
22 Addressing fields of rationality: a policy for reducing household energy consumption?

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The reason stateways fail to modify folkways is that policymakers often get it wrong – the experiences the state manipulates are not the experiences that produce the habits that produce the visible patterns they seek to change. (Stephen Turner, 1994: 104)

22.1 INTRODUCTION

In this chapter we analyse effective strategies for changing household energy behaviour. We synthesize insights from psychology, anthropology and economics and develop an interdisciplinary model for understanding energy behaviour and change. More specifically we develop a model which includes a concept of ‘fields of rationality’, understood as the *modus operandi* that individuals act within. We suggest that this approach, which attempts to be holistic by taking factors at different levels of analysis into account, might be important for understanding people’s energy use behaviour. Also, we discuss how insights into fields of rationality might give guidance for the design of effective policy instruments.

Different disciplines have different perspectives on what influences energy behaviour. In economic theory it is assumed that a consumer chooses what they prefer, given what is feasible with the given prices of goods and their income. The preferences of the consumer are considered as given, and the main instruments for change are considered to be the price level of the products consumed and the income level of the consumers.¹ Schiffer (1979) for instance relies on these perspectives when he underlines that: ‘The demand for energy depends critically on the elasticity of substitution, as well as upon the income and price elasticities of various energy-intensive amenities’.² Based on these perspectives, there is a strong argument in economic literature that the use of economic instruments is superior to command-and-control instruments when it comes to their cost-effectiveness (see for instance Baumol and Oates, 1988). The recommendations for cost-effective policies for reduced energy consumption would thus be for policies that focus on ‘getting the price’ of electricity to the right level to meet the goals set by policy-makers.

Like economists, psychologists study people’s preferences, but from a slightly different angle. Whereas the economist’s approach is normative, the psychological approach is descriptive, defining preference as whatever likes or dislikes the individual may have in a certain domain, with the explanation of the observed preference being a matter of empirical investigation. Also, psychologists question the assumption that the preferences of the individual are a function of maximizing gain and avoiding loss. Environmental psychologists (Kaplan and Kaplan, 1989) have instead suggested what they label the Reasonable Person Model as a conceptual framework both for understanding individual preferences and for environmental decision-making in general. In this model, not being

rational in terms of maximizing one's gain on one single value does not mean that people are irrational. The Reasonable Person Model builds on three principles: (1) people can be reasonable, depending upon the circumstances that surround them, implying that reasonableness is the outcome of an interaction between person and situation; (2) people actively seek to understand their world, but often possess extremely limited information; (3) people's needs are many and varied, and thus not reducible to any single unitary value: we are not maximizers but 'satisficers' (Simon, 1972). From this it follows that people, when constructing their preferences, relate to several sets of values at the same time and that they are likely to draw on, refer to and evaluate such values contextually dependent on the situation. The existence of multiple values is also commonly acknowledged in sociology and anthropology.

Another important assumption shared by parts of psychology and other social sciences concerns the unit of analysis. Rather than seeing individuals as autonomous consumers who act independently of each other, relational aspects are highlighted. From a psychological perspective, a holistic and relational perspective on individual behaviour is found in the so-called transactional approach to environmental psychology, aiming to study how, mutually, 'individuals change the environment and their behaviour and experiences are changed by the environment' (Gifford, 2007). Here, persons-in-environments are treated as the basic unit of analysis without any further dividing into smaller entities. Persons, processes and environments are seen as parts of a whole, not as independent components that are combined in an additive fashion to make the whole. Thus, the transactional approach focuses on shifting processes in person – environment configurations, studying acting, doing, talking, thinking instead of studying personal states, structures and static entities, and aims at explaining specific psychological phenomena on the basis of the most appropriate theoretical principles at any given time (Altman and Rogoff, 1987; Stokols and Altman, 1987; Pepper, 1942; Werner et al., 2002).

Similar to the way the transactional approach in psychology centres not on individuals but on persons-in-context (for example social environment), sociology and anthropology are disciplines concerned with relationships between people. This focus on relationships complements the economic perspective by enhancing our understanding of some of the central factors that condition people's preferences and thus their energy behaviour and consumption at large. To provide some examples: an investment in a heat pump; a family's yearly consumption of kilowatt hours; or a teenager watching television in her room with her friends – these are different types of energy behaviours that tend to be highly socially conditioned. This is so both with respect to the intra-household relationships and dynamics played out in the place where consumption takes place (people's homes), and also through the wider social networks that household members feel a belonging to and seek approval from (see for example Douglas and Isherwood, 1996[1979]; Miller, 1998; Carrier and Miller, 1999; Henning, 2005). Moreover, cultural values come into play and are connected to the social norms (or 'rules') that guide energy behaviour. Grasping such values may be particularly illuminating for understanding energy practices, which tend to vary according to the cultural context (Wilhite et al., 1996; Henning, 2005; Wilhite, 2008a; Winther, 2008).

In addition, material factors condition any kind of practice, and particularly so in the area of energy, with its heavy, costly and enduring technologies of production and supply (Holden, 2002; Shove, 2003). Recent contributions in sociology and anthropology

combine a people-centred focus on notions such as comfort, cleanliness and convenience, with an analytic emphasis on the systems of provision which significantly contribute to shaping consumption (Shove, 2003; Wilhite, 2008a, 2008b; Winther, 2008). Here, the sociocultural dynamics, together with the push from markets, suppliers and providers of infrastructure, produce new patterns and often increasing levels of consumption. One implication of such works on how systems change over time is that material and social conditions are not treated as contextual factors but actively brought into the analysis.

There have been many attempts to synthesize insights from different disciplines for understanding pro-environmental behaviour on a general basis and energy behaviour specifically. Faiers et al. (2007) draw together key issues from consumer behaviour theories relevant for energy use to aid policy-making, and develop a discussion ground around integrated theories of consumer behaviour. Their theory overview indicates that the issues of learning and awareness, coupled with accessibility to simple technologies, are central factors for formulating effective policy for energy use. Also, Wilson and Dowlatabadi (2007) review different perspectives on drivers for individual behaviour and apply these insights to decisions affecting residential energy use. They conclude by pointing to the necessity for collaboration between disciplinary approaches to energy efficiency. Kallbekken et al. (2011) combine social-psychological and economic theory in a model of environmentally significant consumption. Their perspectives open up the way for a wider hypothesis on policy instruments through showing the potential for the use of a diversified policy (information measures and incentives).

As Wilson and Dowlatabadi (2007) point out, there is a need for syntheses that specifically combine the economic perspectives with social and behavioural determinants of energy use. In our study we synthesize insights from economic, anthropological and psychological theories to combine the foci on individual factors for explaining behaviour within the sociocultural and material context in which the individual operates. This allows us to open up the under investigated field in economic theory on what forms preferences.

In the following we present our model for explaining energy behaviour and define the concept of ‘fields of rationality’ within this model. We then illustrate the model by pointing to two contrasting fields of rationality relevant for the present purposes, that is, the consumer – citizen dichotomy. By addressing this dichotomy we discuss strategies for policy for reducing people’s energy consumption. The chapter ends by pointing to the need for knowledge of how the context and different groups respond to different policy instruments and their design. This knowledge is often crucial to get the desired outcomes of the interventions

22.2 RELEVANT FACTORS FOR EXPLAINING BEHAVIOUR: THREE LEVELS

In economic theory, consumer preferences are a central element for understanding energy consumption. Commonly, preferences are understood as the set of assumptions relating to a real or imagined choice between alternatives. Based on the degree of utility they are assumed to provide, the consumer will rank the alternatives. Energy behaviour is thus a result of the individual consumer’s optimizing process between the utility provided by

the various alternatives available and the individual's budget restriction. The preferences behind such behaviour are here treated as an exogenous variable in the model, thus as a given. In our model, however, we seek to highlight and develop factors that may explain energy behaviour and thus the preferences behind them.

22.2.1 The Basis: Structures Surrounding Us

As a first step towards explaining energy behaviour we base our model on practice theory as outlined by Bourdieu (1977) and later elaborated by Sewell (1992), Warde (2005) and Ortner (2006).³ This will result in the identification of four central factors which in sum characterize the overall social structures that condition people's energy behaviour. We will later show that these four factors also have relevance for capturing the dynamics at the group or household level, which is no less important for understanding individual behaviour.

The cluster of approaches referred to as practice theory has shown to have merit in the field of energy. This is so due to the everyday, repetitive characteristic of household energy use and the significant role played by material and sociocultural factors in shaping what people do with energy (Wilhite, 2008a, 2008b; Winther, 2008). We are interested in the interplay between individual consumers on the one hand and, on the other, the sociocultural and material conditions that affect their behaviour.

Within practice theory structures are considered as 'the principles' that form social practices (Sewell, 1992: 8). Structures come in two forms. First of all they constitute the ideas, values, norms, conventions and codes for human interaction that exist in any social group. We may denote this part of structures as the 'frameworks of meaning' (Gullestad, 1992; Ortner, 2006; also referred to as 'cultural schemas' by Sewell, 1992). Such frameworks exist tacitly among and within people. They are the culturally informed tools with which we think, act and feel (Sewell, 1992). For our purposes we follow the common separation between social norms (how things should be) and cultural values (what is valued).

Secondly, and in contrast to the 'virtual' characteristic of frameworks of meaning, structures also contain elements which Sewell refers to as 'real'. Here we find natural resources, material objects and assets of various kinds, and also regulations and formalized procedures. Sewell refers to this category as 'non-human resources' (Sewell, 1992: 13). Also, real structures contain human resources such as bodily strength and knowledge. Resources are unevenly distributed and controlled within a given society, but Sewell asserts, following Giddens (1979), that all members of a society possess resources of both the human and the non-human kind. 'Indeed, part of what it means to conceive of human beings as *agents* is to conceive of them as *empowered* by access to resources of one kind or another' (Sewell, 1992: 10). Again we see the significance of knowledge and resources as a premise for action, as noted above (Simon, 1972; Faiers et al., 2007).

With this model of what surrounds an individual and their given energy behaviour we have a conceptual tool for beginning to understand why people do as they do. The notion of 'practice' entails this interrelationship between individual action (behaviour) and structures. Following this, the concept of 'habitus' highlights the way in which such structures become internalized in individuals through the routines and practices of everyday life (Bourdieu, 1977). This does not mean that individuals are only subjected to

the power of established social norms, values and a given set of resources. As we discuss below, individuals have emotions, ambitions and skills. They also have personal norms, values and identities that may or may not contradict those of the larger group. We may rather consider an individual's potential to influence a given behaviour personally along a continuum, stretching from pure routine (non-reflexive behaviour) at one end. At the other end, where behaviour is marked by a high degree of reflexivity and intentionality, we have 'agency' (Ortner, 2006).

In a given society a multitude of structures and practices exist in parallel (Sewell, 1992: 16–17). The conventions and values (and indeed material factors) guiding the practice of waste management, for example, may be different from those shaping people's shopping habits. One of Sewell's central points for explaining how structures may change over time is that people may transfer the conventions (schemas) attached to one given practice over to the next. Thus if 'go green' characterizes the conventions, values and norms related to waste recycling practices, there is a potential that people would start applying a similar set of values and conventions for modifying their shopping practices. For such a shift to become a new established practice, however, one also has to consider how such (new) conventions interplay with other (old) parts of the total structure; that is, their material and knowledge-related aspects.

In sum, four structural factors condition and partly make up a given practice: cultural values, social norms, human resources and non-human resources. The other significant contributors to the practice are those who perform them: acting people. Positioned between the overall structures and the individual level are the households, groups and social networks to which individuals belong or otherwise relate.

22.2.2 The Group or Household Level

Social relationships significantly influence people's energy behaviour, as we have argued in the introduction. To grasp these and other factors relevant to the study of energy use at the group and household level, the four-factor model described for the larger structures also yields significance. Cohabiting families tend to share certain norms and values (Aune, 2007). Members of a family also have significant groups which they relate to outside the household, whose norms may be in line with or contradict those of the household. Such norms may nonetheless come into play when individuals behave at home, for instance when taking a shower. Negotiations may occur when various members' values, norms and preferences vary (Henning, 2005; Winther, 2008). We nevertheless presume that individuals to a considerable extent share norms and values with the relevant groups in question, which vary according to the practice in question. This results in particular family or group conventions (or debate) as to how a certain type of behaviour, such as showering, should be carried out. Furthermore, such conventions are also formed by the set of resources possessed by the group; both human (knowledge, capacity, competences) and material (for example available shops in the neighborhood, household income, type of dwelling). Finally, we recall that the larger structures work on groups and individuals whose engagement and behaviour within various practices is often characterized by a high degree of routine. In sum, households and groups are largely influenced by the outside structure and the wider social network, but they also possess a capacity to nego-

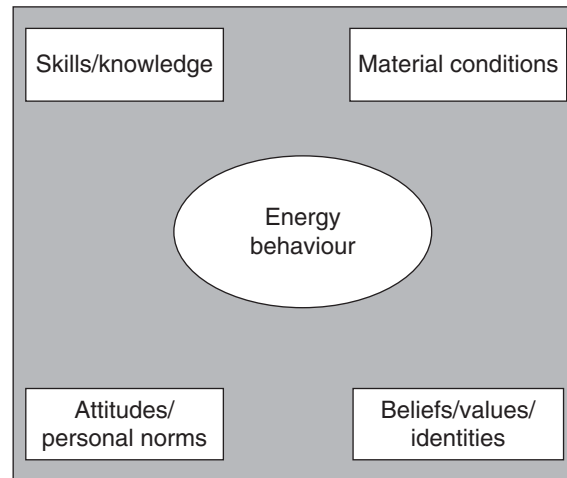


Figure 22.1 Factors influencing behaviour on the individual level

tiate and form their own practices according to the internal power relations and the group's common aspirations, possibilities and constraints.

22.2.3 The Individual Level

Both psychology and economics are preoccupied with explaining behaviour (consumption in traditional economic theory) through a focus on the individual. However, the two disciplines provide different explanatory factors for behaviour. Economics puts effort into understanding how external factors, income and prices, influence choices (termed 'material conditions' in our model), while in psychology the internal factors are the main focal points. An internalist approach sees behaviour: 'mainly as a function of processes and characteristics which are conceived as being internal to the individual: attitudes, values, habits and personal norms' (Jackson, 2005). Building on this internalist approach, we will also draw on psychological approaches discussed in the introduction which put an analytic focus on the individual–environment relationship, acknowledge the existence of individuals' multiple values and preferences, and give attention to the various and often limited types of knowledge that people possess. In our model we therefore put weight on internal individual factors such as skills and knowledge; attitudes and personal norms; and beliefs, values and identities. We also include material conditions or constraints as perceived by the individual for explaining energy behaviour. Together with the habitual aspects embedded in what people do with energy, these are important cognitive, affective and material factors partly accounting for the motivations pushing or pulling the individual to perform various measurable behaviours, and could as a first step be seen as the underlying factors for understanding preferences in economic theory. The main factors influencing behaviour on the individual level are illustrated in Figure 22.1.

It is important to keep in mind that the influences of psychological factors on environmentally significant behaviour such as energy use are more varied than commonly

assumed, and that the strongest influences are often determined by structural factors. The more a behaviour is shaped by technology, infrastructure, regulation, financial cost, convenience and other contextual factors, the weaker the effect of personal variables (Stern, 1999). However, even when energy use in the household is to a large extent determined by physical or structural features, there is considerable room for the influence of psychological factors. Some examples of such factors are personal commitment, perceived personal costs and benefits of actions, and behaviour-specific beliefs and norms. Energy behaviour may also be influenced by non-environmental attitudes and beliefs (Stern, 2008). Although the effects of many psychological variables on specific behaviours are highly indirect, they can potentially influence a wide variety of behaviours. Psychological interventions aiming at behavioural change in the home should target the 'niches' between powerful structural variables, when behaviour is not strongly constrained by regulation, habit, matters of economic cost, convenience and the like. Niches thus refer to the moments in which the people–environment configuration is particularly open to change. Examples of such situations when people's values, attitudes, personal norms or knowledge bases could be receptive to psychological interventions are: when a regulatory regime is transformed; when the purpose for spending money is not clearly identified; when there are contradictions embedded in a system as to how people 'should behave'; or when significant material changes are to be made, such as when planning for the construction of a new home (Stern, 2008).

22.3 OUR MODEL

In the discussion above we have elaborated the factors that we find important for explaining people's energy behaviour. We have introduced four main factors on three levels, where the factors are related to human resources, non-human resources, and norms and values, and the levels are the society, the group and the individual, respectively. The model is illustrated in Figure 22.2.

As can be seen, each level (square) has been given a specific shading. This is to illustrate that the individual is positioned within a particular type of group structure and dynamics, which in turn is located in a larger societal structure. A field of rationality in this model comprises a particular configuration of factors (and their content) on all three levels. For example, if you are living in Norway, you relate to a given set of knowledge areas, energy regulations and technologies, social norms and cultural values which are different from those found in France. Thus if you move from Norway to France you would have to relate to the structures of the French society. This is represented in our model by the shading of the background of the societal level. Hence, the background shading might vary; it depends on the type of society the individual relates to.

A change in cultural context may thus produce changed behaviour. To take the example of people's uses of light sources: In Norway the habit of keeping many lights on might be valued for the cosiness and heat this produces, and also be morally accepted. In the French context, the cultural and social conditions are likely to be different. An individual who shifts context may thus experience a discrepancy between their own behaviour and that promoted by and embedded in the new cultural context. After a while, for example when visitors have given hints of dislike of the individual 'wasting' electricity,

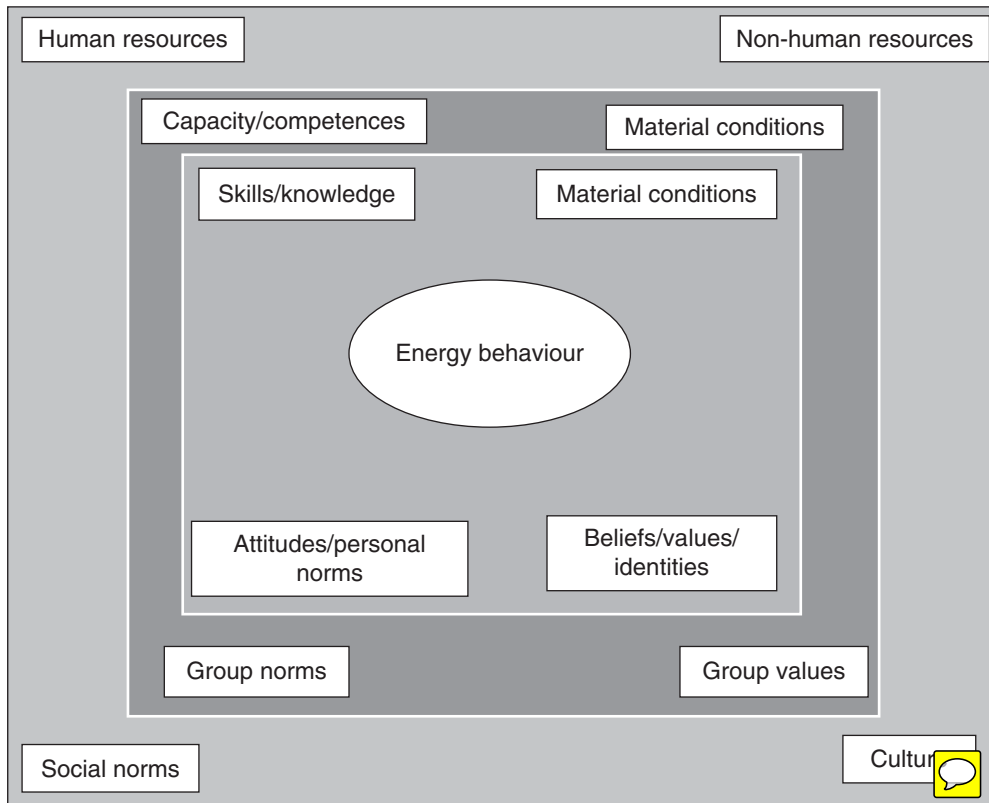
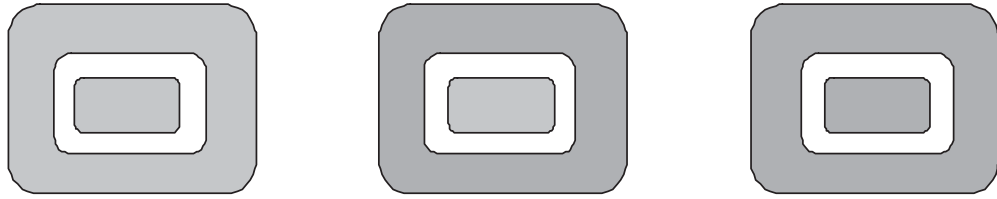


Figure 22.2 Field of rationality: factors influencing behaviour

this discrepancy may be adjusted by the individual who modifies their behaviour to a kind that fits with the new context (for example, turning off the lights when leaving a room). If we add other possible differences between Norway and France to the picture, such as electricity prices (being higher in France) and the supply of movement detectors in local shops (more available in France), the likeliness of the Norwegian individual switching to the French field of rationality for light behaviour becomes higher (Figure 22.3).

With the same kind of reasoning the shading of the group or household level varies depending on which group you relate to in your energy behaviour. The groups you relate to (significant others) may also differ from one type of behaviour to the next (for example showering before meeting friends or baking pizza for a family's joint home evening). Hence, the background shading of the group level signifies what group you relate to when performing a specific energy behaviour.

Following from the above, the shading of the inner square, the individual level, illustrates the position taken up by the individual who is acting or performing a given behaviour. More specifically we let this shading represent the logic from the individual's perspective (realised by them or not), which in turn results in a given behaviour. A person who has moved to France may also insist on keeping the lights on despite the potential social and economical costs such behaviour may imply.



Notes: The box to the left illustrates a Norwegian individual positioned in the Norwegian cultural/energy context who behaves in compliance with this. The box in the middle indicates the situation where the Norwegian individual has moved to the French cultural/energy context. In the box to the right, the Norwegian individual has adjusted to the French context and changed his/her behaviour accordingly. In this example, the *white* color represents the group level and is left out of the discussion.

Figure 22.3 Shift of cultural context as a cause for changed behaviour

The field of rationality is thus made up of factors in the inner, middle and outer squares. We have underlined the close interrelationship that exists between an individual and their social, cultural and material environment. Within a given type of behaviour, such as lighting, the field of rationality is what in sum provides a rationale for behaviour. The field may be more or less congruently constituted (same shading on all three levels) or have separate logics/shading on the different levels. The individual level is nevertheless privileged in the model, in that it is the individual and their logic that ultimately produces a given behaviour. We argue that the concept of a field of rationality is useful for understanding individual behaviour, and the varying ways in which this behaviour is partly conditioned by contextual factors and partly by the socially, culturally and materially positioned individual. In section 22.5 we will treat strategies for reduced energy consumption through a focus on fields of rationality.

The model is relevant both for plain habitual behaviour and more cognitively informed behaviour. Pertinent here is Ortner's (2006) axis for behaviour which ranges from plain routine informed by established conventions (reproducing habitus) at one end, to agency with a high degree of reflexive thought and intentionality at the other. At each extreme, people have a given rationale for doing what they do, and energy is, as mentioned, a realm where habitual aspects are strong. However, we will in the following concentrate on energy behaviour that involves reflection. We are concerned with situations in which people either think of what they do or consider changing their behaviour with the purpose of fulfilling certain goals. We will use two examples of fields of rationality to illustrate our points concerning possible strategies for policy: the consumer field and the citizen field. More generally, we hold that an important strategy for changing energy behaviour towards sustainability is to focus on the field of rationality of the individual. This strategy is discussed further in section 22.5.

22.4 CONSUMER AND CITIZEN: EXAMPLES OF FIELDS OF RATIONALITY RELEVANT TO POLICY DESIGN

There is a body of literature which shows that behaviour is linked to the perspective or rationale that forms the basis for it. A well-known example is the study conducted

by Gneezy and Rustchini (2000) on parents picking up their children after closing time in the nursery. In a field experiment they introduced a monetary fine for latecoming parents. As a result, the number of latecoming parents increased significantly, contrary to what had been expected when the fine was introduced. This is referred to as the 'crowding-out effect' of taxes and might be interpreted as a shift from one 'decision area' to another or, to use the jargon developed in the present work, as a shift in the field of rationality.⁴ Before the fine was introduced, parents might have considered the act of picking up children on time as a moral duty, but when they were fined for being late they appeared to consider latecoming as part of a market transaction where latecoming was morally acceptable. The field of rationality here shifted from moral obligation towards a market-based thinking. Hence, parents' likeliness for picking up children after closing time depended on which field of rationality they thought this decision belonged to.

A similar dichotomy between different fields of rationality is that between 'the consumer' and 'the citizen'. Sagoff (1988) defines the citizen role as the one you take when you are concerned with and behave according to the public interest. Thus as a citizen you are concerned with the community rather than your own well-being. On the other hand, as a consumer you are primarily concerned with personal or self-regarding wants and interests, and put aside the community-regarding values which you take seriously as a citizen (Sagoff, 1988: 8).⁵ Nyborg's (2000) *Homo economicus*–*Homo politicus* distinction has much in common with Sagoff's consumer–citizen dichotomy. *Homo economicus* is a person who maximizes their own well-being; that is, a consumer field of rationality, whereas a person acting in the *Homo politicus* mode puts themselves in the role as an ethical observer, and tries to consider what is best for the society (Nyborg, 2000: 309–10), that is, a citizen field of rationality.

An example of a product that addresses people as citizens is renewable electricity certificates.⁶ Electricity suppliers who offer such guarantees for an extra fee expect customers to be positioned within a citizen field of rationality, which in turn will trigger their decision (behaviour) to buy the guarantee. We return below to a study on such certificates and the fields of rationality found in Norway. We note, however, that the purchase of a certificate does not affect the electrons the customer gets in their outlet; the electricity product they receive is exactly the same as before. The reason why some people still pay extra for such a product is because they want to contribute to renewable electricity development, and not as a result of their consumer rationality (Winther and Ericson, forthcoming). The field of rationality in which they operate is the citizen field.

A citizen field of rationality is not always of equal relevance or significance. The literature indicates that the citizen field is more dominant for behaviour that is civic-oriented than purely consumer-oriented (see for instance Berglund and Matti, 2006 or Westskog, 1997 for a discussion of this). One example of civic-oriented behaviour is pro-environmental behaviour (that is, recycling or use of public transport instead of a private car). From social psychology, we know that pro-environmental behaviour is influenced by more citizen-oriented values like altruistic and biospheric values (for example Stern's value–belief–norm model – Stern et al., 1999; Schwartz's norm activation theory – Schwartz, 1977).

In the above discussion, we have been focusing on the field of rationality that triggers an act. However, it is also important to note that individuals tend to have values, norms and skills that are not act-provoking in a given situation. Latent rationalities exist and

Sagoff (1988), Sen (1985) and Nyborg (2000) all include the notion of different rationalities in their discussions. The dichotomy between consumer and citizen, *Homo economicus* and *Homo politicus*, points to the possibility of individuals operating within different rationalities depending on the context. Even if you act within the citizen field of rationality, you might at the same time have your *Homo economicus* rationality intact. In this regard, changing the field of rationality that provokes the act might change the outcome or behaviour, as the Gneezy and Rustchini (2000) study on nursery fines indicates.

The existence of latent rationalities brings a new perspective to policy. The way a policy-maker designs the policy instrument, or that a decision problem is framed for the decision-maker, could influence the outcome of the behaviour. A specific design or context could realize the desired outcome.⁷ In our model this is referred to as changing the field of rationality through design of the policy instrument or the decision problem. In the next section we will look at findings from an ongoing study that will illustrate the point further.

22.5 FIELDS OF RATIONALITY: A POTENTIAL FOR CHANGE

In the following we will use examples from qualitative interviews conducted in Kirkenes and Vadsø (towns in Northern Norway) and a focus group study in Kirkenes and Oslo to illustrate how our field of rationality thinking might be useful in policy formation. The study focused on people's electricity behaviour and the potential for change. More specifically, we asked what may make people purchase renewable electricity certificates and save electricity, and what role information could play in this respect.⁸

Specific behaviours and specific products might be more related to one field of rationality than other, for example related to the citizen field rather than the consumer field. People's decision to purchase a renewable electricity product will tend to be based on a citizen field of rationality, and by using this logic in the promotion of the product in specific ways, one may increase the number of people wanting to buy this kind of product, as illustrated below. The supplier of electricity in Kirkenes offers a renewable electricity certificate for \$5 per month. The renewable certificate does not imply that you receive a benefit as a consumer, as the quality of the electricity (as noted earlier) remains the same. Among customers who have bought the certificate, they said that their motivation for doing so was related to a concern for the environment. Some explained in more detail how they want to make use of their customer power and send a signal to the market, so as to stimulate development of renewable production at the cost of fossil and nuclear production. As 'Sonja' concluded: 'It is like a statement. It will not have effect if only a few people buy it. But it is a start.'⁹ This is clearly a citizen-motivated act.

The content and design of information intended to trigger people's motivation to purchase the certificates appear to affect their likeliness for doing so, and thus also the possibility that this will lead to increased production of renewable electricity. In our focus group study in Kirkenes we tested how different designs of information regarding the renewable electricity product were understood, and how the participants expected that this might influence their behaviour. One of the designs tested provided the customer with a short text on renewable certificates and the Norwegian 'standard mix' on their invoice, and also a link to NVE¹⁰ for further information. In another treatment the

customer was given information about how much CO₂-emissions were generated from the consumption of electricity without a renewable certificate. These emissions were compared to the emissions resulting from driving a car. A third treatment gave a narrative where a story was told, focusing on why a named person had chosen to buy the certificate. The narrative highlighted the relevance of a citizen field of rationality for the interviewee's motivation for buying the product: 'if more people required this guarantee it would mean less CO₂ emissions in the long term. What matters is to use our power as customers to influence the development.'

The first treatment produced considerable confusion: 'I do not quite understand what renewable energy is, where it comes from. Is it smart or is it stupid? . . . Do they mean a heat pump, that one should install one of those?'¹¹ Most participants did not have an idea of the certificate before arriving for the discussion, and this information (which they were exposed to first) did not seem comprehensible. Instead, this information appeared to make people focus on their lack of understanding, thus producing a kind of ignorance. In all four focus groups participants expressed disinterest in the message and even distrust in the product, apparently preventing them from wanting to seek further information or to choose the certificate. 'To be honest, I do not think I would have even read it.'¹² In this treatment you provide people with information that is not made specifically relevant for the citizen field, and as such you do not trigger people's citizen motivation to act. On the other hand the treatments focusing on environmental effects were more positively evaluated. These two other treatments facilitated the translation of what the purchasing of certificates may mean in terms of environmental consequences. Hence, the information received about the product was made consistent with the citizen field of rationality in a transparent way which seemed to open up the potential for obtaining a change – through the purchase of certificates for those that are citizen motivated.

For electricity-saving behaviour, people referred to a double set of motivating factors: to save money (economical factors) and environmental concerns. Thus we found two fields of rationality (consumer and citizen, respectively) to exist in parallel. The same individual would highlight both aspects: 'To me both the price and environmental concerns would have been important'. Other participants stressed economic factors as most important, highlighting the need for 'getting the expenses down'. Another person put weight on 'environmental concerns' only. Hence, this might imply that when promoting energy-saving behaviour, effects might be increased both by using cost-saving arguments and by pointing to environmental effects. There might also be gender differences related to which field of rationality more easily comes into play. As Henning (2005) found for Swedish homes in a study of heat pumps, men tended to be more concerned with economic arguments (which have hegemony in the Swedish context, according to Henning). Women were more attuned towards demonstrating environmental values when deciding on such investments, but since heat pumps in Sweden belonged to men's domain, women had a less direct say in such cases.

22.5.1 Facilitate Shifts in the Field of Rationality

Based on the Kirkenes study we emphasized the importance of providing clarity and consistency in the way citizen-oriented information and products are presented (or translated) in order to appeal to people as citizens and in turn trigger the desired behaviour.

The information that had an effect was that which was consistent with a citizen field of rationality. Shifts in the fields of rationality themselves may also potentially produce more sustainable energy behaviour. We recapture some points that have been mentioned. Above we discussed how a person's change of cultural context (Norway–France) may inform their changed behaviour. We explained this shift by pointing to the new field of rationality that appeared in which the individual's (changed) behaviour took place. Policies may also induce changes in the field of rationality. In the general discussion of the consumer – citizen dichotomy we drew on cases in the literature to show how the introduction of new policies (for example money for blood donations, or fines for latecoming parents) negatively affected people's behaviour in relation to what had been intended. The crucial point in this process was that the new policies induced a shift in which decision area people felt that the actual behaviour belonged to.

In our general model (see Figure 22.2), a change in any one of the shadings of the three squares (collective, group and individual level) indicates a change in the field of rationality. This could potentially (but not necessarily) affect the logic (shading) of the inner square and thus the behaviour of the individual. For example, a policy could make an individual modify their attitudes; or a significant group to which the individual belongs could be gaining new knowledge and cause the individual to change behaviour; or the arrival of new regulations or taxes on the societal level could affect the overall field of rationality and also the area of decision of the individual.


That being said, societal structures may also contain considerable fixity and therefore be resistant to change. Socio-material structures and cultural values have been noted as relatively enduring. For example, in a cross-cultural comparison of people's energy use in the 1990s, Japanese and Norwegian households referred to distinct sets of cultural values in their ways of using energy (Wilhite et al., 1996). The Japanese put cultural emphasis on bathing practices (with a link to notions of purity), but their lighting practices appeared less culturally significant. In contrast, Norwegians stressed the cultural value of providing a 'cosy home' by the use of an average of 14 light points in the living room, preferably by the use of incandescent light. The authors concluded that behaviours that are deeply culturally anchored are less likely to be influenced by policies. Correspondingly, they advised that policy makers should focus on the 'lighter' practices that are not so culturally embedded (Wilhite et al., 1996). Following this, and interpreted within our model of fields of rationality, in Japan it would make more sense to try to change the field of rationality for lighting behaviour than bathing practices.

But cultural values may also change. The field study in Norway referred to above was conducted in 2009, just before an EU Directive putting a ban on incandescent light was introduced. Norwegians had for some time started to readjust to the lack of available incandescent bulbs in the shops, and the situation had also received attention in the media. What we found in Kirkenes was that the 11 households interviewed seemed less negative towards energy-saving bulbs (compared to incandescent light) than Wilhite et al. had found for Oslo in the 1990s.¹³ If this discrepancy is not only caused by local variation between towns in Norway, this could indicate that Norwegians, possibly due to the ban on incandescent bulbs and a generally increased environmental awareness, may currently be modifying their perceptions of what the value of 'cosiness' entails.

This indication of a shift in the degree of fixity in Norwegian lighting practices points to the realization that cultural practices are also open to change. The concept of fields of rationality may help us further understand the dynamics embedded in such processes of change. In the case of light sources in Norwegian homes, the individuals who express a concern for the environment when justifying their choice of light source reflect that they consider this decision to be located in a citizen field of rationality associated with environmental concerns. This reference hence replaces the previous 'cultural' one, associated with the value of cosiness.¹⁴ If more people adapt to the new field of rationality, new, shared conventions guiding practices and behaviours may be invented (see section 22.2.1 above, 'The basis: structures surrounding us'). We also notice how a ban or regulation may have an effect on people's norms and values. The introduction of the ban on smoking in public places is a striking example of how regulations may induce shifts in norms. Nyborg and Rege (2003) show how an introduction of a smoking regulation may move a society from a situation where most smokers are non-considerate to a situation where they are considerate towards non-smokers even in the unregulated zone. They also refer to empirical evidence that social norms on considerate smoking behaviour have changed dramatically in Norway. In 1999, only 10 per cent of non-smokers reported that smoking guests would usually smoke indoors in their home without asking for permission. As much as 74 per cent reported that this was the most common behaviour among smoking guests 10–15 years earlier.

Importantly for the presented model, the distinct factors on all levels together make up the field of rationality and are mutually influencing each other. Changes in one factor potentially affect the others. The embedded fundamental assumption is that for understanding the individual, we need to see the world as they do. This is what we try to capture with the concept of fields of rationality.¹⁵

22.6 CONCLUSION AND REMARKS

In this chapter we have focused on how energy behaviour can be understood and explained by integrating perspectives from different disciplines. We have introduced a model which includes the concept 'field of rationality' signifying the configuration of factors on the individual, group and societal levels which are relevant for energy behaviour. We argue that knowledge of the fields of rationality that guide energy behaviour for groups and individuals might be an important tool for designing policies for change. Although the model has general appliance, and may be used to assess the relevance of tools ranging from economical incentives, regulations, to enhancing people's access to new technologies, we have primarily discussed information measures which presupposes that people through conscious or reflexive processes change behaviour based on the information provided. Specifically, we have focused on the dichotomy between the citizen and the consumer fields of rationality and showed how these fields might form behaviour and we have indicated how insights into such dynamics maybe used in shaping information that will have effect. The material from Norway on people's electricity use and information interventions that address either 'citizens' and/or 'consumers', shows that atters how messages are designed. We argue that for information to have the desired effect, the message must be translated so as to match the relevant field of

rationality on the part of individuals. Thus promotion of green electricity certificates (citizen field) for instance, had no effect if not activating the citizen field of rationality in individuals. Thus we highlight consistency between the logic in message and the field of rationality of the individual.

An effective policy for sustainable energy consumption needs to be based on knowledge of how energy behaviour most likely might be influenced, as illustrated above. To follow Stephen Turner (1994), whose quote opened this chapter, in order to form policies for changed behaviour that work, one needs to address the experiences that actually produce the habits one seeks to change. A central problem in the realm of energy has been policy-makers' enduring trust in energy efficiency as a means to reduce consumption. In Wilhite's words: 'What the record shows is that efficient technologies may well increase the efficiency of energy throughout but that promised reductions in energy demand seldom pan out' (Wilhite, 2008b: 121). Technologies alone do not change behaviour in a sustainable direction. Instead, as embedded in our model, one should regard them in connection with the behaviours that produce the patterns one seeks to change. Referring to a similar point, that energy efficiency depends not only on technology but also on the choices of the users, Allcott and Mullainathan (2010) observe the considerable investments that go into research and development (R&D) for providing energy-efficient technologies. They argue that a corresponding R&D effort should be made in the field of behavioural science in order to develop policy innovations and even large-scale businesses that promote energy efficiency in practice, and thus energy conservation (Allcott and Mullainathan, 2010). They also point to the cost-effectiveness of such programmes.

Within an R&D programme based in behavioural and social sciences one should develop various policy instruments and focus on what kinds of designs would produce the desired effects on people's behaviour. Policy instruments like taxes and subsidies are often believed to be of a more general nature with no need for specific testing. However, as illustrated above, effects of policy instruments are dependent on both the sociocultural and material context, and the individual whom these instruments are used towards. When focusing on the effects of the instruments, knowledge of how 'the context' and various groups and individuals would respond to different instruments and their design is often crucial to achieving the desired outcome. Hence, effective interventions often need to be tailor-made.

Acquiring the necessary knowledge and tailoring interventions might of course be very costly, and as such not a strategy that can be followed fully. However, in the same way as R&D is used to transform 'hard science' into useful technological solutions, so systematic effort needs to be made on developing pilot projects informed by behavioural and social sciences and, successively, innovative policy tools for sustainable energy consumption. According to the premises in our model, successful innovation at large would most likely be achieved through efforts which include both hard and soft sciences. As a start, testing policy instruments before implementing them is one way to understand how behaviour is influenced by instrument use, and might be worth the money invested in field studies – just as pilot projects are worth it for hard sciences to become useful technologies.

ACKNOWLEDGEMENTS

We thank Sylvie Douzou, Torgeir Ericsson, Catherine Grandclement, Isabelle Moussaoui and Håkon Sælen for helpful comments and suggestions. Funding from the Norwegian Research Council is gratefully acknowledged.

NOTES

1. Presentations of this theory can be found in most standard textbooks on microeconomics, like Gravelle and Rees (1992).
2. The elasticity of substitution measures the ease or difficulty of substituting between commodities, while price elasticity tells how demand for a good changes with the price of that good or alternatively with the price of another good (cross-prices elasticity).
3. Sewell theorizes about how structures and practices change, Warde elaborates on practice theory's relevance in the realm of consumption, and Ortner provides a model on the relationship between people's routine habits on the one hand and intentional, reflective behaviour or 'agency' on the other.
4. The effects observed are coupled to Frey's (1997) crowding theory. Frey argues that an external incentive might also affect the internal incentives for behaviour to crowd out moral motivation.
5. Sen (1985) discusses people's preferences and finds a dichotomy between well-being and agency which has resemblances to Sagoff's notions of consumer and citizen, respectively (Sagoff, 1988). Well-being is connected to an individual's individualistic preferences or self-interests (Westskog, 1997), whereas the agency aspect of individual choice refers to the opinions and beliefs that an individual has, and this is often connected to the individual's participation in a society.
6. When a customer buys a renewable electricity certificate, the supplier guarantees that the customer's total consumption will be purchased from production that is 100 per cent based on renewable sources. A system of 'guarantees of origin' has been established in the European Union (EU) area, including Norway. A disclosure regulation puts an obligation on suppliers of electricity to state on the customer's bills which fuel mix is behind their supply (percentage of fossil, nuclear, renewable and so on).
7. There is a lot of literature from the field of behavioural economics and social psychology on the effects of design of policy instruments or framing of decision problems for behavioural outcomes. Much of this literature is concerned with how a decision problem is understood by the decision-maker, and is termed 'framing' (for example Tversky and Kahneman, 1981).
8. The project is titled 'Do customer information programs influence household electricity consumption?' and is financed by the Norwegian Research Council (2009–11). We conducted 11 in-depth interviews in Kirkenes and Vadsø in September and October 2009. The focus group discussions were held in Oslo (November 2009) and Kirkenes (December 2009) and had eight sessions with eight persons in each group.
9. From interview with 'Sonja' in Kirkenes, 6 October 2009. Her name has been changed.
10. NVE: Norsk vassdrags- og energidirektorat (Norwegian Water Resources and Electricity Directorate).
11. Young, female focus group participant no 8, Kirkenes 7 December 2009, Transcript 88322 Cicero Gr.6-Kirkenes, page #6.
12. Middle-aged female focus group participant no 3, Kirkenes 7 December 2009, Transcript 88322 Cicero Gr.5-Kirkenes, page #7.
13. Our informants referred to the cost and environmental benefit from energy-saving bulbs; or they said that incandescent was more beautiful; or they said that the quality of the light from the two types of sources was the same. This shows more variation in people's attitudes towards energy-saving lights than was documented in Oslo in the 1990s.
14. To an anthropologist, this distinction between environmental and cultural values may appear a bit strange, since environmental values can be considered as cultural as any other value. The distinction is made to clarify the argument which seeks to highlight how policies may affect fields of rationality in ways that produce sustainable consumption.
15. It follows that we do not adapt the notion of rationality as premised on 'the rationally optimizing man', as opposed to that informed solely by norms, which embedded much social science discourse some decades ago. See for example Elster's discussion of actions being influenced 'both by rationality and by social norms' (1989: 102). The present work does not operate with such distinctions, but regard fields of rationality as encapsulating norms and other factors relevant to people's ways of behaving.

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