How users shape and use markets

Competitive paper prepared for Special Track 6: Representing multiplicity in markets: multiple representations of markets

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Abstract

In this paper we consider the interrelationships between users and market shaping. Current research addressing the user is centred upon product development/innovation and user configurations. We argue that this dominant "co-construction of users and technology" perspective (Oudshoorn and Pinch 2003) has a weak link to markets (and indeed marketing activities). The purpose of the paper is to explore the role of users in markets. We contend that there are two types of user roles in markets: first, users of products and services may (to varying extents) take part in shaping/producing the markets in which these goods are being exchanged; second, users *of* markets may capitalize on previous investments made to establish markets. Examples of both user firms and consumer users will be provided. The paper will conclude by discussing the implications for business marketing, alongside the boundaries and inter-relations between markets.

1.0. Introduction

Users constitute a category of actors that has been given considerable attention in research on technological development and in marketing. They have been ascribed significance in the development process and have often been highlighted as a group that suppliers – somehow and at some stage – need to involve in order to successfully develop new products. Over the past two decades the *active* role of users (and/or consumers and customer firms) has been further underscored in research on value-creation, reflected in concepts such as prosumers and

value co-creation (e.g. Cova and Dalli 2009). Brand communities and the notion of tribal marketing place the interactions and identities of multiple consumers centre stage (Cova and Cova 2002), and have a parallel to B2B customer network studies. Here especially, the role of the user firm in technical development in dyadic relationships is longstanding (e.g. the work of the IMP group). The role and impact of users upon markets in which goods are being exchanged remains poorly investigated, however.

This lack of research on the role of users is not surprising given the relatively modest research interest shown towards the shaping of markets itself for many years, within both marketing and research on technological development. The emergence of market studies as an interdisciplinary field over the past decade or so has served to revitalise interest in the organizing of markets. Examples of research topics addressed as part of this development include the interrelation of technological development and economic ordering (Helgesson 1999); the performative role of economic theories (Callon 1998; MacKenzie 2006); how marketing practices contribute to shape markets (Azimont and Araujo 2007; Geiger and Finch 2009; Harrison and Kjellberg 2009); the role of material devices in shaping markets (Callon et al. 2007; Cochoy 2008); the shaping of market agents (Andersson et al. 2008).

Still, the role of users has yet to be seriously considered in this context. In their study of the exchange of a second-hand oil field, Finch and Acha (2008) show how production concerns may affect both the mode and object of exchange. From a market studies perspective it is thus relevant to ask whether users also are important to take into account when seeking to understand the organizing of markets. This is in particular when considering existing demand situations, rather than only product development and commercialisation. How might users contribute to the establishment, development or demise of markets? It is also relevant to consider whether the role and impact of users goes beyond the shaping of the objects of exchange (technologies and their uses) to affect also *the ways in which* such objects are *being exchanged*.

As with the users-technology literature, even marketing literature that assumes an active role for the end consumer user or user firm has little to say about their roles/activities in shaping markets. Given this, and the recent interest in the organizing of markets, which we share, we propose to address the following two questions: i) 'What roles do users –have *in ongoing* market shaping?' and ii) 'What roles do the multiple users *of markets* have?' In terms of the latter question, we argue that by extending our interest in users beyond their centrality in the shaping of technologies, our conception of 'users' changes: there are other

types of market users than end user consumers and the user firm/customer. We argue that the marketing literature currently does not address either of these questions directly.

2.0. Markets as practical accomplishments

Our point of departure when taking an interest in the role of users in markets is a view of markets as ongoing practical accomplishments (Kjellberg and Helgesson 2007a). We conceive markets as the joint outcomes of a large number of concrete practices, typically performed by a wide variety of agents. This includes explicit efforts to establish and/or change markets, as in the market investments associated with the introduction of 'new-to-the-world' products (Johanson and Mattsson 1985), or the deregulation of a specific market (Olsen 2000). It also includes those everyday practices highlighted by Alderson and Cox (1948:151): "a market changes day by day through the very fact that goods are bought and sold."

A first group of practices that contribute to the ongoing production of markets are the exchange practices that buyers and sellers engage in to stabilize (temporarily, at least) the objects, modes and agents of exchange (Callon and Muniesa 2005; Kjellberg and Helgesson 2007b). A second group of practices that contribute to shape markets are those that establish market rules and regulations, e.g. competition laws, industry specific regulations, product safety regulations (Fliegstein 2001; Olsen 2000; Mattsson 2004). These practices may involve buyers and sellers alongside legislators and other agents not directly involved in exchange. While they are often viewed as external to the market (infrastructural), we conceive them as endogenous to the process of shaping markets. A third group of practices that contribute to shape markets are those which produce images of markets, e.g. industry analysis, market segmentation, product comparison (Rinallo and Golfetto 2006; Azimont and Araujo 2007; Anand and Peterson 2000; Harrison and Kjellberg 2009). These representational practices do not merely depict markets 'out there' but are integral to the transformation of a number of more or less discrete exchanges into a market.

Viewing markets as the ongoing results of practices thus underscores the potential import of a wide variety of agents and bodies of expertise, including law, economics, accounting, marketing and purchasing (Araujo 2007). Hitherto, however, the role and import of users in market shaping has received little attention. Given the attention users have received in marketing and innovation studies over the past decades, and the importance ascribed to their involvement in new product development processes as a result, a more thorough investigation of the role of users in shaping markets would seem warranted.

3.0 Relationships between users and technology

Much existing work centred on users outside of the marketing literature can be considered under the general banner of 'user-technology relationships' (e.g. Oudshoorn and Pinch 2003, 2009; von Hippel, 2005). In general, users and non-users alike are considered as active agents in using and developing technologies, which involves the configuring and re-configuring of the user by both producers and users. This has implications for market demand, as some users have 'needs ahead of the general market' (von Hippel 1986). Furthermore, the user-technology literature incorporates mediators that represent users (e.g. patient advocacy groups). Moreover, the initial studies in innovation regarding types of users have now shifted towards investigating user communities (von Hippel 2007) in developing and using technologies either with or without a producer organisation.

In this paper, the two key literatures to be considered are those of STS and the von Hippel lead user school[1]. We consider these to be complementary and overlapping, even if there is relatively weak dialogue between the two (cf. Oudshoorn and Pinch 2009). Simplistically, the main role for the user is as a developer and user of technology. Within this, there are several dimensions around which the debate can be centred. These are those of; (i) who are the (active) user and non-user, (ii) the configuration, representation and identification of users and use, and (iii) mediators of users in technological development process. These categories suggest various roles/activities for users in shaping markets and as users of markets.

Who are the (active) user and non-user?

The first category reveals a plethora of terms that have been applied to both users and non-users as "active agents in the (de-) stabilization of technology" (Oudshoorn and Pinch 2003). In fact it is only recently that the non-user has been given particular attention (e.g. Oudshoorn and Pinch 2003; Rose and Blume 2003). Many of the terms used are relating to (homogeneous groups of[2]) users in a semiotic sense (Oudshoorn 2003; Wyatt 2003), rather than to actual users and actual use (although more recent work attempts to incorporate both). In the STS tradition, users are typically described via labels relating to projected or future users of consumer technologies. For example, 'intended users', 'potential user', 'future end user' (van Kammen 2003), 'envisioned user and use', 'projected user' (Akrich 1992).

[1] See Oudshoorn and Pinch (2003, 2009) for useful overviews of the development of the literature

[2] Rose and Blume (2003:123): "…critiqued the presumption that users can be categorised as a singular group, and has questioned the extent to which and how both potential and actual users of technologies actually participate in processes of innovation".

Typically projected future users, intended users, potential users, and future end users – and the uses to which a new technology will be put – are said to require configuration (Woolgar 1991), which is a very designer or producer-centric perspective, at least in terms of the methodology adopted when investigating product development. The process of assuming or projecting the characteristics of the user and their use can be likened to top-down segmentation processes in marketing (e.g. Harrison and Kjellberg 2009). One issue which arises is the degree of alignment between projected future users and the actual users (Akrich 1992), and whether alignment is possible or indeed desirable (e.g. Kline 2003).

Only a small amount of work in the STS tradition directly considers actual users in use contexts. The actual users can be in somewhat standard categories of active and passive, but also in terms of unwilling users (Rose and Blume 2003) or resistant users (Kline 2003) or non users (Wyatt 2003). Other work assumes the active user and reports on the multiple roles held by users over time (e.g. Lindsay 2003; Pinch 2003).

For example, the resistant user resists what Kline refers to as the 'prescribed use' of a pre-designed technology for the 'intended user' in order to re-interpret and transform it to fit in with use within existing community practices. That is, "because the aim was to modernize and reform rural life by making it more urban, promoters initially imagined (Akrich 1992) and attempted to configure (Woolgar 1991) farm users as urban consumers"(Kline 2003:53). The resistant user here differs from the more mainstream conceptualisations of resistant users as negatively deviant or heroic, or from simplistic notions of 'consumer resistance' in not buying new products. One result is that producers and intermediaries respond to resistance via changing and re-designing technologies; as resistance is by users which are active shapers or 'configures' of their own needs, or themselves as actual users.

Wyatt's (2003) work on the users and non-users of the internet is one of the clearest explications of non-use. Non-use can be both passive but also an active choice. That is, non-use is not inherently forced because of limited financial means or lack of access to technology. Instead, it can be of four patterns or types; resisters, rejecters, excluded and expelled, and consumers can shift between these categories over time.

A dynamic and longitudinal perspective is often absent from STS-based studies. Two exceptions are those of Lindsay (2003) and Pinch (2003), both of which consider the multiple roles for users and how these might change over time. In Lindsay's study of the two main stages in the life of the TRS-80 computer technology, users are designers, producers, marketers, distributors, and technical support.

This shifting focus to actual users, communities of users with multiple roles, and how they change over time is closer to the von Hippel tradition. Indeed, from an innovation perspective, it is well established that users have a central role in the innovation process, both individually and in networks (e.g. Shaw 1985; Håkansson 1987; von Hippel 1988). In user-dominated innovation patterns, the user is the source of new product ideas for the firm (both products and uses), and such user-driven product development processes can be more successful than non-user driven innovation (von Hippel 1977, 1978; von Hippel and Finkelstein 1979). What these studies underline is how a product/technology is developed in interaction with a user at the user's setting (Rosenberg 1982; Håkansson 1987).

The key user category is that of the 'lead user', or users that perceive key benefits from an innovation and that are more likely to innovate and experience a need for an innovation ahead of the general market (von Hippel 1986). Lead users are also variously known as the innovative user, or the innovative end-user. The concept of lead user has been applied in a variety of industrial and consumer settings, e.g. scientific instruments (von Hippel 1976), PC-CAD development (Urban and von Hippel 1988), Apache software (Franke and von Hippel 2003) and sports equipment (Franke and Shah 2003). Lead users innovate more than other users, in terms of new ideas, new applications and new prototype solutions (von Hippel 1986; Morrison et al. 2004). Whatever the setting, the focus is on the actual user operating in their use context. Lead users typically have roles as idea generators, designers and producers, but this can also extend to those of marketers, distributors, and technical support in user communities (complementary to the studies reported by Lindsay and Pinch above). For example, recent studies emphasize that lead users are often connected with other innovative users in networks (e.g. Franke and Shah 2003). They interact with other lead users in obtaining advice and assistance. Networks of users can influence the design, development and diffusion of an innovation (Morrison et al. 2000; Urban and von Hippel 1988). The issue becomes how to identify this central user category (see below).

(ii) The configuration, representation and identification of users and use

The two seminal ideas regarding who or what represents users in the (early) design / testing stage of technological development within STS studies are those of the envisioned/projected user and user configuration. This is a rather producer-centred perspective on users and use needs which typically does not involve the user directly and views users as multiples. Working up representations of intended, future users and configuring their needs via object design or expected use does not give users an active role. Instead, these are "consumers and

consumer *images* constructed in laboratories, factories, and marketing departments" (Schot and de la Bruheze 2003:230, italics added). Hence it is semiotic in nature (Oudshoorn 2003) and also tends to be rather static (although recent studies are introducing a dynamic perspective). This intra-organisational work, which privileges the designer or the designed object, raises questions in terms of (i) the degree of alignment between the imagined and actual user and (ii) whether in fact one should expect alignment.

In brief, Woolgar (1991) discusses the design and testing phase of technical development and emphasises how the designer-actor of (personal computer) technology is required to identify, define and constrain the future use actions of future users. Hence the designer of a new technology is the central actor in the "process of configuring its user". At some point the configured user has to be replaced with the actual user[3]. Akrich's (1992, 1995) projected or imagined user is also enacted by technology designers. The representation of the future user and their uses is referred to as a script, which is inscribed into the technology or object. Typically, representations of users are generated either explicitly or implicitly, with the latter particularly powerful in shaping design parameters (Akrich 1995:175). An example of how to generate the former would be via market research surveys. In terms of implicit methods, the "I-methodology" is Akrich's well-known term for when designers consider themselves as generalisable proxies for user needs. Hence the object is designed around a prediction of what future imagined users require, and in this way the object – rather than the designer-actor - can be said to configure users.

Although both of these seminal works are focused on the early stages of technical development, and both are rather static, the user is given agency. That is, Akrich discusses how the "I-methodology" can result in a mismatch between the projected user and the actual user, and that the latter can have other representations of their needs, which requires a process of alignment of the multiple representations and the new technology. That is, users can interpret, modify and reject a 'given' script (Oudshoorn 1998). Indeed, from an ANT perspective such modifications are to be expected (translation being the central social process), whereas any observation of "clean" acceptance needs to be given a special explanation (Latour 1986). Woolgar gives the user a more active role by incorporating actual users in the testing phase. Nevertheless, the design stage is privileged (e.g. Lindsay 2003:32), and users do not have a role in shaping the technology post product launch: "[Woolgar] does not study

3 See also Bardini and Horvath 1995 (the reflexive user, the envisioned user – i.e. "the future "real" user in the minds of the developers, and this enables them to anticipate potential uses of the technology" p. 31). Note that "this reflexive user, while influential in the early development of the technology, is shown to be a static, one-time view that is bound to disappear and to be replaced by the real user".

the actual use of the technology by [actual users], to understand whether the configuration process still continues".

More recent research concerned with the nature of the configuration process over time when multiple representations are involved, along with the possibility and even desirability of achieving alignment responds to some of these criticisms. The recognition of a multiplicity of user representations– by users themselves, suppliers and intermediaries – introduces a process dimension and in so doing moves beyond the design stage to consider actual use. Here, different representations of users by designers and the users themselves are constructed and negotiated over time and thereby shape the ongoing development / use of a new technology (e.g. Lindsay 2003; Rose and Blume 2003).

The question regarding the necessity of alignment, or the desirability of the same, is an ongoing discussion. Akrich argues that some stabilisation of user representations is necessary, which is a compromise achieved over time as designer and user scripts clash and change. Indeed, from a production even if not from a user development point of view, sufficient alignment has to be assumed at least by the supplier for economic reasons (Harrison and Waluszewski 2008). In Schot and de la Bruheze's (2003:240) study, alignment across "projected users, represented users, and real users" in the pre- and post-launch of a new consumer product illustrated how aggregations of the 'expected consumer' – via market research - are a rational basis for action within an organisation. Nonetheless, the authors caution how "confrontations between projected consumers, represented consumers and real users [do not necessarily] lead to market success"; alignment is difficult to achieve.

The actual desirability of alignment can also be questioned by moving away from the laboratory and into actual use in practice (e.g. Rose and Blume 2003). That is, from the pre- or post-launch stages to existing demand situations and ongoing market shaping. Here, the alignment process is ongoing, as users "express dissatisfaction" with the inscribed product via "market actions" (p. 124).

The consideration of actual users and actual use shifts attention away from representations of imagined users and how to match multiple representations, to the identification of actual users, and interaction with the same. That is, how are lead users identified and recruited (von Hippel 2005) or from a more STS perspective, how are users rather than uses created (Pinch 2001, 2003; Lindsay 2003). The identification process can occur, for example, via advertising, databases of existing customers, and within existing business relationships.

The focus on the demand side as a source of innovative ideas and learning-by-using requires that lead users are both identifiable and accessible (von Hippel 2005). That is, the emphasis is on directly interacting with the actual user in order to learn about innovative ideas in development processes. Lead users are often treated as representative of other 'follower' users (Håkansson and Waluszewski 2002), which is perhaps a proxy for the 'I-methodology'. Therefore user-producer interaction is required in order to identify and adapt to user needs in co-development processes (see also Lundvall 1988; Rosenberg 1982; Håkansson 1987; Rothwell et al. 1974; Hart et al. 1999). If users are the source of innovative ideas, the nature of the technical and marketing research activities in the NPD process changes (e.g. Biemans 1991).

In the STS tradition there is an interplay between identification of actual potential 'likely users' users and how these are subsequently represented. For example, Lindsay (2003) discusses a process of devising an initial user representation, identifying potential customers based on this, and expansion of the original representation as a result. Marketing material used by the company in Lindsay's study – such as adverts – illustrated the 'projected user' in context.

(iii) Mediators of users in developing technologies

The text above is primarily concerned with designers or producers of technologies – and indeed the designed objects - and how they represent and interact with users. Other types of actors representing and negotiating on behalf of users are those in mediator roles roles.[4] This includes user representatives or spokespersons, typically in medical-related arenas, such as health boards or the design of new contraceptives (e.g. van Kammen 2003). It can also incorporate social movements, pressure groups and the state. These others can be directly involved in product development, or even research (e.g. Callon and Rabeharisoa 2003). When shifting from the design to the market introduction stage, mediators operate on both the demand (consumption) and supply (production) sides, e.g. consumer organisations, marketing and testing agencies, and retailers (Schot and de la Bruheze 2003: 234).

The result of the inclusion of multiple actors alongside the producer/supplier is twofold. First, the supplier's representation of users is no longer awarded a privileged status (cf. Kline 2003). Secondly, the inclusion of intermediaries necessarily results in multiple

[4] Latour (2005, p. 39) makes an important distinction between mediators and intermediaries. Mediators 'transform, translate, distort and modify the meaning or the elements they are supposed to carry'. By contrast, an intermediary 'transports meaning without transformation' (ibid.).

representations of users due to the multiple actors involved (and this does not necessarily include the user per se). The debate then shifts to negotiating and lobbying over these multiple representations in voicing projected user needs and perspectives vis a vis a new technology. That is, as van Kammen (2003) and Schot and de la Bruheze (2003) argue, the necessary reconciliation work involved in aligning multiple representations (Akrich 1992) can occur via user intermediaries.

Several studies introduce a dynamic element when multiple actors are involved in the design stage of a new technology and then trace how multiple actors represent and interact over time post-launch (e.g. Lindsay 2003). Here, mediators, suppliers and consumers (directly) interact in defining the technology, the uses of it, and in requiring alterations to that technology. For example, in Kline's (2003) study, the farming community users impacted by the introduction of telephones were "active consumers who resisted, modified, and selectively adopted these technologies on an individual basis" (p. 51). Schot and de la Bruheze's (2003) investigation of the mediated design and market introduction of the disposable milk carton focused on the ongoing process of "mutual articulation and alignment of product characteristics and user requirements" (p 231) across users, suppliers and mediators of various types. The use of a longitudinal perspective involved multiple 'mediation junctions' (both within the firm and across boundaries) for agenda building – i.e. market shaping - and technology development, and ultimately aligning demand and supply.

Lastly, users can also be (or become) mediators, e.g. indirectly in aiding demand/volumes, such as specialist magazine reviewers (e.g. Lindsay 2003) or directly in shifting role. That is, "technology studies have not paid sufficient attention to mediators such as marketers and salespeople in the development of technology" (Pinch 2003:248). Practices such as sales strategies, demonstrations and sales brochures are necessary for recruiting, training and retaining users (ibid.).

Despite that there is a relatively weak link to markets within the user literature reviewed above we are not suggesting that associations between users and markets are ignored. Indeed, the co-creation of technology and markets is implied in some of the technological development literature. More specifically, markets can be assumed into or implied in a co-creation process of markets and users (e.g. von Hippel 2005), are built via 'social and technical practices' (Pinch 2003) and are structures "within which technologies are developed and made available" (Rose and Blume 2003:127).

There are parallels here to work in the consumer marketing literature on socio-cognitive dynamics in product markets. Rosa et al (1999) argue that product markets are socially constructed knowledge structures that are shared among producers and users. Such knowledge structures include mental representations of products, which link the objects to "possible usage conditions, derived benefits, and competitive concerns" (ibid. p.66). Such mental representations can be initiated and disseminated by producers, but require the participation of buyers/consumers/users and typically evolve through social interaction (ibid.). In this process, the importance of market stories to convey product uses and benefits is emphasized. Section 4 below suggests a number of additional possibilities concerning the role of users in shaping markets.

4.0. The dual role of users in markets

Section 3 above discusses a variety of categories for how users shape technological development. Far from surprising, our review of the literature reveals a bias towards the role and impact of users as actors which shape technologies and the uses of these technologies in specific contexts. This means that users are recognized as having a role in markets primarily related to the qualification of exchange objects, i.e. in the determination of object characteristics and the evaluation of goods (Callon et al. 2002). In the light of the literature on the shaping of markets introduced in section 2 we argue that there is a need to broaden our attention to include how users may influence or affect the *ways in which* such objects are *being exchanged*. That is, to acknowledge the possible roles of users with respect to such issues as product assortments, modes of exchange, and the formatting of agents of exchange alongside their import on technologies/exchange objects.

Section 3 hints at several roles that users can have in shaping the ways in which objects are being exchanged in markets. Table One below summarises these into five roles, those of (i) developer of technology, (ii) marketer, (iii) distributor, (iv) technical support, and (v) user. It is possible for users to hold at least one role at any given point in time.

Table 1: User roles

Role	Literature
1. Developer of Technology	von Hippel 1988; Lindsay 2003.
2. Marketer	Pinch 2003; Morrison et al. 2000
3. Distributor	Urban and von Hippel 1988; Lindsay 2003
4. Technical support	Pinch 2003; Franke and Shah 2003

5. User • Potential and/or actual • Interpreter • Modifier/transformer • Critic/resistance (voluntary non-use) • Involuntary non use	Akrich 1992; von Hippel 1988 van Kammen 2003; Schot and de la Bruheze 2003 von Hippel 1986 Rose and Blume 2003; Kline 2003; Wyatt 2003 Harrison and Waluszewski 2008

The roles of 'developer of technology', 'marketer', distributor' and 'technical support' are discussed by both the STS and von Hippel traditions. In particular, the latter places considerable emphasis on the user as an idea generator, designer and producer of technology. The 'user as marketer' role has a clear link to the organising of markets. For example, the user has a function in spreading information and/or recommendations, which could influence the dimensions of exchange. In a similar vein, the 'distributor' role – either explicitly or in terms of contributing to the diffusion of technology – may also influence the ways in which objects are being exchanged. The easing of the forging of associations between technology and users, or technical support, could be vital in both market establishment and ongoing development. This could affect the dimensions of exchange and indeed volumes in a market.

The fifth category in the table is 'user', which incorporates the potential and actual user, the user as interpreter, modifier/transformer, critic/resister, and non-user (either voluntary or involuntary) of objects. The distinction between the semiotic user and the actual user of markets suggests a dichotomy between producer-centred configuration and representation of users, and 'real' user and use. When a longitudinal perspective is taken, these two categories are likely to feed into one another in the organising of markets, as there are interplays between representations and actual use. For example, marketing material of various types, and sales rep practices, shape or illustrate the 'projected user'. The representations of the future, envisioned user can occur both in the establishment of new markets and in the ongoing organising of existing markets.

The user 'interpreter' can be both the user directly and other types of actors representing and negotiating on behalf of users in mediator / intermediary roles. This is well known in technical development processes, and can be extrapolated to the processes of market shaping. For example, user spokespersons, pressure groups, social movements, magazine feature writers, etc also deny any special status for the supplier's representation of users in markets. This suggests the existence of multiple representations of users in the frameworks for exchange of objects.

The empirical examples in sections 4.1 and 4.2 below focus on situations where users and non-users alike are "active agents in the (de) stabilisation of "*markets* (cf. Oudshoorn and Pinch 2003). Both user firms and individual users may in various ways and to varying extents be involved in the ongoing stabilising and reproduction of markets. For example, resisters to current market/exchange formats may cause changes to designs or opt for alternative modes of exchange, just as users of technology cause changes to product designs and alter the intended use in context.

4.1. The role of users in shaping ongoing encounters in markets

The importance of users in shaping markets will of course vary across markets. Their role will also vary in terms of how directly involved they are in the ongoing work of organizing markets. Below, we present three types of user involvement – covering both B2C and B2C – with increasing degrees of direct involvement.

We can discern a first user role in markets based on the 'actual-potential' user category from Table One. Efforts to generate market projections based on envisaged future patterns of use award users a role in the generation of market representations by producers. The generation of such representations constitutes one important class of practices shaping markets (Knorr Cetina 2006; Kjellberg and Helgesson 2007a), being employed both as the basis for formulating seller-initiated market programs and as means for evaluating such programs. This relatively passive user role can be observed both in B2B and B2C settings, although the use of distal representational techniques may be more prevalent in B2C markets. However, users can also contribute more proactively by informing sellers about their user experiences, as highlighted by Rosa et al (1999) and by von Hippel (2005). We noted one example of such a more active user role in the commercialization of a new diagnostic tool called BIAcore (Harrison and Kjellberg 2009). In this case users of the new technology (which were academic researchers) informed the producer of possible applications in which the instrument could be used, thus providing critical input to the producer's ongoing segmentation process.

By looking at the practices involved in generating individual market exchanges we can identify a second user role. Here, users may become directly involved in the consummation of economic exchanges in their capacity as one part of the collective making up "the buyer" (Andersson et al. 2008). We can easily identify seller initiatives that seek to exploit this potential user role by "inviting" users to play a part in the exchange. A well-known example is the targeting of users/travellers by airlines through frequent flyer programs (Kjellberg

2010). These marketing devices single out users as the target for generating loyal customers, seeking to make future *market exchange* of airline travel services dependent on previous *use* of such services.

This type of initiative can also be found in more explicit B2B settings. A case in point is the ball-bearing producer SKF's introduction of the CADalog, a "computerized edition of the main catalog, in which calculations rules, diagrams, ratings and dimensions for the application of bearings… capable of inserting a drawing of the desired bearing section directly in the designer's CAD blueprint" (SKF Annual Report 1987). The CADalog was made available to engineers and helped create a similar type of link between this group of users and the sale of SKF bearings, as a frequent flyer program did between travellers and ticket sales. This link was further developed with the launch in 1990 of the SKF Equivalog, which "translates competitors' designations to SKF equivalents" (Annual Report 1990). The Equivalog thus served to weaken the link between the use of competitor's bearings in the design specification and the actual sale and subsequent use of bearings in a piece of machinery. In general terms, efforts of this type can be said to award users a direct market-shaping role by linking market exchanges more explicitly to the users of the objects of exchange.

A third type of user involvement in markets can be observed in situations where users seem to accept the object of exchange that is being offered (e.g. a product, service or technology), but not the mode of exchange through which it is being offered. The obvious examples here are illegal downloading and other forms of explicit refusals to accept the sellers' terms of trade. But this type of user activity can take numerous forms and need not at all be illegal. The organising of car sharing is a current example where users, at least in some cases, have been directly involved in introducing an alternative mode of exchange as a complement to the dominant one[5]. This type of user involvement could be viewed as more direct than either of the previous ones as it typically involves user initiative. However, the degree of proactiveness of actual users may vary. Various user representatives, such as special interest groups, may be far more important than individual users. In some cases actual user initiative can be so modest that it is difficult to distinguish from the type of seller initiatives described above. One example of this is when user representatives develop into producers in their own right, e.g. when an association of "green drivers" offers car pooling services to the general public.

[5] See, for instance, http://ecoplan.org/carshare/.

The wholesale refusal to accept commercialization may be a special case of active user involvement in markets. This type of user activity can have direct and considerable effects on markets, e.g. through boycotts. It is important to underscore that resistance of this kind not only operates on exchange practices, i.e. by reducing the number of market exchanges being realized, but that it also seeks to influence seller objectives and images of the consequences of market exchanges. In this way, boycotts and other forms of market resistance can have reverberating effects that in some extreme cases may lead to the dissolution of a market. This suggests that active market resistance is a first example of (non-)use of markets.

4.2. Users of markets or market use

As we briefly noted above, our shift in attention from the development of technologies to the shaping of markets has consequences for our conception of users. Besides the potential role of user firms and consumer users in formatting exchange objects and other aspects of market exchanges, discussed above, individuals or firms may also act as *users of markets*.

In these cases, the "suppliers" of markets would be those actors which have made the necessary investments in the conditions and features of a market for it to be stable enough for access and use. That is, a market has been put in place by others, and is perceived as having a useable form. This form may of course vary, e.g. from the type of 'open market' discussed by Coase (1937), via more or less concentrated market structures (Scherer and Ross 1991) and market networks (Baker 1984; Johanson and Mattsson 1993), to "domesticated markets" (Arndt 1979). But the notion of "market use" is fundamentally problematic since even the most anonymous participation in a market can be said to contribute to shape that market (confer the quote from Alderson and Cox (1948) above). Nevertheless, we argue there is a difference between explicit efforts to shape markets and explicit efforts to rely on established market procedures. It is important to stress that this difference is not based on the consequences that an engagement has for a market, which may be small or large, but on the envisioned purpose of the engagement.

The notion of market use expands the types of actors that can be considered as users. That is, in addition to users of products and services that are being bought and sold on markets (the user firm and user consumer discussed above), there may be actors that use markets in a more direct sense when buying, selling, or intermediating, as well as actors that use markets indirectly, as third parties. This means that we expand our conception of users to include also suppliers, third parties and intermediaries (see Table Two for some examples).

This is one important way of dealing with the idea of multiple roles gleaned from the earlier literature review.

Our first example of market use belongs to the "third party" category and concerns the on-going efforts to establish a global market for carbon trading. This provides a topical example whereby the 'open market' is too instable for investments to be made by market-using actors. EDF Energy and Centrica are two organisations in a partnership within the UK energy market. They are currently delaying investments in two new nuclear reactors (at a cost of up to €5 billion each) due to the perceived failure of the UN Copenhagen summit in 2009. The issue is the price that owners of fossil fuel power stations pay to emit CO2 is considered to be too low and unstable. The lack of any quantified climate change targets has resulted in there being no stable international price for credits for CO2 emissions. In December 2009 the price of carbon credits fell to below €13. Yet the International Energy Agency forecasts that the international price would need to be €33 a tonne in 2020 and €73 a tonne in 2030 in order for low-carbon technologies to be "economically viable". Spokespersons for EDF Energy and Centrica are calling on the UK government to intervene and establish a 'floor price' for carbon credits "...as it may take time for an international carbon market to develop fully" (The Times, 23rd December 2009).

The example illustrates, in a business-to-business setting, how two organisations are unable to use a market as a source of input regarding prices in order to calculate an investment decision. The existence of an incomplete financial market for carbon credit trading, in which the necessary features and conditions for exchange have not yet been sufficiently stabilised, leads to an involuntary non-use of a market.

Our second example of users of markets concerns sellers who offer me-too products, specifically generic pharmaceuticals. Consider the following transcript from a television commercial:

> [Setting: Two women sit in a sofa (mother and her teenage daughter). The yonger woman is holding a box of Ibumetin, which she is reading from.]
> -But Ibumetin contains the same active substance as Ipren and is also effective against headache, toothache, menstruation pain, backache, muscle and joint pain and fever.
> -Yes,
> -But Ibumetin has a lower price, so why do people buy Ipren?
> -… No idea.
> -Strange!
> [Speaker voice]: Ibumetin. Effective against pain, fever and inflammation. (http://www.lif.se/cs/default.asp?id=17947&ptid=19178, trans.)

The excerpt above is one of several advertisements for Ibumetin that have capitalized on the product characteristics associated with their competitor Ipren, marketed by Pfizer as the 'intelligent pain reliever". This tag line prompted Nycomed to launch Ibumetin as "a more intelligent alternative" arguing that it had all the characteristics of Ipren but that it also had been "gifted with a lower price". Generally, generic pharmaceuticals can be said to rely on established product classifications, qualifications and modes of exchange. Indeed, the growing use of health economic assessments by state and county health administrations to evaluate alternatives when procuring pharmaceuticals provides an increasingly transparent market mechanism that is used by producers of generic compounds. However, mimetic behaviour of this kind does not necessarily constitute market use since it may have considerable effects on the market in question (e.g. when the addition of the offer significantly affects total output). It may also lead to protracted controversies concerning the veracity of claims to similarity (which constitutes the basis for this type of market use).

Our third example of market use illustrates that selling organisations can be users of markets as well. The example covers a shipping company which finds out the 'market price' and the 'market interest' for a new product through established relations to buyers. Nordic Marine is an organisation operating in the international maritime industry. One of the company divisions installs or retrofits ships equipment on ocean-going vessels. The main product areas are in safety equipment and environmental. The latter is a new business area, one which is primarily driven by the need for legislative compliance (from the International Marine Organisation, IMO).

The company currently has a programme of new product development in the environmental products area regarding water pollution. The NPD process incorporates a 'market evaluation stage'. Here, individuals in Nordic Marine first make some assumptions "and then use these to get to a dialogue stage". They contact their counterparts in organisations which represent users/customers "as an information source regarding positioning and pricing…from the vessel owner view". For example, an existing relationship with CMS – a company which manages large numbers of vessels – is utilised to provide Nordic Marine with competitor price levels and a "market evaluation assessment" for a new product under development.

5.0 Implications

In this paper we have argued for the existence of two roles for users in markets. The first of these takes the end user consumer and customer firm and considers how they can shape the

ongoing organising of markets. The second role expands the definition of users by considering the use *of* markets. What is common across the two roles is the expansion for the role of the user from the object of exchange to the market exchange format. In this concluding section, we will briefly bring out three general implications of the dual role of users in markets discussed above.

First, the dual user role implies that the identity of users becomes less distinct when we shift focus from using technologies to exchanging in markets. We have identified a number of potential user roles in the shaping of markets that correspond relatively well to the identity of users as conceived in the lead user and STS literatures. In addition, we have provided some initial indications of users of markets in sections 4.1 and 4.2. Besides the multiple roles that users may have in shaping markets, then, other agential configurations may act as users of markets in parallel. This is further complicated by the fact that an actor configuration that primarily uses a particular market may share many components with an actor that takes on a much more active market-constituting role in some other market. This means that the identification of essential 'users of markets' is likely to be difficult. Instead, further empirical investigation will allow for the fleshing out of how actors hold multiple market using roles simultaneously.

Second, our identification of situations in which users contribute to shape markets suggests that users may be actively exploited in market settings. To some extent our examples have shown that they already are. Here, the similarity in user identities across technical development, use and market shaping efforts is likely to offer possibilities for actively involving users in the consummation of market exchanges to a much higher extent than today. The growing use of social media by marketers is one area in which users are increasingly implicated. The notion of 'buzzadors', i.e. users who are paid to recommend specific products to their friends (http://www.buzzador.com/), is a current example. Such increased involvement of users in markets may come to undermine the unique position of users, leading to credibility issues not only vis-à-vis potential buyers, but also in relation to companies which seek the assistance of users to further improve their offers. Imagine a user panel consisting of users paid by your worst competitor.

Third, our discussion of users of markets begs the question: who bears the costs of organising markets? Can everyone be a market user? Efforts of regulators (and increasingly also of economists) to engage in "market design" typically assumes and seeks to realize a passive, market using role for both buyers and sellers. But there is more to working markets than a stable regulatory backcloth against which homogenous products are being exchanged.

In many cases, a variety of actors will exert considerable and continuous efforts to put and keep in place the conditions that allow for market exchange. For business marketing, this implies that actors engage in an ongoing exchange process within existing networks in order to be able to be both users of markets as buyers and sellers.

Table Two: Users and uses of markets

Theme	Using markets when buying	Using markets when selling	Using markets when intermediating	Using markets indirectly (3rd parties)
Qualification of products and services	Utilising off-the-shelf components, i.e. exploiting existing qualifications of products for exchange	Launching 'me too' products, i.e. exploiting existing ways of qualifying products for exchange (the relevant dimensions to compete in)	Private label products? (But this means becoming a seller, rather than an intermediary)	
Assortments and modes of exchange	One-stop shopping, i.e. exploiting the assortment function to reduce transaction costs	Expanding product lines. For example, introducing complementary products and services, e.g. who needed an iPhone cover before the iPhone?	Exploiting an established mode of exchange by expanding assortments (e.g. Amazon – from books to everything that can be sent by mail in a small package)	
Learning	Using a call for tenders procedure to learn about alternative design solutions, technical calculations, etc.	Finding out a 'market price' through established relations to buyers		As a source of input when calculating, e.g. in the nuclear example the firms want to use/need market prices for CO2 to make investment calculations
Market cycles	Exploiting cyclical variation. For example, some buyers may be able to utilise repetitive patterns if their use of an input does not follow the same cycle.	Using markets as safety valves, e.g. Nordic paper manufacturers sell most of their volumes in long-term contracts but use spot market deals to balance		

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