

# **Practice as a patterned network of heterogeneous materials - an actor-network approach to practice theory**

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## **ABSTRACT**

The actor-network theory has received growing interest amongst consumer researchers. This article proposes that the material-semiotic approach of actor-network theory (ANT) can be used to widen and redirect the scope of practice research. While recognizing the two theories as intertwined, it is suggested that the ANT framework can open new avenues in practice research in three ways. Firstly, the ANT conception of agency recognizes the substantial role of material relations directing attention on material agency. Secondly, the conceptualization of actor-network moves the focus from micro-level social practices to a wider network of relations. Methodologically, adopting the ANT guideline of following the actor can help to answer recent calls for embedding consumption in to its wider cultural and institutional context. Presenting first a short introduction to the theories of ANT and practice, the paper presents an elaboration on the possibility of conceptualizing practice in an ANT way: as a patterned network of heterogeneous materials.

## **INTRODUCTION**

Conceptualizing consumption as practice has offered an alternative to interpretation and to the complex landscape of contemporary social theories (Reckwitz 2002: 243). It has accelerated a vast amount of practice-based research on consumption and also prompted interest in other fields of study such as organizational studies (Nicolini 2009), marketing (Giesler 2012; Martin & Schouten 2014), market studies (Kjellberg & Helgesson 2007) and environmental studies (Spaargaren 2011).

While the diversity of and multiple standpoints to practice have enriched practice theory, they have also made it difficult to grasp. Instead of addressing the philosophical background, much research concentrates on empirical insights. Focusing on the data is clearly important, but from a disciplinary standpoint there is also a need for theory development (Olson 1981).

The aim of this article is to suggest the possibility of building on ANT framework on ontological and epistemological questions confronted by practice theory. Firstly, the symmetrical tenant of ANT extends agency also for objects. Secondly, the network in ANT is a tool that enables practice to be viewed as a network of actors and to attain the network of practices. Thirdly, following the actor assembling the network offers a methodological tactic for embedding consumption into its wider cultural and institutional context.

While Bajde (2013) recognizes ANT can help to tackle challenges faced by the consumer culture theory, it is suggested here that practice theory in particular can benefit from the underpinnings of ANT, enabling to shed light on the materials of consumption (Watson 2008) and facilitating the move to the "context of context" (Askegaard & Linnet 2011). This is also proposed by D'Antone and Spencer (2014), who draw on actor-network theory to interpret consumption as a collection of human and non-human entities and a network of multiple actors. Instead of human agency, ANT suggests agency is an emergent effect, dependent on networks of heterogeneous interactions (Murdoch 1998: 369).

In relation to theory development, there is a growing need to consider how practice research is carried out. Difficulties in converting abstract theorizations to suit pragmatic needs have recently directed interest to the methodological challenges of practicing practice (Halkier & Jensen 2011; Nicolini 2009; Sahakian & Wilhite 2014). This was highlighted at Nordic Conference on Consumer Research NCCR 2014, where the topic received its own session. These questions are addressed by opposing an ANT-driven methodology in relation to practice theory.

The article proceeds with a brief outline of the literature on actor-network theory, concentrating on the seminal works of Law and Latour on ANT, followed by a review of the theories of practice. Then, there is a discussion of the actor-network approach to practice theory with an introduction to the ANT perception on agency and the network view of practice. The methodological standpoint of ANT and its implications for practice based perspective are also discussed. Finally, possibilities for using ANT-framework for practice research are presented.

## **A SHORT GUIDE TO ACTOR-NETWORK THEORY**

Actor Network Theory emerged in the 1980s in the work of French sociologists Bruno Latour, Michel Callon and John Law, in the field of science and technology studies (STS). While ANT has its background in STS, it has later interested and been utilized by researchers in a variety of social science fields and has been applied in increasingly varied ways drawing on a range of theoretical resources (Aspara 2007: 13; Law 2009: 142). Thus, there is no single ANT, no coherent theory to be followed, but rather a heterogeneous assembly of ideas and interpretations. The focus of this paper is on the theoretical perspective and the grounding ideas of Latour and Law, as well as the work of Callon, Murdoch and others.

The N in the acronym, standing for network, is a slippery stone. Firstly, though it contains the word network, ANT is built on different paradigms and has been used in different debates than the vast body of network research. Latour (2005: 132) has even stated that the theory should have been named differently, supplementing network with worknet or action net to avoid confusion. Network in ANT does not stand for a physical, concrete network, and it does not have a technical meaning such as a computer network or a subway (Latour 1996). Instead of trying to describe a network, as do most network theories, the network in ANT is used as a tool to describe something (Latour 2005: 131). However, there have also been discussions on the similarities between ANT and other network theories. For example, Brekke and Hoholm (2005) have highlighted how ANT thinking could assist Industrial Marketing and Purchasing group to make descriptions that better link business relationships with other phenomena in society.

Secondly, networks cannot be explained simply in terms of the social relations of human actors. Instead, social relations are always held together by durable and resistant materials (Latour 1996; 2005; Murdoch 1998: 360). This is where ANT departs from network theories and the social network theory. Whereas social network theory concentrates on social relations between human actors, according to ANT almost all interaction is mediated through and held together by objects, and social is nothing other than patterned networks of heterogeneous materials (Law 1992: 381; Murdoch 1998: 360). Actor-network is an assemblage of various elements, humans and nonhumans.

Instead of social and social networks being in the background of everything, emphasis is directed to the relations between the actors and actor networks (Latour 1996: 11). As Law (2004) observes: "ANT's realism is a realism of *relations*, as opposed to the realism of objects that can be grasped 'out there', independent of their relations and deployments" (emphasis added). Everything in the social and natural worlds is treated as a continuously generated effect of the webs of relations within which they are located (Law 2009: 141).

The ontology ANT proposes is flat. Compared to traditional studies, it makes no *a priori* assumption of order relations, whether something is human or nonhuman, machine or nature, macro or micro, far or close, big or small. All entities are treated equally, and number and topography of connections is left to the actors themselves (Latour 1996: 5). Consequently, all actors that affect and transform the state of affairs have agency (Latour 2005: 53).

The main unit of ANT is actor. Actor, sometimes also called actant<sup>1</sup>, is a part of a network, but also always constitutes a network in itself. The actor does not fully recognize or know all of the elements in its network. This simplification, or "black boxing" in ANT terms, is a necessary part of agency. (Callon 1991: 142; Law 2009: 147) According to the flat ontology, actor can be anything: material or text, anything which has power to act.

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<sup>1</sup> Actant or actor, Latour (1996) uses the words in place of each other.

This is where ANT has links to Foucauldian thinking and its conception of power.

Latour proposed ANT as a universal framework (Ylikoski 2000: 305). Instead of being categorized as a theory, a more viable categorization is to consider ANT as an ontology or as a methodology (Law 2009, 141), or as both, since they are deeply interwoven: ontology defining what there is, and leading the way for the method, explaining how to study, analyze and capture that what exists. The methodological starting point is to follow the actor (Murdoch 1998: 369), and make a careful description of it (Latour 2004). While this makes empirical work difficult, it also helps to produce a clear picture of the subject under scrutiny. ANT is a toolkit for the researcher, and the tools are also suitable for practice research. Before discussing this topic, a short overview of practice theory is presented.

### **A GLANCE AT PRACTICE THEORY**

Conceptualizing consumption as practice provides an alternative to interpretation and to the complex landscape of contemporary social theories (Reckwitz 2002: 243). While *homo economicus* represents a rational decision maker and *homo sociologicus* a norm follower, *homo practicus* places the human being as a carrier of practice (Nicolini 2013: 4). Social becomes situated in practice and the basic unit of analysis becomes practice. This premises work as a starting point for practice theoretical discussion.

However, like ANT, practice theory is not a unified and homogeneous theory. Instead, a better term would be "practice based perspective" or "family of practice research". While ANT has its roots in science and technology studies (STS), they have both, to some extent, had an effect on the reformulation of the practice theory (Reckwitz 2002, 243; Shove & Pantzar 2005).

Nicolini (2013) has outlined six different theorizations of practice: the social praxeology of Bourdieu and Giddens, practice as tradition and community, practice as activity, practice from an ethno-methodology standpoint, contemporary theory of practice (leaning on Heidegger, Wittgenstein and Schatzki) and language as discursive practice. A more simple division is offered by Shove and Pantzar (2005). The authors distinguish between practice research that draws on Bourdieu, Giddens and de Certeau emphasizing routines, habit and competence, and work that is based on Schatzki (2001) and Reckwitz (2002). The early descriptions of practice leaning on Bourdieu, Giddens and de Certeau are thoroughly social "in the sense that material artifacts, infrastructures and products feature barely at all" (Shove & Pantzar 2005: 44). The theorizations by Schatzki and Reckwitz, on the other hand, consider the role of material in practice.

More recently, Halkier and Jensen (2011), drawing on Reckwitz (2002), Schatzki (1996) and Warde (2005), have distinguished a social constructivist approach. This takes as its starting point an analysis of how

consumption practices are socially produced and reproduced (Halkier & Jensen, 2011: 105–107; Leipämaa-Leskinen et al. 2014).

In its conception of practice theory, this paper draws on the synthesizing attempts and contemporarily popular theorizations of Reckwitz (2002), Schatzki (1996) and Warde (2005), as well as on the more material understanding of Shove and Pantzar (2005). Reckwitz defines practice as “a routinized type of behavior which consists of several elements, interconnected to one other: 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”. The interconnectedness of these elements forms a so called ‘block’ which cannot be reduced to any one of these single elements. (Reckwitz 2002: 249-250). The definition links symbolic meanings with doings and sayings.

Schatzki (1996) applies two different notions of practice: practice as coordinated entity and practice as performance. Practice as an entity refers to practice as a nexus of doings and sayings reconstructed through time and space. This entity is coordinated through understandings, procedures and engagements. Practice as performance refers to individual performance: actualization and carrying out the practice. Thus, practice is a coordinated entity, which also always requires performance for its existence (Warde 2005: 134).

In their definition, Shove et al. (2012: 24), aiming for simplicity, define practice by interdependent relations between materials, competences and meanings. The definition outlines the principal role of material in practice, distinguishing it from the much utilized ‘doings and sayings’ (Warde 2005), which neglects the materials in practice. In this respect, practice theory comes near ANT in its approach to material.

Next, practice meets ANT (again) as the possibilities ANT provides for practice ontology and methodology in consumption studies are discussed.

## **CONSTRUCTING PRACTICE FROM AN ACTOR-NETWORK PERSPECTIVE**

As noted in the previous sections, theory of practice and actor-network theory (ANT) are not too far apart. Both theories are better termed theoretical families with their roots in the STS, and they can also be characterized as process-depicting theories. The main constructs of practice and actor-network are both composed of several interconnected elements.

However, while ANT recognizes the role of material in human and non-human relationships, artifacts are included as elements - but lacking agency - in the constitution of practice. By adopting the ANT tenant of ontological symmetry to practice research, it is possible to achieve epistemological openness. Moreover, the network approach of ANT can be used to connect practices to the wider network of practices, while the simple rule of following the actor gives direction in applying practice theory to an empirical case.

## **Actor-Network Theory on agency**

In practice theory the emphasis is on practice, and the individual is seen as a carrier of practice (Reckwitz 2002, 250). However, the relation between materials and practices remains under-theorized (Shove & Pantzar 2005, 44) and the central ANT tenant of symmetry or flat ontology that grants agency to non-human objects such as artifacts and technologies has been only partly adopted.

Instead of facing practice open minded, practice theory postulates individual into the intersection of practice (Warde 2005, 143; Reckwitz 2002, 256). In Schatzki's (1996: 89) conceptualization of practice as coordinated entity and practice as performance, agency is given to the one who understands, for example, what to say or do, knows the procedures such as rules and instructions, and comprehends the engagements or teleoaffective structures embracing ends, projects, tasks, purposes, beliefs, emotions and moods. Practitioner becomes the integrator of the elements of practice when performing practices.

However, it should not be the researcher's job to decide in the actor's stead what groups make up the world and which agencies make them act (Latour 2005: 184). To study consumption in an open and balanced manner we cannot presuppose active consuming subjects and passive consumed objects (Bajde 2013: 235). Instead of placing the individual at the center of the practice, ANT shifts the focus to the interplay of actors and allows accepted subject-object relations to be seen in a new way. A television can be an active material object and a change agent that impacts on family life and the spatial aspects of the home (Chitakunye & Maclaran 1999: 53). Similarly, though we know it is not good for us to sit, and though we are constantly advised to stand or walk more, offices, desks and chairs seem to force us to take a seat. Likewise, in Bettany's account, a manual grooming device employed in the Afghan hound community becomes indeterminate, acting multiple roles while at the same time becoming an important actor in the formation of others (Bettany 2007: 54). This does not mean that objects would have an intention. Rather, it shows objects and things can be active, act and alter networks.

For most practice theorists practices are arrays of human activity (Schatzki, 2001: 2). Why could a television or something else non-human not be in the nexus of practice? Why is it necessary to predefine a center point, or by extension, why define a nexus at all? Latour (2005: 44) outlines practice as a node, a knot and a conglomerate of many types of material and human agencies. Social agents are never located in bodies and bodies alone, but rather that an actor is a patterned network of heterogeneous relations, or an effect produced by such a network (Law 1992: 384; Murdoch 1998: 360). Agency is attributed in terms of formations of meaning and materiality in which objects, bodies, and other heterogeneous entities are embedded (Bettany & Kerrane 2010: 1747). With this in mind, agency is next construct in relation to a network.

## From an actor-network to a practice-network

In ANT actor is a part of a network, but also always constitutes a network in itself. The patterned network of heterogeneous relations becomes and is the actor. This way agency is always a property of a network. Every action traditionally ascribed to human beings – thinking, writing, working and so on, are actually generated in networks that pass through and ramify both within and beyond the body (Aspara 2007: 41).

While practice theory places practice as a basic ontological unit for analysis, the hyphen in actor-network emphasizes the relation of the actor and the network, the network of translations behind every actor. A network or worknet or action net (Latour 2005: 132) view of practice draws together the network of practices, linking practices in space and time and revealing the power structures ordering practices (Callon 1991, Murdoch 1998).

Though practices are acknowledged as being interrelated, there has been little research into how different practices affect one another (Warde 2005: 149) and, more importantly, how practices interrelate (Shove & Walker 2010: 476; Hargreaves 2011). It is suggested here that ANT enables consumption practices to be interlinked in the wider material and societal context (Askegaard and Linnet 2011, 384).

In ANT terms, elements of practices can be *black boxed*: a household is comprised of heterogeneous actors, and similarly these actors, like a TV, are assembled by a network of actors, all being connected by different practices. For example, when seeking to enhance sustainable lifestyle, ANT allows us to see the futility of concentrating simply on giving instructions or setting regulations for consumers, since acting sustainably is the product of the whole network. The infrastructure, culture, and technology; the products sold in local supermarkets, the information in newspapers and all other heterogeneous materials are equally important. But how does this differ from what practice theory has to say? Though practice as entity resembles ANT's network of heterogeneous materials, in practice research practices are connected and assembled through the *individual*, "the unique crossing point of practices" (Reckwitz 2002: 256). In ANT "Society, organizations, agents and machines are all effects generated in patterned networks of diverse (not simply human) materials" (Law 1992, 380).

Methodologically, this means following the actions of network-builders instead of following the practitioner. It is akin to concepts like Kopytoff's (1986) cultural biography of things that tracks an object's origin, exchanges, uses, and transition points, with the distinction that the object, the actor, can be anything. Pragmatically this involves the use of methods like observation that make it possible to follow material as well.

Practices are engaged in the practice of everyday life and consumption is situated at the intersection of multiple practices that are connected to the network of institutional practices. Adopting the symmetrical tenant of ANT could help to follow the network of connections, incorporating the material and context. In studies of market, ANT has already been utilized to address the role of marketing in the construction and operation of markets (Araujo

2007: 211). It is now time for the possibilities of ANT to be utilized in practice research. In the next section, the methodological consequences of the network view are discussed.

### **The Actor-Network method**

After introducing the ANT perception on agency and the network view on practice, the methodological implications of ANT-based practice theory perspective are now discussed.

The methodological challenges in using practice theory have been acknowledged by many scholars (Halkier & Jensen 2011; Halkier, Katz-Gerro & Martens 2011; Nicolini 2013). ANT's starting point of following the actor addresses the methodological shortcomings of practice theory unresolved by Schatzki and other practice theorizers (Nicolini 2013: 180).

It is not suggested that ANT would make things simple; on the contrary, its methodological opacity offers no shortcuts. However, ANT does offer a novel framework to study practice as an entity as well as entangled practices, connected to one another. This is especially beneficial when a holistic, systemic approach on practices is sought, such as when looking at practices in relation to sustainability, where attention should be carefully directed at all elements of practice. In addition to doings and sayings, and objects, tools, devices and apparatus (Halkier et al. 2011, 6), we need to grasp the institutional surroundings like infrastructure, policy and technology, and also the bundle of interrelated practices, such as the practices of the policy makers. In order to achieve this, the following route map is suggested: Firstly, the researcher should adopt the symmetrical tenant of ANT and not decide in advance what is related and important, whether an interaction is micro or macro, big or small, social or technical. Scale is the actor's own achievement (Latour 2005: 184). ANT is all boundary without an inside and outside and so, instead of deciding on which layers to include, the sole question is whether or not a connection is established between two elements (Latour 1996, 6).

The task is then to carefully follow the actions of the heterogeneous network-builders (Murdoch 1998: 369), focusing on the network of connections. If an actor makes no difference, it is not an actor (Latour 2005: 130). Following Latour:

Actor-networks do connect and by connecting with one another provide an explanation of themselves, the only one there is for ANT. What is an explanation? The attachment of a set of practices that control or interfere on another. No explanation is stronger or more powerful than providing connections among unrelated elements, or showing how one element holds many others. (Latour 1996: 11)

ANT enables the interlinking of consumption practices to their wider material and societal context (Askegaard & Linnet 2011). "Society, organizations, agents and machines are all effects generated in patterned networks of diverse (not simply human) materials" (Law 1992, 380). On a



tactical level, using multiple methods might turn out to be most fruitful in capturing the network of practices and revealing the agencies at work.

Though ANT manages to remove layers and connect micro and macro, it comes at a price. The objective is giving a good description, not on interpretation. Tracing the network for a good description involves a lot of work. However, this way it is possible to obtain a better picture of a complex phenomenon.

## **CONCLUSION**

This article has attempted to enrich practice theoretical discussion and research by proposing (re)intertwining of ANT and practice-based research. This could enhance practice-based research in three ways. Firstly, while the practice-based perspective places the individual at the intersection of practices, the symmetrical tenant of ANT places all elements on the same line. Agency can be ascribed to an object but also to the assemblage of heterogeneous material, contributing to a better understanding of material in our lives. Methodologically, this might mean following an object instead of a human. Secondly, the network view of ANT could help to unveil the interconnectedness of practices and trace the micro and macro. Thirdly, this can be attained by following the actor in order to picture the network, incorporating the local and institutional context.

The ANT framework for practice research could be especially fruitful when looking at complex integrative practices and when the aim is an enriched, holistic understanding. A good example is research on sustainable practices, where ANT description could offer answers on local and global, micro and macro obstacles impeding sustainable practices. While following the actor is a somewhat vague guideline, and tracing the network involves hard work, it has the potential to capture a complex phenomenon. Though the ANT framework might not be adopted entirely, it offers good direction and inspiration for practice research.

ANT has already been utilized by certain consumption researchers for new perspectives and conceptualizations (Chitakunye & Maclaran 1999; Bettany 2007; Bettany & Kerrane 2010; Thomas, Price & Schau 2013). However, the full potential of ANT and the benefits described here remain to be unexplored.

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