by means of education and information (e.g., labelling).<sup>4</sup> The long list of barriers and constraints for consumers wanting to change to a more sustainable lifestyle shows that the need for empowerment is not limited to being able to make informed choices. Hence, in their quest for sustainable consumption governments would be ill advised to rely only on traditional consumer policy instruments (or consumer policy in a narrow sense, cf. Reisch, 2004). Especially, given the huge task ahead of us, and the slow progress until now, it seems reasonable – even necessary – to consider thoroughly all possibilities for designing external conditions that facilitate changes towards more sustainable consumption patterns.

First and foremost, there is a need for governments to demonstrate a higher level of commitment to this goal than they have done until now (cf. Lafferty & Meadowcroft, 2000). A strong signal of commitment can be sent by living up to declarations about integrating and giving prominence to the goal of sustainability in a broad range of policy areas, such as transport policy, energy policy, agricultural policy, and tax policy. This would also have practical importance in as much as decisions made within many policy areas influence the external constraints on consumer choices, both in terms of available options and of the costs of sustainable choices in terms of money, time, and effort compared to non-sustainable choices. Further, more traditional consumer policy instruments should be employed, and co-ordinated with these other means.

In this connection, consumer empowerment may be understood both in the “negative” sense of removing or reducing constraints and limitations that impede consumers’ ability to change lifestyles in a sustainable direction, and in the positive sense of strengthening intrinsic tendencies and capabilities so as to increase consumers’ propensity to initiate changes themselves and to persist in their striving

for change. The two approaches are similar both in many of the actions taken and in being based on the understanding that consumer empowerment and activity depend on their environment. However, they differ in that the latter implies that constraints on behaviour may have motivational implications and that consumer motivation and capabilities may not only be set free, but could actually be extended. This is something I will elaborate on momentarily. But first, I will briefly discuss some of the most obvious opportunities for facilitating sustainable consumption through influencing external constraints and some ways of empowering consumers to make more informed decisions.

#### *Creation of Facilitating External Conditions*

Through legal restrictions and voluntary agreements with industry, environmentally harmful chemical substances can be phased out of the market and standards for things such as flushing toilets, window glazing, and home insulation can be made stricter, which can lead to lasting improvements in sustainability without consumers needing to spend limited time and decision-making ability on the issue (Stern, 2000; Stern et al., 1997). Hence, seen from a consumer interest point of view, possibilities for making consumption patterns more sustainable through legal restrictions and standards should be utilized to the fullest extent possible. In most cases, consumers will not notice that their choice options have been reduced due to legal restrictions or product standards. However, in some cases they will notice, and then they may protest or may individually look for loopholes to get around the restriction (e.g., Mazis, 1975). Hence, in such cases the legal regulation should be supplemented by (information) activities to secure its acceptance in the targeted population (Burns & De Vere, 1982; Jacobsson, Fujii, & Gärling, 2000). Of course, legal restrictions and standards are targeted more at producers than at consumers and it is political resistance and lobbying from producers and producer organizations that most often block or delay their implementation. How to deal with this kind of resistance is outside the scope of this paper.

There are limited possibilities for improving the sustainability of consumption patterns through legislative restrictions and standards, however. Most of the desired change is bound to be achieved through changing consumer choices between offers available in the market,

which all are legal, but not equally sustainable. Given the importance of the budget constraint for consumer choices, an obvious step is to attempt to “get the prices right,” first and foremost through removing “perverse subsidies” (Holliday & Pepper, 2001; Myers & Kent, 1998), but in general through applying taxes and subsidies in a way that makes relative prices more reflective of total social costs (OECD, 2001; Sitarz, 1994). The importance of changes in the price structure is demonstrated by research showing that when environmentally friendly alternatives are made more affordable (and the budget constraint thus less restrictive), consumer choices eventually adjust (e.g., Bamberg & Schmidt, 1999; Wier & Calverley, 2001). Changes in the price structure to the advantage of a more sustainable alternative may also lead to reductions in costs in terms of time and/or effort. For instance, subsidies and other types of preferential treatment have increased the availability of organic food products in the supermarkets in many countries, which has made these products more affordable, not only in money terms, but also in time.

As indicated in the discussion of constraints above, external conditions for sustainable consumption can in general be made more facilitating by reducing the amount of time, effort, and other non-monetary costs demanded of the consumer. In many cases this is probably more important than getting the prices right. Recycling is a case in point. It is well documented that providing functional storage equipment and convenient collection services for recyclable waste fractions has a large impact on the recycling of household waste (e.g., Thøgersen, 1997). The use of bicycles for city traffic can be facilitated by means of traffic safety and separation measures (e.g., speed limits, bike paths, and traffic light design), and the use of public transportation can be facilitated by providing a frequent, fast, and reliable service. Still, many cities are designed mainly for car traffic (UNEP, 2000).

#### *Informing and Educating Consumers*

Consumer information and education are key tools in the consumer policy toolbox, and they are not less relevant in empowering consumers to look out for their sustainability interests than for their health, safety and finance related interests (Sitarz, 1994). As mentioned earlier, research has found that the salience of environmental problems in the general population depends on media coverage of the issue (e.g.,

Ader, 1995). In fact, environmental issues seem to be more sensitive to media coverage than many other social issues, probably because most of the environmental problems that currently confront us in the industrialized countries are not experienced directly by most individuals (Zucker, 1978). The sensitivity of issue salience to media coverage shows at least two things of importance for consumer policy. First, it shows that when people set their priorities they are influenced by how issues are prioritized in their community (as reflected in media priorities). This is sensible, given that environmental and other sustainability issues are often complicated, and to get a sense of how an issue is considered among relevant (knowledgeable) referents can be an effective way to cut through the chaff. Secondly, the sensitivity to media coverage shows that it is possible to influence consumer attention towards environmental issues by means of mass communication (cf. also Staats, Wit, & Midden, 1996).

Consumer education for sustainability should not be limited to mass media campaigns, however. The issue is already part of the curriculum of basic as well as higher education in many parts of the world, and it needs to be increasingly so in the future (Sitarz, 1994).<sup>5</sup> The results of these activities, as reflected in students' (short-term) knowledge, attitudes, and behaviour, are mixed (Rickinson, 2001), but in general positive (Zelezny, 1999). The uncertainty regarding sustainability education is limited to how it should be performed in order to be effective. Several scholarly journals and societies have been founded to deal with this issue. Hardly anyone questions that teaching for sustainability in the formal education system is indispensable, both for creating a basic awareness about the sustainability issue in the population and for laying the ground for campaigns targeting specific issues. Also, studies have found that the benefits of sustainability education in the school system are not limited to the long run (where one can assume that they will influence future householders), but that it can have a rather instant effect on current consumption patterns, due to children (and schools) influencing parents (e.g., Ballantyne, Fien, & Packer, 2001; Vaughan, Gack, Solorazano, & Ray, 2003).

In addition to the activities in the formal education system, NGO's and governmental organizations at different levels offer children and adults a long range of more informal environmental education activities. After the World Summit in Rio in 1992, many such activities were organized in the local Agenda 21 framework (e.g., Norland,

Bjørnæs, & Coenen, 2003).<sup>6</sup> Few systematic evaluations of informal environmental education activities have been published. Those that I have identified are generally positive, both when the activities are NGO (e.g., Fien, Scott, & Tilbury, 2001; Palmer & Birch, 2003) and government sponsored (e.g., Lindström & Johnsson, 2003). However, educational interventions outside the formal education system seem in general to be less effective than those within the system (Zelezny, 1999). Informal education activities are voluntary and hence they tend to attract people who are already more concerned about the issue than the average citizen. Many of these activities contain an important social (e.g., Staats, Harland, & Wilke, 2004) or entertainment (McEntee, 1989) component, both of which may contribute to their success.

Computer technology and the Internet have improved consumers' access to sustainable consumption relevant information enormously (e.g., Moore & Huber, 2001; Reisch, 2001b). However, there is still a lack of empirical research documenting its impact on consumption practices. Price comparison robots have become quite popular (e.g., Campanelli, 2002) and one can speculate that the more convenient access to product tests also means that consumers consult these tests more, which all in all improves market transparency (Hansen, Rezagbakhsh, & Bornemann, 2005). Some price comparison sites offer more than just price comparisons and there are even some, such as the Danish "hvidevarepriser.dk," which also compare products on important environmental characteristics. Hvidevarepriser.dk was created by a government-financed fund, Elsparefonden (the Electricity Saving Fund), with the aim to promote energy efficient white goods (those carrying EU's A-label for white goods). Already 2 years after its start, the site was visited by a quarter of a million users a year (Elsparefonden, 2002), which is considered a success in a country with less than 5.5 million inhabitants. And based on this experience, Elsparefonden has decided to devote more of its resources to web-based information and what they call "self-help systems" for consumers (Elsparefonden, 2004). It is not (always) necessary for a web site to offer cheaper prices for it to become popular, however. For instance, the Danish site "Green Information,"<sup>7</sup> which offers information about the environmental quality of all kinds of consumer products, had about 1.5 million visitors in 2002, in addition to about 10,000 calls (Bauer, 2002).

*Labelling Schemes*

Labels and declarations are widely used to inform consumers about product qualities that are important, but not immediately perceptible. Labelling was emphasized in Agenda 21 as a promising means to assist consumers in making sustainable choices (Sitarz, 1994), and in the last two decades a large number of eco labels and ethical labels have been implemented. Labelling has indeed proven to be an effective tool. For instance, 6–7 years after the implementation of EU's mandatory energy labelling scheme for white goods it is now necessary to extend the classification with further categories in the low energy consumption end, because 90% or more of the products sold in some markets and product areas are in the best category.

However, a number of preconditions need to be fulfilled and sufficient time allowed for the diffusion of the label in the relevant market for labelling schemes to have the intended effect (Thøgersen, 2002). A non-trivial, but somewhat overlooked, precondition is that producers of qualifying products use the labels, which they tend to do only if it is mandatory or judged to be profitable. And as long as only few and marginal producers use a particular voluntary label, market leaders may conclude that it is not worth the cost of the fee for using it. For instance, a test by the Danish Consumer Agency's test laboratory in 2001 revealed that the leading detergent brand on the Danish market, Ariel (Procter & Gamble), fulfilled the criteria for the Nordic Swan and EU Flower labels,<sup>8</sup> but the company had decided not to apply for the label (From, 2001). Another basic precondition is that consumers trust the label (Hansen & Kull, 1994; Torjusen, Sangstad, Jensen, & Kjærnes, 2004), a requirement which "third-party" labelling schemes usually meet better than producers' or retailers' own labelling schemes (e.g., Eden, 1994/95; Enger & Lavik, 1995). For instance, the implementation of state (e.g., in Denmark) or trusted NGO (e.g., in Sweden) issued and controlled labelling schemes was an important prerequisite for the generation and growth of a market for organic food products in many European countries during the last decade or two (e.g., Michelsen, Hamm, Wynen, & Roth, 1999; Reisch, 2001a; Torjusen et al., 2004).

A third pre-condition is that consumers know and understand the label. Labels are usually not self-explanatory (Van Dam & Reuvekamp, 1995) and a new eco label or ethical label is implemented in an environment which is already crowded with labels, including many



signifying ecological and ethical characteristics (e.g., Reisch, 2001a). Uncertainty about what a label means or who issues it may also impair consumer trust in the label (e.g., Tufte & Lavik, 1997). Hence, in order to create attention, comprehension, and trust, the introduction of a new label needs to be backed by activities informing and educating the relevant populations about the label (Reisch, 2001a).

#### EMPOWERMENT AND MOTIVATION

As mentioned earlier, it is common to consider consumers empowered to change lifestyles in a sustainable direction when constraints and limitations, which impede their ability to do so, have been removed or reduced. Consumers are considered to be empowered if they are offered sustainable choice options for their everyday necessities which are easy to identify, trust, and understand, and which fit into their current way of life without making unreasonable demands on time, effort (including decision-making effort), and money. However, as indicated earlier this perspective on consumer empowerment is too limited, in my view. Creating better opportunities and strengthening their abilities only *make it possible* for consumers to take responsibility for the environmental and ethical consequences of their choices and behaviour. It is not sufficient to make them *do it*, or to explain *why* they do it.

Problem awareness, or concern for the state of the environment and for the living and working conditions for those less fortunate in the world, is an additional – and widely recognized – precondition for taking action for sustainability (e.g., Fransson & Gärling, 1999; Sitarz, 1994). For example, environmental concern (i.e., problem awareness) can explain why an individual wants to contribute to protecting the environment. Hence, it explains the *direction* of the person's behaviour. Still, even problem awareness is not sufficient to explain the variations in the *energy* that people put into this endeavour, i.e., how actively and persistently they pursue the goal of environmental protection (or other sustainability relevant goals).<sup>9</sup> For this, we need a theory of motivation.

In motivational psychology, the concept of empowerment has been used to describe the feeling that one's actions "make a difference" (Geller, 1995). It is a feeling (or perception) whose implications for a person's propensity to initiate action towards a goal and to persist in

goal striving is well documented (e.g., Deci & Ryan, 1985; Ozer & Bandura, 1990), and this also in the environmental field (e.g., Allen & Ferrand, 1999; Ellen, Wiener, & Cobb-Walgren, 1991; Pelletier et al., 1999). I will elaborate on the motivational properties of this concept in the following, but first I want to stress that consumer empowerment in this sense naturally still depends on the consumer's environment, as conditioned by consumer policy (in its widest sense) and market supply as well as by culture and social relationships. However, a conceptualization of empowerment in terms of how much the actor's environment facilitates a desired type of action – which may even be more desired by society than by the individual actor – is too narrow, which becomes clear as soon as we consider empowerment in a motivational perspective.

Deci and Ryan's self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) is a useful framework for understanding the motivational aspect of consumer empowerment. Self-determination theory is based on the assumption that people have intrinsic needs and psychological drives, and that these intrinsic needs provide energy for the organism to act on its internal and external environment. Empirically, three such needs, which appear to be essential for optimal functioning and development, have been identified: the needs for competence, relatedness, and autonomy (Ryan & Deci, 2000). As a result of our perennial striving to fulfil these intrinsic needs, human beings have a natural tendency to be curious, exploring, and socially active – something which is especially obvious in children – and activities that make us feel autonomous, increase our (sense of) competence, and/or strengthen our social ties are intrinsically motivating.

The regulatory environment can undermine a person's intrinsic motivation, however. This happens if it does not allow the individual to experience a predictable relationship between his/her actions and its outcomes. Then amotivation and a feeling of helplessness are fostered (Seligman, 1975); the opposite of empowerment. A person's intrinsic motivation to perform an activity is also undermined if the regulatory environment is experienced as controlling (Deci & Ryan, 1985). In extreme cases, when individuals have perceived their environments to be unpredictable or controlling during critical phases of their personal development, they may develop a general propensity to experience situations as amotivating or controlling and may thus suffer from a reduced general ability to act in an intrinsically motivated way.<sup>10</sup> In sum, in a motivational perspective an empowering regulatory

environment is one which fosters feelings of autonomy and competence, rather than feelings of ineffectiveness or being a pawn in others' game (Deci & Ryan, 1985).

### *Empirical Evidence*

A positive relationship between self-determined motivation and behaviour has been found in domains as diverse as sport (Pelletier et al., 1996), psychotherapy (Pelletier, Tuson, & Haddad, 1997), education (Vallerand et al., 1992), and the environment (Pelletier, 2002). For instance, Pelletier and his colleagues found that self-determined motivation towards the environment is positively correlated with environmentally friendly behaviours such as reusing paper and packaging, recycling, and environment-friendly purchase behaviour (Pelletier, Tuson, Green-Demers, Noels, & Beaton, 1998) as well as with environmental activism (Séguin, Pelletier, & Hunsley, 1998). They also found that amotivation towards the environment (i.e., the reverse of empowerment) is negatively correlated with environment-friendly behaviour (Pelletier et al., 1999).

Most of the experimental research on the impact of the regulatory environment on intrinsic motivation has investigated what it means if the environment is experienced as controlling (Deci & Ryan, 1985; Ryan & Deci, 2000). There is plenty of research documenting that extrinsically administered rewards (Deci, Koestner, & Ryan, 1999) or punishment (Mulder, 2004) – factors which create a controlling environment – tend to undermine intrinsic motivation for an activity. These studies are usually laboratory studies based on student samples and focusing on activities with limited social importance, such as solving puzzles. However, at least one field experiment with ordinary citizens and a focus on an important activity reaches the same conclusion. In a referendum context in Switzerland, Frey & Oberholzer-Gee (1997) found that when a monetary incentive was offered for accepting a nuclear waste repository in one's region, the feelings of civic duty ceased to have an impact on citizens' willingness to accept such a facility. The monetary incentive seemingly rendered perceptions of civic duty, i.e., the intrinsic motivation, irrelevant for the decision.

A number of survey-based studies also support the notion that an autonomy-supporting regulatory environment facilitates the performance of environmental and ethical behaviours. In a study of individual and environmental forces that affect engagement in prosocial

behaviour among (a) students and (b) volunteer workers, Gagné (2003) found that autonomy orientation (a personality trait) was strongly and perceived autonomy support modestly related to engagement in prosocial behaviour. In addition, autonomy support predicted lower volunteer turnover. Based on a survey of previous research in the environmental field, De Young (1993) concluded that helping people to understand the nature of environmental problems, as compared to coercive regulation by means of techniques such as social pressure, punishments, or economic incentives, seem to produce more durable performance of environmentally friendly behaviours.

A quasi-experimental field study, investigating the influence of a weight-based waste disposal fee on consumer's recycling behaviour and motivation, adds a few nuances to these conclusions (Thøgersen, 2003). Compared to a matched group of municipalities where households paid a flat rate for garbage collection, the felt obligation to recycle and self-reported recycling behaviour was actually (marginally, but significantly) higher in municipalities offering an economic incentive for recycling in the form of a weight-based fee. Although this finding may seem to contradict the predictions of self-determination theory, it is in fact consistent with earlier findings regarding *performance-dependent* incentives (Deci & Ryan, 1985). Deci and Ryan (1985) suggest that the reason why a performance-dependent incentive has a less detrimental impact on intrinsic motivation than other types of incentives is that it is not only controlling and thereby undermines autonomy, but also provides feedback about performance, which may have a positive influence on perceived competence. The relatively small differences between municipalities with a flat rate and municipalities with a weight-based fee suggest that the two opposing influences on intrinsic motivation more or less neutralized each other in this case.

Perhaps the most convincing evidence supporting a motivational approach to empowering consumers for sustainability comes from evaluations of the EcoTeam programme (Harland, 2001; Harland, Staats, & Wilke, 1999; Staats et al., 2004), a behaviour change programme which until now has been implemented in 17 countries (including the USA), and which builds on a motivational view similar to self-determination theory.<sup>11</sup> The key distinguishing feature of this programme is that it attempts to initiate behaviour change in a group setting. EcoTeams are small groups of 6–10 people who know each other beforehand and who meet once a month to discuss experiences, ideas, and achievements related to the programme.<sup>12</sup> In addition, the

programme provides information about desirable environmentally relevant goals and about behaviour changes that could help reaching the goals, and feedback is given periodically about achievements at the individual household level, at the team level, and at the national level. At the team meetings, participants set their own goals for each of the areas on which the team focuses, and they also themselves decide which methods they want to use to reach the goals. In sum, the EcoTeam approach acknowledges and attempts to fulfil the person's needs for competence, relatedness, and autonomy.

A thorough evaluation of the Dutch EcoTeam programme (Staats et al., 2004) found that, compared to a matched control group, members of the EcoTeams significantly changed their consumption pattern in an environmentally friendly way during the 8 months their team was active. Two years after the end of their participation the changes remained; in fact they had even improved slightly. The behaviour changes were also reflected in a decrease in the use of four environmental resources.<sup>13</sup>

However, the EcoTeams approach has one serious limitation, which is related to the breadth of its impact: Participants in EcoTeams tend to be more concerned about the environment and more actively protecting the environment than the average person, and this already before participating (Harland, 2001). And relatively few people volunteer to commit themselves to an effort of this size and kind.<sup>14</sup> Hence, boosting participation is a major concern; something which has led to the suggestion that "leaner" EcoTeam programmes be developed based on scientific research identifying effective subsets of elements in the original programme (Harland, 2001).

#### *Implications for an Empowering Consumer Policy*

The experience from the EcoTeam programme and the other evidence reviewed above indicate that an optimally empowering regulatory environment is perceived as informational, rather than as unpredictable or controlling (Deci & Ryan, 1985; Ryan & Deci, 2000); "informational" implying some degree of freedom to choose one's own actions as well as feedback about one's performance. Because of the persistent finding in the environmental field, among others, that information alone rarely changes behaviour (Gardner & Stern, 2002), the strong emphasis on basing regulation on information is bound to be met with scepticism. Therefore, it needs to be stressed that it is *not*

assumed by those advocating informational approaches to the empowerment of consumers that information alone is sufficient to make people carry out environmentally or ethically responsible actions that are highly disadvantageous in terms of monetary, time, or behavioural costs, or to get them to abstain from doing something they really like (e.g., De Young, 1993). In such cases, behaviour change on a wide scale requires that the structural conditions guiding behaviour be altered, making the desired behavioural alternative cheaper or more convenient or making the undesired behaviour more expensive or inconvenient, or outright unlawful. If important structural conditions are changed permanently, people will eventually adjust their behaviour to the new conditions, as mentioned earlier. Structural conditions may even be tailored so that “responsible behaviour” is no longer dependent on the individual’s motivation or good will.

However, in cases where structural conditions have been altered, but non-sustainable options are still available, it is an important finding from this line of research that the way in which structural interventions are presented to the public may be important for the success of the regulation. For example, it is well documented that regulation which is perceived as controlling may “crowd out” pre-existent internalized motivation for the desired behaviour (Frey, 1997). When this happens, the produced behaviour change is less than what would be expected, given the incentive value of the intervention. A related insight is that not all structural interventions undermine internalized motivation to the same extent. First and foremost, it depends on how much freedom of choice is left to the individual. Hence, for instance, a legal restriction banning a certain behaviour is more coercive – and can be expected to undermine internalized motivation more – than regulation by economic means (Frey, 1997). In addition, we saw in the weight-based garbage fee case that the extent of undermining depends on whether the fulfilment of other basic needs, such as competence, is affected by the regulation. The insight that the negative effect of a controlling type of regulation on intrinsic motivation can be neutralized if the regulation also enhances competence can be utilized to guide choices between alternative forms of intervention, but also to design packages of interventions – for instance combinations of a monetary incentive and feedback about performance. However, research evaluating the combined effect of such means is still lacking.

The discussion of the importance of performance feedback on perceived competence indicates that it can be a good idea to supplement structural interventions by information. This may be a good idea for other reasons as well. Research has found that the effectiveness of a structural intervention in the form of a “carrot” enticing people to perform some environmentally or ethically responsible behaviour, which they do insufficiently when left alone, can be multiplied several times by combining it with the right kind of information, including endorsements made by relevant (often local) authorities (Stern, 1999). According to research reviewed above, the information effect may be due to the fact that it catches attention, creates faith in the veracity of certain actions, and/or activates a sense of belonging to, and perhaps duty towards, the community. In cases where the structural intervention has the form of a “stick” forcing people to refrain from something, they would otherwise do, a special effort by the authorities is needed in order to get public acceptance of the regulation (e.g., Jacobsson et al., 2000), including information explaining the need for the regulation (e.g., Burns & De Vere, 1982; Steg, Vlek, & Rooijers, 1995). Without such an effort there is a risk of producing defiance or outright reactance in the population (e.g., Brehm & Brehm, 1981; Mazis, 1975).

#### *Should the Communication Emphasize Obligations?*

An important question is the degree to which communication from authorities should stress the individual’s obligation to behave in a sustainable way. The idea that normative communication can be powerful receives support from the many studies which have linked environmentally desirable behaviour to the strength of the norms an individual holds with respect to this behaviour (e.g., Biel, Von Borgstede, & Dahlstrand, 1999; Fisher & Ackerman, 1998; Reno, Cialdini, & Kallgren, 1993) and especially to the strength of internalized (sometimes called personal or moral) norms (e.g., Guagnano et al., 1995; Harland et al., 1999; Hopper & Nielsen, 1991; Thøgersen, 1999). However, it has also been argued that pressing individuals to behave in an environmentally friendly way for altruistic reasons is de-motivating and may eventually produce a sense of helplessness (Kaplan, 2000).

At least two types of norm communication are widely used. One is the communication of facts about what people in a particular reference group actually do with regard to some problematic behaviour, that is,

which norms they live by.<sup>15</sup> That the communication of such facts may be needed is supported by the empirical observation that norms are often misperceived in the direction of overstating the frequency of personally and socially problematic behaviours (Borsari & Carey, 2003; Perkins, 2003). The usefulness of this type of norm-related information is further supported by experimental evidence documenting that (a) social uncertainty reduces cooperation in social dilemmas (e.g., Van Dijk et al., 2004) and (b) more participants are prepared to cooperate the larger share of the population they believe subscribe to a moral norm about cooperating (Von Borgstede, Dahlstrand, & Biel, 1999). In a field setting, feedback about group-level behaviour has proven to be an effective way to promote recycling (Schultz, 1999). Further, campaigns aimed at correcting misperceptions about relevant others' behaviour have reportedly been successful at reducing problematic behaviours such as smoking, drinking, and drunken driving among adolescents and college students (Borsari & Carey, 2003; Perkins, 2003).

The other type of widely used norm communication is guilt appeals in advertising (e.g., Huhman & Brotherton, 1997). One study found that guilt feelings predict ecological behaviour, mediated through perceived responsibility (Kaiser & Shimonda, 1999). In laboratory experiments, guilt appeals have been found to produce a stronger sense of responsibility, compared to a control appeal, and in this way to increase intentions to make a contribution to a worthy cause (Basil, Ridgway, & Basil, 2001). However, most studies of guilt-based advertising tend to suggest that, although it is not difficult to arouse guilt in this way, the effectiveness of guilt-based advertising is extremely limited (Bennett, 1998).

A problem with guilt appeals is that they are likely to be felt as pressing and sometimes even manipulative. One study found that when consumers infer manipulative intent by the organization behind the communication, negative attitudes toward the organization and the advertisement are produced instead (Cotte, Coulter, & Moore, 2005). When normative appeals are perceived as pressing there is the risk that the authorities are perceived as busy-bodies, meddling with what people perceive as their private affairs (Ölander & Thøgersen, 1995). Also, research in the self-determination tradition indicates that the use of normatively pressing language (i.e., telling people what they "should" do, rather than informing them about reasons for doing it) tends to create a sense of being controlled and therefore undermines



intrinsic motivation (e.g., Deci, Eghari, Patrick, & Leone, 1994; Koestner, Ryan, Bernieri, & Holt, 1984). There is even evidence showing that strongly pressuring messages (for instance, making explicit commands against the act of littering) can produce psychological reactance and an increase, rather than the intended decrease, of a proscribed behaviour (littering, in this case) (Reich & Robertson, 1979).

In sum, the evidence suggests that normative communication in the form of information about what most people actually do can be useful, but that communicators should avoid overly pressing language and guilt appeals.

#### FINAL COMMENTS

In this paper I have reviewed evidence regarding the need for consumer empowerment, and how consumer policy can assist in empowering consumers for a more sustainable lifestyle. The evidence suggests that although individual consumers – especially in the industrialized world – have some discretionary power over their consumption pattern and although current lifestyles contribute to resource depletion and environmental degradation, limited abilities and restricted opportunities, in combination with norms and incentives supporting non-sustainable practices, make it difficult even for highly motivated individuals to do anything radical to improve the sustainability of their lifestyles. And when it comes to the implementation of laws and regulations making structural conditions more conducive to sustainable consumption (e.g., introducing environmental taxes) “the scale of change has fallen well short of the rhetoric” (Lafferty & Meadowcroft, 2000, p. 381), as it was put in one thorough analysis of government policies in nine of the richest countries in the world. Hence, appeals to individual consumer responsibility in this area easily get a flavour of “blaming the victim.”

Still, in a joint effort where governments and businesses also do their part, empowering consumers to overcome their personal limitations as well as to be more motivated and initiating, is undoubtedly a valuable, probably even indispensable, part of an overall strategy for achieving a more sustainable consumption pattern. The evidence presented above pointed at many things that can be done. It is argued that a crucial characteristic of empowerment is that it is a *feeling*, not

something that can be quantified objectively. This has the practical implication that improving the consumer's individual resources and making the environment more transparent and more facilitating may have the same effect on consumer empowerment. A facilitating environment can to some extent compensate for deficient consumer resources, and vice versa.

Motivational psychology suggests that empowerment, at the individual level, can be achieved through the provision of possibilities for acquiring a sense of competence and self-determination. Education and information about sustainability issues related to one's current lifestyle as well as possibilities for behaviour changes which are important, can be mastered, and offer the individual some freedom of choice, are important means. Individuals feel empowered when they experience being in control and being able to master change (De Young, 2000). A feeling of empowerment is also nurtured by a sense of belonging, for instance when doing things for the environment together with other people (cf. De Young, 2003; Speer, Jackson, & Peterson, 2001).

Theory and research also indicate that government communication aimed at promoting a more sustainable lifestyle should not be overly pressing. Pressing language can produce the opposite of the intended effect. And it would hardly be fair to actively induce guilt feelings in consumers for maintaining a normal lifestyle, a lifestyle which to a large extent is encouraged and the result of structural conditions created by government and business. When it comes to normative communication, governments should primarily let their actions speak. As it is the case in parenting, action speaks louder about one's norms than words. Hence, more than from anything else citizen consumers infer the importance of sustainability issues from the commitment shown the issues by our best men and women, representing us in various government bodies.

When it comes to convincing consumers to make specific changes in their lifestyles, people should be trusted to be able to infer the appropriate behaviour change from knowledge about the problem and how it relates to their lifestyle. Empowerment here means education supplying the necessary knowledge about the problem and information about the – often many – ways in which behaviour changes can help, and providing feedback allowing the individual or household to monitor their progress. Communication aimed at correcting common misperceptions about consumption norms – which may induce people

to over-consume in order to “keep up with the Joneses” – or at rectifying the false impression that nobody else is doing anything (Pieters, Bijmolt, van Raaij, & de Kruijk, 1998) is another promising tool.

#### NOTES

<sup>1</sup> Cited in UNEP’s monthly newsletter on sustainable consumption, “SC.net,” which is circulated via e-mail and the Internet, see <http://www.uneptie.org/pc/sustain/sc-net/sc-net.htm>.

<sup>2</sup> And also business organizations such as the WBCSD (e.g., WBCSD, 2001).

<sup>3</sup> E.g., Consumers Association of Canada (<http://www.consumermanitoba.ca/about.html>) and the US Federal Drug Administration ([http://www.supplementquality.com/news/FDA\\_health\\_initiative.html](http://www.supplementquality.com/news/FDA_health_initiative.html)).

<sup>4</sup> For examples, see Note 3. For an example with reference to environmental labeling, see <http://www.timesnewsweekly.com/Archives2002/Jan.-Mar.2002/022802/New-Files/ELECTRICBILLS.html>.

<sup>5</sup> Education for sustainable development is a prioritized element in the Johannesburg Plan of Implementation adopted by WSSD, see <http://www.un.org/esa/sustdev/sdis-sues/education/edu.htm>.

<sup>6</sup> The Internet is the best source to get an updated overview of local Agenda 21 activities. See, e.g., Germany, <http://www.agenda21-netzwerk.de/>; Switzerland, [http://www.are.admin.ch/are/de/nachhaltig/agenda\\_21/index.html](http://www.are.admin.ch/are/de/nachhaltig/agenda_21/index.html).

<sup>7</sup> The government-funded organization behind the site has recently been reorganized and the site has changed name to “Environment and Health,” see <http://www.mil-joeogsundhed.dk/>.

<sup>8</sup> See <http://www.forbrug.dk/test/testbasen/rengoering/hvidvaskemidler/>.

<sup>9</sup> Cf. also the weak relationship between environmental concern and behaviour usually found in empirical studies (e.g., Bamberg, 2003).

<sup>10</sup> Notice the similarity with what Seligman (1975, for example) called “learned helplessness,” a condition which can lead to depression.

<sup>11</sup> For programme details and further evaluations, see <http://empowermentinstitute.net>.

<sup>12</sup> The EcoTeams concentrate on each of six themes for four consecutive weeks: garbage, gas, electricity, water, transport, and consumption. To support the work, the team members are provided with a personal Workbook and a logbook in which results are recorded. The Workbook includes a short introduction to each of the six themes, followed by an explanation of the goals of the programme. There is also a listing of a large number of pro-environmental actions that can be undertaken by the household and a questionnaire, which enables the individual team member to check their progress in terms of environmental actions. Team results in terms of savings of gas, energy, waste reduction, etc. are recorded in the team logbook. In this way, team members get more insight into their own behaviour and are able to track their progress. The group results are sent to a central database where the results of all active EcoTeams in, for example, the Netherlands are compiled, and the individual teams receive feedback about the amount of realized savings on a national level. By means of the EcoTeams Newsletter, the teams also receive information about the accomplishments of EcoTeams in other countries. More details can be found on the programme’s website and in Staats, Harland, and Wilke (2004).

<sup>13</sup> The reduction in waste production was already statistically significant at the end of the team period, while it took longer before the reduction in the use of natural gas, electricity, and water was significant. But it was when measured two years later (Staats et al., 2004).

<sup>14</sup> In 2001 it was estimated that, during the six years the EcoTeams had been fully operational at that time, some 20,000 households in 16 countries had participated (Harland, 2001).

<sup>15</sup> For more information, see [http://www.mostofus.org/model\\_c1.asp](http://www.mostofus.org/model_c1.asp) and <http://www.socialnorms.org/index.php>.

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