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Towards a theory of practice innovation: a discussion of the production and re-production of Nordic Walking.

excerpt from a submitted paper by Mika Pantzar and Elizabeth Shove

Synopsis

In innovation studies it is usual to distinguish between processes involved in first making something new and those that characterize subsequent development and diffusion. In this presentation we argue that both require a combination of symbolic and material ingredients and of competence or know-how. The precise nature of these elements and the manner in which they come together is dynamic and generative. Our first point is that new practices arise and routines emerge and persist as a result of various integrative processes. With integration as our central theme we construct a conceptual framework that allows us to analyze invention, innovation and innovation in similar terms. Our second move is to recognize that producers and consumers are both involved in making and sustaining new connections. Taking this point forward, we develop a theoretical position that relativises these conventionally distinct roles and that represents a novel hybridisation between innovation studies and sociological theories of practice. We illustrate and elaborate on these ideas with reference to Nordic Walking. Nordic Walking is a form of speed walking with two sticks. First practiced in 1997, it is now a regular pursuit for more than six million people in twenty countries and is reputed to be Europe's fastest growing form of exercise.

Introducing Nordic Walking

Don't underestimate walking. Nordic Walking is becoming a new, extremely successful trend sport ... According to manufacturers and retailers, the walking segment has been the fastest growing product category in terms of quantity and turnover, and Nordic Walking may just have what it takes to set the cash registers ringing. Providing an ideal body work-out for optimum fitness, Nordic Walking reduces the impact on the lower joints, stabilizing heart and circulation. (report of ISPO 2003, World's largest International trade fair for SPORt equipment and fashion)

An entrepreneur combines, relates, integrates and organizes pre-existing but previously separate components in novel ways. Schumpeter's (1911/1949) famous observation provides a starting point for the following exercise in exploring and

exploiting common ground between sociological theories of practice and innovation studies. In bringing these theoretical resources together we suggest that Schumpeter's characterization of entrepreneurship applies to consumers as well as producers and that both are implicated in the invention and reproduction of practice. We elaborate on these ideas with reference to the origin and diffusion of a new form of sport: Nordic Walking.

Nordic Walking has a number of qualities that make it an especially appropriate case through which to develop a method of conceptualizing and analyzing innovations in practice. First, the very idea of commodifying and marketing something people have been doing for 1.6 million years and of positioning it as a form of fun is itself impressive. Second, and in many ways more important, Nordic Walking represents a new configuration of *existing* materials (walking sticks), forms of competence (walking skills) and images (for instance of nature, health and well being). Its novelty clearly lies in the way that already existing elements are linked together. The idea of walking for pleasure is already well established, but not with sticks. Likewise, walking sticks have a long history but not one that is associated with fun. Third, Nordic Walking has a very short history. When Kasurinen and Kantaneva published the first book on the subject in 1999 they had no way of knowing that Nordic Walking was about to take the outdoor leisure industry by storm or that it would feature as one of the 'centrepieces' of the 2003 sports trade show, ISPO (ISPO 2003, ISPO 2004).

In Finland, the number of Nordic walkers increased by 500 per cent between 2002 and 2004 (Taloussanommat, 19.11.2004, 14: Optio 11.11.2004, 36); in 2004 the Chinese Ministry of Sports initiated a joint venture with the aim of marketing Finnish manufactured walking poles and in 2005 a leading fitness magazine, *Fit for Fun*, named Nordic Fitness as the German Megatrend in the exercise field. Globally the growth has been brisk. How has this come about?

The empirical backbone of our study is based on eighteen interviews with people from organizations which produce and distribute Nordic Walking sticks or that promote the sport, and on an analysis of advertisements and articles in the trade and popular press. We also draw on the results of seven focus group discussions about new forms of walking undertaken as part of a related project (Oksanen-Särela, Timonen, 2004). These materials allow us to identify the ingredients of Nordic Walking and show how they have been pieced together. Without insights given by practice theory this attempt would have led to conventional success story where heroes are business leaders. Practice theory has brought with itself more versatile picture.

Some explanations

According to various version of practice theory human action, practices, habits and life routines are characterized by processes of doing and thinking which are not easily distinguished one from another. In keeping with this approach, Reckwitz

defines a practice as “a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood.” (Reckwitz, 2002, 250). For us, practice theory provides a means of conceptualising dynamic processes inherent both in business and in everyday life. It allows us to show how consumers, as well as producers, change within social and material structures and how they also effect changes in these structures. Seen in this way, innovative products are not simply solutions to existing needs: they, and the practices of which they are a part, have transformative potential in the life of individuals and of society itself.

In highlighting the socially recursive nature of innovation, we work with theories of practice as developed by Giddens (1984), Reckwitz (2002) and Warde (2005). In contrast to those who undertake situated ethnographies of practice (Czarniawska, 2004; Hutchins 1993; Orlikowski 2002; Suchman 1984) and who emphasise the detailed operation of localised rules and context-specific forms of knowledge and meaning, we are interested in conceptualising generic mechanisms of reproduction and innovation. As such we have more in common with authors like Schatzki (1996; 2002), Ryave and Schenkein (1974), Furnée (2002), de Certeau (2003), all of whom represent practices as relatively enduring entities held together by sets of norms, conventions, ways of doing, know-how and requisite material arrays. The crucial difference between these approaches and our own is that we focus on the *dynamics* of practice and on *evolving* rather than existing routines.

We begin by suggesting that the invention *and* reproduction of practice (i.e. (re)production) both involve and both require the co-production and integration of objects, competencies and images. In thinking about how new practices arise we therefore consider the existence and availability of these necessary ingredients and the manner in which novelty is generated through their active integration, that is, through performance. It is also through performance that practices exist as recognisable and relatively enduring entities. While established practices figure as something that actual and potential practitioners can participate in or withdraw from, it is important to remember that these entities depend upon and are constituted through recurrent reproduction. In working through the implications of these ideas for innovation studies, the main purpose of our approach is to develop a variant of practice theory capable of understanding change as a process of integration and disintegration and capable of conceptualizing the birth, reproduction and death of practice.

Three orders of (re)production

Assuming that new practices are constituted through the novel configuration of existing elements, it should be possible to imagine and perhaps identify innovations-in-waiting or proto-practices. These represent the “first order” of practice innovation since requisite ingredients exist but integration has yet to occur. What we term established practices arise as a result of “second order” processes through which constituent elements are interlinked and in which this interlinking is

at least temporarily self-sustaining. Relations *between* established practices are also important in maintaining and eroding patterns of spatial and temporal reach and in enhancing or undermining the durability of specific practices. In other words, established practices are held together by what we might think of as "third order" cycles of self-reinforcement (i.e. systems of interdependent practices). Finally, the existence of constitutive elements is at least partly conditioned by the practice itself¹ (c.f. 'autopoiesis', Maturana, 1981, 21).

In operationalising these somewhat abstract ideas we identify three critical processes. The first relates to the construction of necessary elements (the 'building blocks' of the practice-to-be) by "first order" producers. The second involves their integration to form novel but recognizable and temporally enduring practices. These integrative functions are accomplished by "second order" producers. The third, which we discuss only briefly, has to do with forms of integration between co-existing sets of established practices.

Before going further, some qualifications are in order. Despite the centrifugal force of self-reinforcing cycles, practices are always fragile not least because they require continual reproduction. This is one reason why we do not entirely subscribe to the 'multi level model' as developed by Rip and Kemp (1998) and elaborated by Geels (2004, 2005). Rather than distinguishing between the micro-, meso- and macro-levels of a hierarchically structured innovation system, our aim is to analyse the properties and characteristics of circuits of practice (re)production, some of which are undoubtedly more durable and undoubtedly more encompassing than others. Second, although we say relatively little about the fracturing of previously self-sustaining arrangements we recognise the importance of parallel dynamics of dissolution. Finally, the fact that first, second and third order processes of (re)production are shaped by diverse social groups, by inequalities of power and resource and by historic patterns of path-dependency is something we acknowledge but do not explore beyond making a number of important observations about the relation between promoters (by which we mean manufacturers, retailers, state

¹ In other words, in second order practice the elements of practice form a self-enforcing circuit. Seen this way, the existence of the elements is at least partly conditioned and constituted by the practice itself. An alternative term to self-enforcing circuit would be 'autopoietic system': "autopoietic systems are systems that are defined as unities, as networks of production of components, that recursively, through their interactions, generate and realize the network that produces them and constitute, in the space they exist, the boundaries of the network as components that participate in the realization of network" (Maturana, 1981, 21). It is important to recognize that the relationship between elements and the practice that they comprise, is clearly antithetical to the traditional static system-environment distinction. This is also what Callon was saying when he made a distinction between Hughes' 'technological systems' and 'actor network': "The concept of actor network can be used to explain both the first stages of the invention and the gradual institutionalization of the market...It is applicable to the whole process because it encompasses and describes not only alliances and interactions that occur at a given time but also any changes and developments that occur subsequently... Furthermore, the system concept presupposes that a distinction can be made between the system and its environment...The actor-network concept has the advantage of avoiding this type of problem and the many difficult questions of methodology it raises" (Callon, 1987, 100). Indeed, our variant of practice theory resembles actor network theory in focusing in associations and disassociations, and the ways weak interactions transform into strong ones and vice versa.

organisations, pressure groups etc.) and practitioners (by which we mean users, consumers and those who do and thereby reproduce the practice in question).

Promoters and practitioners

It is increasingly clear that companies do not have a monopoly on innovation. The dynamic nature of consumer–producer interaction and its significance for the generation of new products and ideas has been the subject of recent discussion across a number of different fields (Luthje, Herstatt, von Hippel, 2002; von Hippel, 2002).

Recognition of the routine creativity of consumers and their equally routine willingness to share is particularly important for the development of an integrative theory of innovation in practice. In tracking the free flow of ideas between amateurs Franke and Shah observe that if an activity is 'rewarding in and of itself, the individual may perform the activity, even in the absence of financial or other types of rewards' (2003, 174). In the cases these authors examine (sail planing, canyoning, snowboarding, handicapped cycling), collective invention, sharing and reciprocity are absolutely part of the fun. In writing about the 'pro–am revolution', Leadbeater and Miller conclude that the activities of 'innovative, committed and networked amateurs' are 'changing our economy and society' (2004, 9) so much so that it is increasingly difficult to distinguish between professional and amateur or between market based and collective forms of innovation. The common proposition is that consumers are not necessarily looking for easy solutions to existing problems nor are their motives reducible to economic incentives and calculation. Instead, and as Franke and Shah explain, experiment and innovation is part of everyday consumer practice.

Aspects of sharing and exchange alluded to above have also been explored by authors examining the importance of communities of practice for innovation at work. Commentators like Suchman, Blomberg, Orr and Trigg (1999) and Wenger (1998) share Brown and Duguid's view that: "The central issue in learning is becoming a practitioner not learning about practice...Learners are acquiring not explicit, formal 'expert knowledge', but an embodied ability to behave as community members". (Brown, Duguid, 1991, 48). Brown and Duguid take these observations forward with the suggestion that " ...Communities are emergent, meaning that their shape emerges in the process of activity, as opposed to being created to carry out a task" (1991, 48– 49). The key point is that such remarks apply to leisure activities and those carried out at home as well as at work.

Perhaps not surprisingly, consumer researchers echo the view that the role of the purchaser–practitioner goes well beyond that of determining the viability or social acceptability of inventions made elsewhere (Firat and Dholakia, 1998; Hirschman, Scott and Wells, 1998; Wikström, 1996). In building on these insights, product designers and market researchers have developed techniques through which to

enhance specific forms of consumer involvement.² In common with much other work on innovation, these theories and methods frequently distinguish between moments of invention and subsequent patterns of adoption and diffusion. This may be because questions about the relation between production, innovation and consumption fall between disciplinary traditions (Harvey, McMeekin, Randles, Southerton, Warde, 2001). Whatever the reason, consumers and producers are routinely held to occupy significantly different – if interdependent – positions with respect to each other at each of these two moments.

In what follows we blur both distinctions. By writing about promoters and practitioners (rather than consumers and producers) we allow that manufacturers and purchasers can be active innovators and advocates, and that both are involved in the (re)production of practice. By addressing the question of how first experience (invention) turns into repetitive or established routine we seek to develop an integrative theory capable of explaining the birth of a new practice and its reproduction in terms of a single conceptual framework. We do so by focusing on the making and breaking of links between material, symbolic and procedural elements. Having described the ingredients of Nordic Walking we show how these have been integrated and reproduced in making the practice what it is today.

A condensed picture of our findings and presentation is on the following table.

² For example, empathic design or constructive technology assessment.

Table 1: The (re)production of Nordic Walking

Types of linkage required	Integrating actions:
<p>Image–Skill</p> <p>How might ideas of the good life (fitness, well-being etc.) be integrated into a new way of walking?</p> <p>How to break associations with silliness, infirmity or fanaticism?</p>	<p><i>Promoters as second order producers/integrators</i> Physiological studies were used to prove the benefits of (properly practiced) Nordic Walking and so link it to an image of healthy living. Exel’s early advertising showed groups of Nordic Walkers to demonstrate that this was a normal, not a deviant activity.</p> <p><i>Practitioners as second order producers/integrators</i> Middle aged women set the trend. In doing Nordic Walking they adopted certain techniques and defined the situations and settings in which Nordic Walking was first located. The more people who do Nordic Walking, the more normal it becomes.</p>
<p>Material–skill</p> <p>How are sticks integrated into a new concept of walking?</p>	<p><i>Promoters as second order producers/integrators</i> Formal coaching, experimentation and measurement have been important all along. Manufacturers and promoters set up a network of professional trainers and a system of accreditation.</p> <p><i>Practitioners as second order producers/integrators</i> Users experiment for themselves, developing new routines and habits. The desire to do more results from the activity itself. Personal techniques and styles evolve around the sticks.</p>
<p>Image–Material</p> <p>How could the walking stick be re-defined as an instrument with which to achieve fitness and through which to enjoy nature?</p>	<p><i>Promoters as second order producers/integrators</i> Manufacturers have invested in design and advertising with the aim of making these connections. The term ‘Nordic’ was purposefully added to ‘walking’ in order to emphasize the relationship between walking with sticks and refreshing, revitalizing nature. This is a core theme for the International Nordic Walking Association led by Exel.</p> <p><i>Practitioners as second order producers/integrators</i> Through use, sticks are increasingly associated with specific outings: they are used for leisure, not for commuting; they are allied with other sorts of equipment – shoes, track suits, special walking socks etc.</p>