Survey

Theories of practice — New inspiration for ecological economic studies on consumption

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ABSTRACT

The dynamics behind ever-increasing consumption have long been a core issue of ecological economics. Studies on this topic have traditionally drawn not only on insights from economics, but also from such disciplines as sociology, anthropology and psychology. In recent years, a practice theory approach has emerged in sociological consumption studies, as part of a general wave of renewed interest in practice theory emanating from a desire to move beyond such dominant dualisms as the structure-actor opposition in sociology. The purpose of this paper is to introduce the practice theory approach in relation to studies of everyday life, domestic practices and consumption, and to argue that this approach can be fruitful for ecological economics and other fields interested in the environmental aspects of consumption. The paper emphasizes the immense challenge involved in promoting sustainable consumption, and the need for collective efforts supported by research into the co-evolution of domestic practices, systems of provision, supply chains and production.

1. Introduction

Ecological economic studies have long focused on the background and environmental consequences of ever-increasing consumption. Since the formulation of the IPAT equation, it has been clear that the amount of consumption ought to be high on the environmental agenda, and the many discussions on rebound effects have emphasized the limits of technological solutions with regard to ensuring a more sustainable development path. It has also been argued that increasing overall consumption hardly leads to improvements in the quality of life in already rich societies; it would therefore involve little sacrifice to put a halt to overall consumption growth (Jackson, 2005). But studies also illuminate the dynamics behind the increase — the competitive forces of market economies, the "global sweatshop" and the "cheap banana" (Schor, 2005), technological change, advertising, lock-in within institutional structures like the work-and-spend cycle (Schor, 1991), search for identity, status competition, individualization, domain conflicts, the family dilemma and so on (Røpke, 1999, 2001). These dynamics prove to be a great challenge to the achievement of more sustainable development.

Ecological economic work on the dynamics behind ever-increasing consumption has not only drawn on an economic tradition; it has also been much inspired by sociological, anthropological, and psychological studies. One reason for this has been a wave of consumption research in the humanities and social sciences since the mid-1980s (Miller, 1995; Campbell, 1991), which has proved relevant for the study of environment-related problems. In recent years, a new trend has emerged in sociological consumption studies – the application of a practice theory approach to the study of consumption – and this approach promises to be highly relevant for ecological economics and other fields interested in the environmental aspects of consumption.

In brief, the point of departure is that people in their everyday life are engaged in practices – in doings – they cook, eat, sleep, take care of their children, shop, play football, and work (which covers a variety of different practices). Practices are meaningful to people, and if asked about their everyday life, they will usually describe the practices they are engaged in. Consumption – which is interesting from an environmental perspective – comes in as an aspect of practices: performing a practice usually requires using various material artefacts, such as equipment, tools, materials, and infrastructures; however, this aspect does not make people conscious of the fact that they are consuming resources in their daily activities. Primarily, people are practitioners who indirectly, through the performance of various practices, draw on resources.

The application of practice theory approaches in consumption studies is part of a general wave of renewed interest in practice theory — some even identify a "practice turn in contemporary theory" (Schatzki et al., 2001). Practice theories emanate from a desire to move beyond dominant dualisms, such as the structure–actor opposition in sociology, but the endeavours differ between disciplines, and the theories are very heterogeneous. The history of practice theories thus includes such philosophers as Wittgenstein and Charles Taylor, sociologists such as Bourdieu and Giddens, and cultural theorists such as Lyotard. Although there is no unified approach, practice theory can be articulated as a loose but nevertheless definable movement of thought (Schatzki et al.,

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2001:13), and it can be argued that the recent work of the philosophers Theodore Schatzki (1996, 2002) and Andreas Reckwitz (2002) has contributed to the formulation of a more coherent approach to the analysis of practice. Beyond the highly abstract philosophical accounts, the increasing interest in practice theory can be detected in a variety of fields, such as science and technology studies, geography, media studies, and design. The work of Alan Warde (2005) has been crucial for bringing the perspective into consumption studies, and Elizabeth Shove and her collaborators have played an important role in developing a research programme in relation to both consumption and other fields through empirical studies (references to this work follow below).

The purpose of this paper is to introduce the practice theory approach in relation to studies of everyday life, domestic practices and consumption, and to argue that this approach can be fruitful for ecological economics and other fields with an interest in the environmental aspects of consumption. I thus share the ambitions of Randles and Warde (2006), who promote practice theories in relation to consumption studies within industrial ecology. My account is much influenced by the work of Reckwitz (2002), Warde (2005), and Shove and her collaborators (Shove and Pantzar, 2005a; Shove et al., 2007), but the present outline is condensed and does not do justice to the complexities of the issues. For simplicity, I refer to 'the practice theory approach', although the outline describes some of the differences within this broad orientation. In general, the sociological and empirically applicable insights are emphasized at the expense of philosophical subtleties. The account starts with the basic perspective, and then elaborates on structure and agency as well as stability and dynamics, before turning more specifically to the implications of a practice theory perspective for consumption. It is explored in which ways the perspective influences the understandings of consumption and environment, and how the perspective may conflict with or reinterpret other theories. The concluding remarks emphasize the immense challenge involved in promoting sustainable consumption and the need for collective efforts, supported by research into the co-evolution of domestic practices, systems of provision, supply chains and production.

2. Bridging the structure — actor dualism

A core topic of social theories concerns the relationships between individual and society, and the question of how to explain social order and how to conceptualize the social. Traditionally, the responses of social theories are grouped according to a basic opposition between two extremes: on the one hand, theories based on a structuralist perspective where the social system and structures exist as a given reality and determine to a large extent the actions of individuals; and on the other hand, theories taking their point of departure in self-contained individuals and reducing society to the sum of the individuals and their actions. Ever since this opposition was formulated, efforts have been made to bridge or dissolve it, for instance by the conception of dialectical interplay between structures and actors: structures can only be established through the actions of individuals, and simultaneously, these actions are formed by the prevailing structures. Giddens' theory of structuration (Giddens, 1984) furthered these efforts through a subtle and elaborate formulation of the interaction in which social practices become the mediating concept between action and structure (actually so subtle that pedagogical versions are useful, such as Kaspersen's (2000). Society is seen as constituted by social practices that are produced and reproduced across time and space:

"The basic domain of study of the social sciences, according to the theory of structuration, is neither the experience of the individual actor, nor the existence of any form of societal totality, but social practices ordered across space and time" (Giddens, 1984: 2).

According to Giddens, agents are knowledgeable about their day-to-day activities, and most routinized activities are carried out based on a practical consciousness that does not require conscious reflection. Instead of conceiving of actions as isolated events, agency is seen as a flow of activities in an ongoing process. Accordingly, intentionality is also seen in a processual perspective rather than as relating specific motivations to specific actions. Reasons for actions can be discursively formulated, however, for instance when agents are asked questions and upon reflection become open to change, which implies that agents are far from passive "slaves" of structural pressures. Through social practices that are reproduced across time and space, agents generate patterns of social relations, characterized as social systems. Social systems are thus relations between actors, organized as repeated social practices and reproduced and transformed by the actors. The systems are said to have structural properties or institutionalized features, giving 'solidity' across time and space (p. 24). The structural properties involve elements of meaning and communication, control and power relations, and legitimacy. They also offer rules and resources that agents draw on in their practices, such as the rules of language and various procedures for action. The rules and resources are both enabling and constraining for the agents' social practices, and simultaneously they are reproduced and transformed by practices.

Characteristic for the theory of structuration, as well as for other theories of practice, is that social practices become the site of the social. Thus, practices are the basic ontological units for analysis. This implies on the one hand that individual actions are constituted by practices; and on the other hand, that social order, structures, and institutions come into being through practices. Social life thus consists of a wide range of practices, such as negotiation, cooking, banking, recreation, and political, religious and educational practices (Schatzki, 2002: 70). The work by Schatzki contributes to an elaborate understanding of the constitution and change of practices.

Practice theory is based on the idea that in the continual flow of activities it is possible to identify clusters or blocks of activities where coordination and interdependence make it meaningful for practitioners to conceive of them as entities. In Schatzki's terminology, a practice is an organized constellation of actions – an integral bundle of activities – a set of interconnected doings and sayings (Schatzki, 2002: 70ff). An organized set of activities is seen as a coordinated entity when it is recognizable across time and space: a practice is a relatively enduring, relatively recognizable entity (Shove et al., 2007: 71). Such an entity can only exist when the activities involved are performed by people — not only by a few particular individuals, but by larger groups of people. Practices have to be enacted, and this enactment always differs slightly and may transform the recognizable entity over time. To make the distinction between the entity and the enactment clear, Schatzki applies two different notions of practice: practice as a coordinated entity (in the following: practice-as-entity) and practice as performance (in the following: practice-as-performance). Individuals face practices-as-entities as these are formed historically as a collective achievement; and through their own practices-as-performance, individuals reproduce and transform the entities over time. Individuals thus act as 'carriers' of practices.

3. Practice-as-entity

Different scholars approach the more specific characterization of the practice-as-entity concept in different ways. Schatzki emphasizes that doings and sayings are linked, and identifies three major avenues of linkage. He defines practice-as-entity as follows:

"...a temporally unfolding and spatially dispersed nexus of doings and sayings.... To say that the doings and sayings forming a practice constitute a nexus is to say that they are linked in certain ways. Three major linkages are involved: (1) through understandings, for example, of what to say and do; (2) through explicit rules, principles, precepts and instructions; and (3) through what I will call "teleoaffective"

structures embracing ends, projects, tasks, purposes, beliefs, emotions and moods" (Schatzki, 1996: 89).

The focus here is on the linkages that make practices cohere as entities. In a more recent text, he also emphasizes that the nexuses of activity are materially mediated, as people use artefacts to shape the connections that make a practice into an entity (Schatzki et al., 2001: 11).

Warde (2005) "translates" the avenues of linkage into components and refers to Schatzki's three components as understandings, procedures and engagements. In the same vein, Reckwitz applies the concept of elements in his definition of practices:

"A 'practice'… is a routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice… forms so to speak a 'block' whose existence necessarily depends on the existence and specific interconnectedness of these elements" (Reckwitz, 2002: 249–50).

Here, a practice becomes a set of interconnected heterogeneous elements, and artefacts are included as elements in the constitution of practices. As Reckwitz argues: "Carrying out a practice very often means using particular things in a certain way. It might sound trivial to stress that in order to play football we need a ball and goals as indispensable 'resources'… but it is not" (p. 253). As Shove and Pantzar (2005a) note, the earlier versions of practice theories like those of Bourdieu and Giddens "are thoroughly social theories in the sense that material artefacts, infrastructures and products feature barely at all" (p. 44). Following the more recent formulations of Schatzki and Reckwitz, it is thus a core programmatic point of Shove and Pantzar to materialize social theories of practice. Simultaneously, they intend to develop a framework that can inspire empirical investigations, now reflected in a number of publications. In their account, a practice is a configuration of three elements: material, meaning, and competence — or in other terms, equipment, images, and skills.[1] The linkages between the elements are provided by the practitioners, who integrate them in their performance of the practices.

Forming a practice-as-entity is about gluing activities together. Whereas Schatzki applies the concept of linkages for this "glue", the other accounts apply the concept of components and reserve the concept of linkages for the active integration undertaken by practitioners when practices are performed; however, the basic understandings do not differ. In the following, I apply the concept of components, which seems easier to handle as a heuristic device. The accounts of the practice-as-entity concept also differ with regard to the listing of the components to be included. Here, I follow the suggestions by Shove and Pantzar to rationalize the long list of components into a small number of categories and explicitly include the material component. Thus, a practice-as-entity is a set of bodily-mental activities held together by material, meaning and competence. In other words, a practice can be seen as a configuration of heterogeneous elements.

Each of these three components should be understood as broad categories covering a variety of "aspects". The components do not have clear boundaries in relation to each other, and they are partly embodied in the practitioners. Take first the competence component, which covers the skills and the knowledge needed to carry out the practice. Skills and knowledge are often learned by experience and

training, and they become embodied in the practitioner. Some knowledge may be codified in formal rules, principles, precepts and instructions, whereas other parts remain tacit in the form of know-how. Some competences are generic, in the sense that they are used in many practices such as the abilities to read and write, while others are more specialized. Although the competences are partly embodied in the practitioners, the practice perspective implies that they are seen as part of the practice (which only exists through the performances) and therefore social, in the sense that they are shared.

The component of meaning is about making sense of the activities. This includes the ideas of what the activities are good for (or why they are considered problematic), the emotions related to the activities, the beliefs and understandings. Also meanings can be generic, in the sense that they are shared by many practices, such as the idea that doing something is healthy. The practitioner becomes the carrier of the practice-related beliefs, emotions, and purposes when performing the practice, but these aspects of meaning are seen as "belonging to" the practice rather than emerging from self-contained individuals. Again, this is what makes meaning social.

The material component includes the objects, equipment, and bodies (or body parts) involved in performing the practice. Objects can be generic or specific. Note that the body appears not only in relation to the material component as similar to an instrument, but is also related to the other components as embodied skills and as the bodily site for emotions. Performing a practice contributes to shaping the body, implying that widespread practices in a society or social group can develop characteristic features.

Some practices can be carried out by individuals, such as reading a book or taking a stroll, but many activities involve some sort of interplay with others, like playing football or socializing in different ways. This interplay is part of the bodily-mental activities held together by the elements. Shove and Pantzar do not explicitly include the interplay, probably because their account focuses on the elements and avoids describing the activities as defining for a practice. Following Schatzki, I prefer to include the activities explicitly and thus consider the importance of the interplay. Sometimes, all participants have parallel roles, while other activities involve the playing of different parts; and in some cases, the parts have highly asymmetrical outcomes. When the parts differ, it could be argued that the practitioners are involved in different practices, although they meet in a common situation. For instance, teacher and student meet in a situation combining teaching and learning practices, and doctor and patient have different perspectives on a consultation. Since however the activities of the actors are mutually conditioned and the practice cannot be accomplished without the participation of both parts, it seems better to conceptualize such activities as one practice. Practices with highly unfavourable outcomes for some of the participants make it particularly obvious that these practices have to be understood in relation to wider social patterns, but this point has general relevance as argued in the following section.

4. Structure and agency, time and space

As the practice theory approach places the analysis of the history and development of practices at the centre of research, agency and particularly structure are relegated to more subordinate roles. It can be discussed whether a structural perspective should be conceptualized only as relationships between practices. As already mentioned, practices are related through the meanings, competences, and objects that are shared across practices, and practices are also related in other ways. For instance, some are complementary, like cooking and shopping for food items, or sports activities and transport, while others can replace each other, like different travel modes. Practices can also relate to each other in clusters or complexes, like all the activities involved in driving and maintaining a car. However, these observations do not sufficiently highlight the interplay between practices and wider social

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[1] McMeekin and Southerton (2007) distinguish between competence and know-how. In their account of practice theory, know-how refers to the technical skills and knowledge learned through conducting a practice, whereas competence is seen as 'negotiated' within and between social groups: what is agreed upon as a competent performance of a practice is a matter of taste (p. 9–10). This distinction is not made here, but I return briefly to the question of different performances by different social groups.

systems, their institutionalized features and material infrastructures (to add the material aspect to Giddens' account, also at the systems "level"). As Randles and Warde note: "Practices do not float free of technological, institutional and infrastructural contexts" (2006: 229). Social patterns such as the division of labour, gender relations, and unequal access to resources, as well as political, economic, legal, and cultural institutions are constituted by practices, but they also provide a context for the performance of practices that is necessary to include in empirical analyses.

Agency is directly visible in practice theory, since human agents are carriers of practices who are seen as knowledgeable and competent practitioners, able to link and integrate the elements of meaning, material, and competence necessary to perform practices. But the agents are not the starting point of the analysis, as practices logically and historically precede individuals, implying that practices, so to speak, recruit practitioners. Practice theorists thus dissociate themselves, on the one hand, from models based on self-contained individuals such as *homo economicus* (who is engaged in the calculation of self-interest), and on the other hand, from models based on over-socialized individuals such as *homo sociologicus* (who internalizes social norms) or *homo aestheticus* (who is preoccupied with the presentation of self) (Randles and Warde, 2006: 228). In practice theory, individuals are seen as "the unique crossing point of practices" (Reckwitz, 2002: 256). But this leaves the question of how practices "recruit" practitioners and – from the perspective of the individuals – how people handle the combination of practices in everyday life.

Since time is limited, practices can be said to compete for the attention of practitioners. When new practices emerge, they can only be taken up by pushing aside existing practices. It may seem obvious to present the problem as seen from the perspective of the individual as a question of choosing a combination of practices on the basis of some sort of criteria. However, this approach amounts to reintroducing an individualistic account rather than sticking to practice theory. This is, for instance, what Giddens does in his later book on modernity and self-identity, where he defines lifestyle as "a more or less integrated set of practices which an individual embraces, not only because such practices fulfil utilitarian needs, but because they give material form to a particular narrative of self-identity" (Giddens, 1991: 81). As Warde (2005: 136) notes: "Giddens appeared to lay aside the arguments of The Constitution of Society (1984) when discussing lifestyles (1991: 80–7), where he offered a thoroughly voluntaristic account of individual action". The same contradiction appears in Spaargaren, who combines a form of practice theory with the application of the lifestyle concept in his work on sustainable consumption (Spaargaren, 2004). In these accounts, the individual focus on self-identity and lifestyle becomes the background for the combination of practices in everyday life.[2]

More in accordance with a practice theory perspective, Pred (1981) deals with structure and agency by combining (an early version of) Giddens' theory of structuration with Hägerstrand's time geography. Pred finds that Giddens leaves us "uninformed as to the cement binding the everyday functioning and reproduction of particular institutions in time and space with the actions, knowledge build-up and biographies of particular individuals" (p. 9). By applying Hägerstrand's concepts of path and project, Pred suggests a dialectics of practice and structure emphasizing the materiality and the spatial-temporal aspects of everyday life. The basic premise is that each individual follows a path in time and space, carrying out practices that take up time and have to take place in

space. The individual's participation in practices is thus constrained by finite time resources, by the impossibility of simultaneous participation in spatially separated activities, and by the time involved in moving through space.[3] As practices often involve other people, other living organisms as well as man-made and material objects, they depend on the coupling and uncoupling of the paths of all these human and non-human "partners", implying so-called coupling constraints. The couplings of different paths are organized by projects that recruit participants. A project is a series of tasks necessary to complete an intention, and it can be defined either by individuals or within an institutional context. Institutional projects are the result of decisions made by those who hold power and authority within institutions, and the projects of dominant institutions in society tend to take time-allocation and scheduling precedence over other projects. Social reproduction is thus based on the intersection in time and space of institutional projects and individual paths, sometimes with individuals linked to specific roles within institutions (e.g., within the family or at a workplace).

Seen from the perspective of the individual, there is a strong element of path dependency in daily life: the engagement in practices and projects throughout life leaves accumulated sediments in the mind and body of individuals, opening for participation in some practices while excluding others (here Pred refers to inspiration from Bourdieu). Individual biography thus has a bearing on how people combine activities in everyday life: rather than imposing an overall logic as an organizing device (like optimizing the utility of time use or shaping one's identity according to some ideal), people manage everyday life as a puzzle of many considerations emerging from practices and projects and influenced by their accumulated experiences and dispositions. The use of time as a resource is thus influenced by time in the historical and irreversible sense.

The concept of projects is also used by Shove et al. as a way to get closer to how practices are organized in relation to each other:

"In everyday life, projects, which take many forms, are significant devices deployed in bounding and in making sense of the temporal flow, and in actively orchestrating and interweaving complexes of practices" (2007: 144).

They made this observation in relation to a study of do-it-yourself activities, but they argue that it has more general relevance. The same study highlights the importance of path dependency in practices, as experiences lead to ever more advanced projects. In more general terms, experience with various practices is important in relation to which practices an individual is open to being recruited to. In addition, it is obviously important which practices an individual actually meets and has access to — which is sometimes quite accidental, as a study on floorball illustrates (Shove and Pantzar, 2007).

The issue of competition among practices for practitioners' time is further complicated by the argument that time and space can be seen as constituted by practices. First, practices shape time, or "practices *make* time", as Shove formulates it (Shove, 2009). For instance, people distinguish between weekdays and weekends because they do different things on different kinds of days. Second, time is an integral aspect of practices: it takes a certain time to carry out a practice in what is considered to be a proper way. In addition to duration, other aspects of time can be characteristic of a practice: things have to be done in a particular sequence, and the ability to time various activities correctly can be an important part of the competence involved in the performance of the practice. When time is seen as constituted by practices, an individual's experience of time can consequently be seen as resulting from his or her performance of practices. This approach complicates the understanding of time as a resource, at least in any homogeneous sense.

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[2] The idea that practices compete for the attention of practitioners is similar to ideas within household economics, first formulated by (Becker, 1965). Inspired by Becker, Linder (1970) focuses on the complicated task that individuals face when they allocate their time among different activities. In his account, an individual receives a yield of "utility" when spending time on a particular activity, and in accordance with basic neoclassical ideas, individuals are supposed to maximize yield per time unit. This optimization idea differs from the idea of self-identity as the basis for combining practices, but the approaches share the application of methodological individualism, which is at odds with a practice theory perspective.

[3] Since Pred's formulation, the introduction of the internet has modified these conditions.

5. Stability and dynamics

Practices are considered recognizable entities across time and space and thus pre-suppose some degree of regularity and repetition. This is perhaps why practice theorists tend to have a preference for focusing on routines in everyday life. This kind of stability is supported by a view of human behaviour that focuses on the importance of practical consciousness and the embodiment of skills applied in everyday practices. Although actions are intentional and practical consciousness can be expressed discursively if people are asked to do so, this seldom happens, since many actions are carried out as routines.

On the other hand, practices obviously change over time; new practices emerge, and others die out when practitioners can no longer be recruited. The dynamics of changing practices attracts increasing interest; in particular, Shove and her collaborators have achieved new insights through empirical studies. In the following, I deal with some of the points made in this research and relate to other literature that can inform further development of the approach. But first a few comments regarding empirical studies on practices.

Since the philosophical accounts of practice theory are abstract, application in empirical studies raises new questions — for instance, it is not so obvious how to delimit a practice. The point of departure must be phenomenological in the sense that defining something as a practice must make sense to people; but apart from that, there is little guidance. Practices relate to each other, for instance, when some practices can be considered sub-practices in relation to a more general heading: washing the car can be considered an element of car driving. In general, a study's research purpose must be decisive for the actual delimitation. Another issue relates to the given condition that practices can only be studied in the form of practice-as-performance, and performances will always differ between individuals and between social groups, making it easy to lose sight of the practice-as-entity. Again, the research purpose must be decisive for whether to distinguish between different practices-as-entities when performances differ among social groups. Finally, practice studies involve the classical problem of setting the boundaries between the elements considered to be constitutive for the practice and the context in which the practice unfolds. Here again, there are no general guidelines that can be applied. With these conditions in mind, a few ideas on the dynamics of practices are presented in the following.

The emergence of a new practice requires a process of innovation where agents configure a set of bodily-mental activities by integrating elements of meaning, material and competence. If such a configuration diffuses by being taken up by others, a new practice can emerge as a provisionally stable and recognizable entity. A practice can thus be seen as an emergent phenomenon based on self-organizing processes, to use a thought figure well-known to ecological economists. Practice innovation is about making new links between existing or new elements. In an exemplary analysis of the emergence of Nordic walking, Shove and Pantzar (2005a) show how well-known components of walking, sticks, fun and health considerations are connected in the construction of a new practice. In general, they argue that dynamics emerge when components travel and migrate between practices; for example, health considerations appear across many practices, and competences related to computer use become integrated in various practices.

In the analysis of emergent practices, it seems obvious to apply concepts known from the economics of technological innovation. For instance, the first phase of configuration of a new practice can be expected to be characterized by experiments before a "dominant design" stabilizes and charts the course for gradual future changes (Dosi, 1982; Utterback, 1994). Innovation economics also points to the importance of the "selection environment". For a practice innovation, this can comprise the context of other practices, macrosocial trends, infrastructure and institutions that provide more or less fertile ground for the new practice. Recent research emphasizes that the selection environment is open to active transformation by the actors (McMeekin, 2001), a point that can also be relevant for practice innovations.

When practices diffuse, they can still be recognizable entities, but they also change like chameleons according to the context of the practitioners. While the elements of the practice circulate, the integration is undertaken by local practitioners, giving rise to modifications of the elements and the practice, as Shove and Pantzar (2005a) exemplify with the change in Nordic walking when it spread from Finland to the UK, and with the diffusion of floorball in different social settings (Shove and Pantzar, 2007). Interestingly, a game like baseball can take on very different meanings in different national contexts; but the game can be played by teams from two different nations even though, in a sense, they play two different games (Wang and Shove, forthcoming). In the same way, practices can be differentiated when they travel across the social spectrum, as playing golf has done. This issue is central for Warde's (2005) discussion of the relationship between practices and social differentiation. Practices also differ according to the engagement of the practitioner. A practitioner can be said to have a career with a practice, as experience and learning-by-doing develop the skills, attach new meaning to the activity, and maybe call for more advanced or supplementary equipment. Inspiration for the study of such careers can be found in the literature on leisure, where devoted practitioners are said to be engaged in "serious leisure" (Stebbins, 1992, 1999). As the career of practitioners unfolds, the accumulated experience and the modification of the elements can influence the trajectory of the practice-as-entity over time (Shove and Pantzar, 2007; Shove et al., 2007: 92).

Technical change is often central to changing practices over time. Shove et al. (2007) study digital photography and do-it-yourself activities as examples of change where technological innovations play an important part. The case of do-it-yourself illustrates, for instance, how competence can be seen as distributed between the skills of the practitioner and the tools, materials and instruction manuals used for performing a task. Recent development of materials and equipment has reduced the need for traditional skills and enabled new groups of practitioners to perform tasks that were previously too demanding, thus illustrating that the boundary between the elements of material and competence is fluid and subject to change. Also, the digital camera implies a redefinition of the competences needed for the practice of amateur photography. Interestingly, however, not all elements in the configuration change simultaneously. For instance, the conventions regarding what constitutes a good picture and the motives preferred seem to have survived the reconfiguration, at least in the short term. Technical change can also have implications for the temporal and spatial organization of practices, as the use of time-shifting technologies like video recorders and, more recently, hard disk recorders illustrate (McMeekin and Southerton, 2007: 13).

The case of do-it-yourself activities also illustrates how the configuration of a domestic practice co-evolves with the predominant mode of provision for the inputs needed to perform the practice (Watson and Shove, 2008). When new tools and materials bring previous specialist tasks within the reach of ordinary do-it-yourself practitioners, more goods are bought from DIY centres for work done at home, while fewer services are bought from skilled craftsmen. Historically, such co-evolving changes in technologies, domestic competences, and modes of provision have been highlighted in Cowan's studies on household technologies (Cowan, 1983), Gershuny's identification of the "self-service economy" (Gershuny, 1978), and more recent studies on the history and present use of the freezer (Hand and Shove, 2007; Shove and Southerton, 2000).

While empirical studies of relatively simple examples of practices changing within a short time span may disclose detailed aspects of practice dynamics, historical studies of long-term changes of domestic practices highlight the importance of wider social changes involved in practice changes. In the long term, domestic practices relating for instance to cleanliness (laundering, showering), comfort (air conditioning), cooking and mobility have changed

dramatically, and studies on these changes reveal how domestic practices co-evolve with changes in gender and family relations, scientific understandings, the meaning of progress, markets and supply chains, infrastructure and so on (Shove, 2003; Cowan, 1983; Wilhite, 2008).

Over time, practices die out when they can no longer recruit new practitioners to perform them. Then, remnants of the old practices can be found in the form of artefacts no longer in use, characterized by Shove and Pantzar as social fossils (Shove and Pantzar, 2005b). Shove and Pantzar suggest that studies on practice innovations should be supplemented by studies of the processes of killing practices — of breaking links between the components that held the practices together. The killing of practices can be important, not least in an environmental perspective.

6. Consumption and environment in a practice theory perspective

In this section, some of the implications of a practice theory perspective are explored: In which ways may the perspective influence the understandings of consumption and environment? First, an ecological economic concept of consumption is introduced and combined with a practice perspective, and then issues concerning the understanding of consumers and motivations for consumption are discussed. In some respects, a practice perspective conflicts with other theories of consumption, while in other respects the perspective reinterprets or elaborates on well-known ideas from debates on consumption and environment.

6.1. The concept of consumption

Almost all practices involve the use of material resources, regardless of whether these practices are catagorized as production or consumption. In ecological terms, human society can be seen as a metabolic organism appropriating resources from the environment, transforming them for purposes useful for humans, and finally discarding them as waste. Conventionally, the process of transforming resources and intermediate products for useful purposes is called production, while the final use and destruction of useful products is called consumption. To some extent this distinction coincides with the distinction between the social domains of business sectors and households, but productive activities also take place in households, and activities usually considered to be consumption also occur at the workplace (Røpke, 2004).

Domestic practices are environmentally relevant in so far as practitioners appropriate and transform resources. The link between a practice and the environment thus goes through the material component — that is, through the production, use and discarding of the materials, equipment and infrastructure needed to carry out the practice. The concept of consumption is used here to capture the appropriation and transformation of resources in relation to domestic practices. This "definition" of consumption emphasizes that the transformation of material goods into waste, while obtaining services from the goods as an aspect of various practices, is a process which in most cases takes place over a longer period. Consumption is thus distinguished from market transactions and the economic concept of demand (as done by (Boulding, 1945; Daly, 1991: 35ff). This distinction is useful also because households procure goods and services for application in domestic practices in other ways than through market transactions. For instance, eating practices require the input of meals, provided by the supporting practice of cooking, based on the input of primary produce. In some cases, the inputs are provided within the domestic domain itself, as when household members do the cooking, sometimes even based on primary produce from the household's garden. But often, inputs of goods and services from other domains are required: primary produce can be bought through the market or received as a present from neighbours and friends; also the cooking work can be provided commercially, through acquaintances, or by public provision. In general, four modes of provision are identified: market, state, communal, and domestic.

6.2. Practitioners rather than consumers

With consumption as the link between domestic practices and the environment, how can consumers and consumer motivations then be approached? In a practice theory perspective, people are basically seen as practitioners engaged in the practices of everyday life. Practices are what make sense to people in everyday life, and their reputations, decency, self-respect etc. depend on being recognized as competent practitioners (Randles and Warde, 2006: 228). Although most practices involve the appropriation and use of goods, services and ambience, people first of all think of themselves as being involved in meaningful practices rather than being involved in consumption. Consumption as such is seldom meaningful, and it makes little sense to say that people have a desire to consume. Motivations and wants are the outcome of practices, and the conventions and standards of practices steer behaviour (Warde, 2005: 137). Seeing practitioners rather than consumers implies that consumption is seen as deduced from practices.

When people sometimes think of themselves as consumers, they usually do so in relation to shopping, where the role of the consumer involves market exchange. In a practice perspective, however, shopping is one practice among others in daily life — a way of procuring many of the goods and services consumed in the course of other practices. Although shopping has no privileged position as the only practice involving consumption, it is surely an interesting practice to study from an environmental perspective — partly because shopping as such gives rise to resource consumption, and partly because the practice has implications for the consumption related to other practices. For instance, the development of shopping as a valued leisure activity contributes to the increasing materials–intensity of other practices. In the extreme case when shopping develops into addiction, the acquired objects may never even be used.

Replacing consumers by practitioners provides a different perspective on the character of the agents and emphasizes aspects of consumption that tend to be underexposed in other theories of consumption. For instance, the focus on practices draws attention to doing rather than having in relation to consumption, and to the use rather than the display of products (Shove et al., 2007: ch. 2). When people consider acquisitions, they are thus seen as motivated by images of the doings in which the products are implicated. As Shove et al. formulate it in relation to a study on kitchen practices: "things are acquired, discarded and redesigned with reference to culturally and temporally specific expectations of doing *and* having – not of having alone" (p. 37). Often, new things are acquired in order to induce new practices (p. 34) – although, in spite of the acquisitions, the imagined practices are not always realized (Sullivan and Gershuny, 2004).

The emphasis on doing implies attention to the competence of consumers, since things are only useful to those who have the skills to use them. This aspect calls for acknowledgement of the pleasure of being a skillful practitioner. Large intrinsic rewards can be related to the pursuit of an activity where skills and knowledge are acquired and expressed, as the literature on "serious leisure" demonstrates (Stebbins, 1992; Russell, 2005: 61f).[4] In the same vein, Shove et al. (2007) find that some practitioners enjoy the process of do-it-yourself activities (DIY) — not only the result of the process is important (see also (Campbell, 2005) on craft consumption and (Csikszentmihalyi, 1997) on the flow concept). The career of practitioners in DIY often involves ever more complicated projects, further development of skills, and the need for a wider variety of tools and materials. This account thus views consumers as "knowledgeable actors whose consumption is in some sense an expression of their capabilities and

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[4] Also here a certain familiarity with household economics can be noted. When Linder (1970) and Winston (1982) focus on the use of goods in household production processes, they are aware of the "process benefits" (intrinsic rewards) related to the activities.

project—oriented ambitions" (Shove et al., 2007: 43). In this way, competences can work as consumption dynamics.

The focus on doings and competence also provides a special take on the idea that consumers compete for status. Rather than focusing on demonstrating one's economic capability by owning and showing off expensive consumer goods, people are engaged in demonstrating their abilities as competent practitioners of various valued practices. As the practices involve intrinsic pleasure, this approach indicates that people enjoy other aspects than just the achievement of a position in an endless status race. Both for themselves and others, this seems more legitimate and calls for less moral condemnation than the classic view on the status race.

The focus on consumer competence is at odds with, for instance, the accounts of earlier critiques of the consumer society (the Frankfurter school and others), which tend to portray consumers as dupes or victims of market forces and advertising that persuades them to buy things that they do not really want. Although acknowledging the influence of advertising etc., a practice theory approach suggests that consumers are not so easy to seduce.

6.3. Multi-causality of consumption and the environmental implications

The account of consumers as practitioners has already touched upon motivations for consumption in general terms — related to competence and intrinsic pleasures of practices. Basically, however, practice theory is at odds with any mono-causal explanations of people's willingness to consume ever more, whether this is based on optimization of utility, status competition or the presentation of self. Since different practices involve a wide variety of meanings and considerations, consumption must likewise be motivated by a broad array of considerations. Following Pred (1981), it can be argued that some practices contribute to more overarching projects, but the combination of projects is the result of path dependencies rather than some organizing logic. To understand the willingness to consume ever more – and to spend so much time earning the income for this consumption – it is necessary to identify the meanings people attach to social practices (and projects). Surely, this would reveal consumption as motivated by all the best reasons such as efforts to attract a partner, be a good parent, ensure a good education for the children, keep the family together, take care of one's aging parents, keeping healthy and so on.

These considerations are not necessarily explicitly expressed. More conscious reflections emerge now and then, but many routine practices are based on practical consciousness, implying that much consumption occurs without prior calculations (McMeekin and Southerton, 2007: 8). Recent years have seen an increasing interest among consumption theorists in studying the ordinary and routine practices of everyday life — also characterized as "inconspicuous consumption" (Gronow and Warde, 2001; Shove and Warde, 2002). These studies contrast with cultural theories of consumption focusing on consumers as manipulators of symbols engaged in expressing their identity through visible signs, particularly through consumption categories suited to signalling, such as clothes, home decoration, and taste in music and other artistic products. From an environmental perspective, the routine practices are interesting, because they account for a large share of the consumption of energy, materials and water (Shove, 2003; Christensen et al., 2007). Good examples of resource-demanding routine practices are the use of air conditioning (Shove, 2003) and the daily shower (Hand et al., 2005). Simultaneously, the lack of reflexivity in routine practices may constitute a barrier to the inclusion of environmental considerations. Consumers are often not aware of the environmental impact of routine practices, when the impact is not embedded as an aspect of meaning constituting the practice, and routines are not so easily called into question. Since environmental considerations tend to be included only in a limited number of actions, serving as symbolic indicators of environmental awareness and behaviour, it would be a formidable challenge to bring in the environment as an important aspect of meaning across most practices.

Since practices differ with regard to the material components needed for their performance and thus also with regard to their environmental impacts, people's composition of practices is important. Focusing on the composition of practices rather than the composition of consumption categories turns the attention towards different dynamics and highlights, for instance, the environmental relevance of the scarcity of time. Time sets a limit to the number of practices it is possible to perform, and people in modern societies face the issue of coping with what is conceived as scarcity of time. Various strategies are applied to cope with time pressure, such as multi-tasking and having rush periods in order to create periods of calm (Southerton, 2003). And in the competition between practices, time-consuming leisure activities that demand much training, as well as activities requiring coordination of schedules, tend to lose out (Russell, 2005: 355; Southerton, 2005). In general, the result is a high activity–intensity per unit of time, and consequently, a high materials–intensity (Røpke and Godskesen, 2007).

The materials–intensity of practices is limited by the income available to practitioners, but the relationship between income and consumption is dialectical: when practices call for additional equipment and consumables, the search for higher income is encouraged — and the development of practices, as well as the involvement in more practices, may continue the spiral. Schor (1991) has highlighted how such a spiral of work-and-spend may be encouraged by labour market institutions with lock-in effects: in practice terms, the formation of the practice of going to work influences the conditions for the performance of most other practices.

7. Concluding remarks

In conclusion, the practice perspective emphasizes the immense challenge involved in promoting sustainable consumption. Consumers may be motivated to undertake various symbolic actions to demonstrate their "green" disposition, but most valued practices are performed with little or marginal consideration for the environment. Practices are motivated by core concerns in everyday life, and people take a strong interest in being competent practitioners. As environmental considerations may easily conflict with other concerns, they would need forceful backing to become an important aspect across most practices. As long as increases in real income enable practitioners to acquire the material adjuncts to improve the performance of valued practices, they tend to do so. The practice perspective suggests that moralizing or trying to persuade individuals of the "double dividend" idea – that curbing consumption would contribute to both environmental improvements and increased wellbeing – has little chance of success.

Promoting sustainable consumption depends, first of all, on collective efforts. The general conditions for performing practices – real income, income distribution, energy prices, labour market institutions etc. – must restrict the possibilities for increasing consumption, and this is better done by design than by disaster, as argued by Victor (2008). With regard to particular practices, it is important to identify the practices demanding considerable resources and to study the formation of these practices as a basis for policies. Such studies may be informed by a broad co-evolutionary approach, taking into account how domestic practices co-develop with changes in production technologies, supply chains, transport infrastructure, exchange institutions, retail systems etc. The sociologically oriented studies on domestic practices may thus link up to research programmes within economic sociology and innovation economics, such as the Polanyi-inspired programme on "instituted economic processes", emphasizing the interdependence between supply and demand (Harvey, 2007; Harvey et al., 2001; McMeekin and Southerton, 2007), and the increasing literature on transition theory (Elzen et al., 2004).

Environmental aspects may be included directly in co-evolutionary studies on the changing configurations of practices, modes of provision and global supply chains, as has been demonstrated by various

authors (Southerton et al., 2004; Princen et al., 2002; Schor, 2005). Still, however, most environmental research on consumption and production tends to be carried out in relatively independent fields, in accordance with the components of the IPAT equation. A co-evolutionary perspective combining the study of domestic practices with the study of their wider ramifications promises to provide deeper insight into the shaping of the environmental impacts of consumption. Simultaneously, this perspective would turn attention away from blaming consumers and focus instead on the need for collective efforts to make consumption more sustainable.

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