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COMMENTARY

The negotiated consumption of sustainability

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Abstract Companies encourage consumers to purchase environmentally sustainable products. The nexus between making and buying sustainable products, however, does not by itself generate sustainable outcomes. Sustainability results from users developing new practices around products and technologies, which we call 'negotiated consumption'. By extending the existing understanding of organizational practices through combining perspectives from social studies of science and technology, and consumption studies, we identify the nature of the negotiated consumption of sustainability. We argue that the effectiveness of environmental strategy, which meets demand for sustainable outcomes, can be only understood through the appreciation of how organizations, and their products and customers, are implicated in, and co-produce, the processes and practices that deliver sustainability.

Introduction

Environmental sustainability is an objective of companies, for example, that manufacture products to reduce carbon dioxide emissions and lower energy requirements, and of the consumers whose values and beliefs encourage them to purchase such products. The relationship between the purchase of sustainable products and sustainable outcomes is not, however, as straightforward as manufacturers of such products commonly assert. In this discussion paper we argue that the objectives of organizations and consumers in improving sustainability do not simply occur as a result of the purchase of sustainable products. Sustainability results instead from various processes whereby users engage with new products and technologies and develop new practices around them over time. This has considerable implications for research into sustainability, such as sustainable innovation and consumption.

By examining literatures of technology and organizational practices, social studies of science and technology (STS), and consumption studies, and analysing how each conceptualizes the relationship between organizations, technologies and users, we argue each individually offers an incomplete explanation of sustainability. The literature of technology and organizational practices emphasize how technology and organizing mutually shape practices, but neglect the role of users in this process. The literatures of STS consider technology, organizational practices and users, but fail to integrate the understanding of symbolic meaning attached to products developed through their use. Finally, consumption studies attend to meanings attached to products in use but ignores how organizations can affect product use. Together, however, these perspectives offer a fuller explanation of sustainability.

We contend that sustainability involves considerable negotiation between consumers, organizations (through the technologies they create), and their surrounding social and technological environments. Organizational concern

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with environmental sustainability should not only address the activities of producers and the motivations of consumers that get us to the point of buying sustainable products, but also with the consumers' post-purchase engagement with products and the relationships within which they participate. Negotiations between organizations, technologies and users have been neglected thus far in organizational literatures on sustainability. In this discussion we remedy this shortcoming and distinguish significant elements of what we call the negotiated consumption of sustainability and outline its implications for future research.

Sustainable outcomes

Much of the debate in the management literature on environmental sustainability is grounded on the way the worsening relationship between global ecology and economic growth leads to demand for manufacturers to produce sustainable technologies and products. The consumption of these products by environmentally aware consumers is then held to address environmental problems (Faber, Jorna, & Engelen, 2005). Take, for example, the case of the hybrid car where there is a clear assumption that its purchase leads to environmental benefits (see Aggeri, Elmquist, & Pohl, 2009; Nonaka & Peltokorpi, 2006). Manufacturers of hybrid cars frequently reveal these assumptions in their statements. Toyota, for example, promotes its Prius as fuel efficient and environmentally friendly, based on its unique design of hybrid engine, 'Toyota Hybrid System' (TMC, 2002). The Prius is differentiated as being designed for a world of scarce oil and greenhouse effects and is marketed as one of the most fuel efficient and environmentally friendly cars available (see Taylor, 2006). Toyota called the technology of the second generation Prius 'Zero-nizing and Maxi-mizing' to emphasize its environmental performance (TMC, 2004: 23). Its innovative engine is assembled with other components such as the brakes, motor and battery to comprise a system that provides for a number of product claims, including its ability to optimize fuel efficiency by 50 per cent in comparison to an average car of the same class (Nonaka & Peltokorpi, 2006; TMC, 2003), and emit approximately 80 per cent less emissions (Taylor, 2006). Toyota is not alone in this characterization of the Prius. Academics also refer to the Prius as an 'eco-innovation', justified in part, by reference to its technological development, and specifically its engine (Aggeri et al., 2009).

As Faber et al. (2005) argue, this assumption of sustainable outcomes ignores social and environmental actors and relationships, supposing that they 'remain constant with the progression of time' (Faber et al., 2005: 14). It is assumed that consumer 'needs' are 'out there' to which producers respond by manufacturing products, rather than actively constituted as part of social practices (Slater, 1997). This bracketing off of the 'social' from understandings of environmental sustainability is also endemic in the assumption that the production and sale of 'green' technologies will engender a form of 'ecological rationality' in the conduct of consumer practices (Banerjee, 2003). Such 'environmental instrumentalism' (Macnaughten & Urry, 1998) assumes that cost-based incentives will motivate consumers to purchase green products and technologies, and in doing so, will magically transform existent behaviour into sustainable practices and effects. Devices such as smart metres, for example, use cost incentives to try and encourage people to use less energy by giving information on how much energy is being consumed and money is being spent. Social change and everyday practices implicated in acts of consumption are neglected. In this scenario, the technological and cultural relationships and practices within which products are situated and used are ignored (see Shove, 2010).

Sustainability is a concept that is much more multifaceted and ambiguous than the assumption of a linear relationship between purchase and outcome implies. Recognizing this, organizational researchers have begun to address the more sophisticated ways organizations frame their relationships to, and interactions with, the environment (see Banerjee, 2001, 2003; Shrivastava, 1994). We contend that there remain continuing weaknesses in these approaches and more robust theoretical foundations for understanding sustainability have to account for the actual use of environmental technologies and products as part of users' everyday life, and the complex interactions between organizations, technologies[1] and users in generating the co-production of effects with the potential for sustainable outcomes.

Our approach differs from literature that explains how processes of continuous innovation gradually improve designs in response to user requirements (Franke, von Hippel, & Schreier, 2006; Von Hippel, 2005). Instead we argue that sustainable outcomes are generated from the deeply connected social interactions between users and technologies over time, and not simply from the purchase of products and technologies deemed sustainable. This discussion paper is also distinct from research carried out by many marketing scholars. Current empirical consumer marketing studies, for example, frequently look at quantitative differences between consumer groups through examining behavioural constructs (e.g. novelty-seeking, risk-taking), time and money spent on a particular activity, and demographic and geographical attributes. Focusing on these quantitative differences generates non-contextual and 'static' pictures of consumers and fails to address the issue of *how* consumers engage and use certain products and services (see Holt, 1997; Ilmonen, 2004). By contrast, we elevate processes and agents of production and consumption in our research, and consider both supply and demand as a mutually constitutive process, rather than discrete domains. In this way, we pay attention to the ways in which objects embody and carry as part of their material constitution relational effects of their makers (see Akrich, 1992; Latour, 1988), as well as associated assumptions about use and effect. We are attentive to materiality, acknowledging the significant role that 'non-humans' play in constituting cultural meanings (Holt, 1995), but extend this analysis to focus upon the active part that products themselves play in constituting practice by viewing them as 'carriers' of organizations (see Akrich, 1992). We believe that in doing so, we can go some way to breaking down artificial divides found in existing literatures between

[1] Technologies refer to both the sustainable and mundane, as we often use sustainable technologies such as solar panels through using mundane technologies such as a shower. Sustainable technologies are not used in isolation and need to be considered as part of a wider system.