CONSUMPTION DOMAINS IN TRANSITION;
System innovations and the consumer as an agent of change

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Introduction

Consumption practices are inextricably linked to the infrastructures of consumption within which they take place. As is illustrated by for example Otnes (1988), daily consumption practices draw extensively on such systems (which Otnes labels social-material collective systems) and thereby also reproduce these systems. These infrastructures do not only comprise large-scale technological artefacts, such as electricity grids, but also include domestic appliances such as boilers, heaters, kitchen appliances, et cetera.

This recognition is of crucial importance when it comes to question how consumption can be made more sustainable. If we consider the four consumption domains with the greatest environmental impact, food consumption, mobility, tourism, and dwelling (EEA, 2005), we must conclude that in each of these domains, individual consumption choices cannot be seen apart from existing infrastructures of consumption.

When questioning sustainable consumption, it would thus be rather naive to neglect the pivotal importance of these infrastructures and focus on individual attitudes and lifestyle changes solely. The other extreme position would be to consider the greening of consumption as merely a technological issue. As is also argued in the call-for-papers, this perspective might at times appear attractive to engineers and and policy-makers. In recent times however, this point of view is increasingly considered inadequate since it is recognized that the optimalisation of technical systems cannot occur without considering the role of consumers and consumption practices (for a range of pragmatic and normative reasons).

This brings me to the subject of this paper. It aims to achieve the following. First of all, I want to reconstruct how consumers came to be seen as relevant agents in system innovations. Secondly, drawing upon recent discussions from both transition theory (Schot and Bruheze, 2003, Geels, 2004) and wider debates from the fields of the sociology of consumption and environmental governance, I aim to develop a perspective on the role of consumers as agents of change, to be used in a research project on sustainable consumption entitled the CONTRAST project (www.contrast-research.nl).

From historical analyses ...

Studying this relation between infrastructures of consumption and consumption is not a new phenomenon in itself. Scholars from the field of science, technology and society (STS) studies have on various occassions stressed how technological artefacts and systems influence

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human behavior and how human behavior reciprocally affects these artefacts and systems. In retrospect, one can identify some of the classics in thinking over changes in the infrastructures of consumption. Thomas Hughes (1983) identified the users as an important actor since they where affected by the process of electrification but not so much in their role of agent of change; Hughes considered investors, engineers, managers and financers to be the system-builders. Comparably, many STS scholars who have investigated the interrelations between technology and its users have predominantly focussed on the 'consequences' of technologies for individual users (for example stressing the 'scripting' of behavior through technologies (Latour, 1992) or, by taking a historical perspective, analysed users came to influence technological development (Bijker, 1995).

Summerton (1994) acknowledges that when it comes to consumers, the focus has been too much on the consequences *for* consumers sec, rather than their role in inducing of forcing system transformations; "users are conspicuously absent in studies on large technical systems, somehow unnoticed among the managers, engineers and regulators. There are many examples of system builders' attempts to shape (or reshape) user behavior or expectations, but can we find cases in which users – through their practices and demands – have explicitly reshaped systems?" Such a research approach would require us to pay attention to issues such as the differential access to power and gender perspectives, discussed in more detail by for example Schwartz Cowan (1983).

Thus, if we come to speak about making consumption and the infrastructures of consumption more sustainable, we need a different approach then the aforementioned ones. It requires us to 'connect infrastructural change with the dynamics of change in domestic consumption' and, at the same time, it requires a perspective on the governance of such transitions and the role that citizen-consumers can play in these processes.

Towards a perspective on the consumer as agent of change

In the more recent debates on system innovations (nowadays more frequently referred to as transitions) the relation between consumers as the infrastructures of consumers is given more attention. Illuminating in this context is Shove's work on the relation between consumption practices, technical systems and changing conventions of normality (Shove, 2003).

With Shove, we venture into the field of transition theory as a contemporary, and popular, theoretical view on system innovations. When it comes to the study of transitions there are different approaches, either focusing on historical analysis or focusing on the governance of transitions. This latter perspective enables us to explore the possible role that consumers can play in bringing about, or managing, transitions.

In this paper, I wish to explore this possible role, not only by drawing upon recent developments in transition theory, but also by taking recent discussions on environmental governance and within the sociology of consumption into consideration. By critically reviewing these lines of thought, I aim to develop a proper and applicable conceptualization of the role that citizen-consumers play in bringing about system innovations towards sustainable consumption.

Drawing upon some empirical examples, I will illustrate how this conceptualization works out when it comes to researching sustainable consumption.

References

Bijker, W. E. (1995), *Of bicycles, bakelites, and bulbs: Toward a theory of sociotechnical change,* Mit, Cambridge [etc.].

Cowan, R. S. (1983), *More work for mother; the ironies of household technology from the open hearth to the microwave,* Basic Books, New York.

EEA (2005), Household consumption and the environment. European Environment Agency, Copenhagen

Geels, F. W. (2004), Understanding system innovations: A critical literature review and a conceptual synthesis In: *System innovation and the transition to sustainability: Theory, evidence and policy,* Elzen, B., F. W. Geels and K. Green (Eds.), pp. 19-47, Edward Elgar, Cheltenham [etc.]

Hughes, T. P. (1983), *Networks of power: Electrification in western society, 1880 - 1930,* Johns Hopkins University Press, Baltimore [etc.].

Latour, B. (1992), Where are the missing masses? The sociology of a few mundane artifacts In: *Shaping technology/building society,* Bijker, W. E. and J. Law (Eds.), pp. 223-258, MIT Press, Cambridge MA

Otnes, P. (1988), *The sociology of consumption. An anthology,* Solum Torlag, Oslo.

Schot, J. and A. A. d. l. Bruheze (2003), The mediated design of products, consumption, and consumers in the twentieth century In: *How users matter: The co-construction of users and technologies,* Oudshoorn, N. and T. Pinch (Eds.), The MIT Press, Cambridge MA

Shove, E. (2003), *Comfort, cleanliness and convenience,* Berg Publishers, Oxford.

Summerton, J. (1994), Introductory essay: The systems approach to technological change In: *Changing large technical systems,* Summerton, J. (Ed.), pp. 1-24, Westview Press, Boulder