

How do material objects transcend the boundaries between professional and domestic practices?

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TN 4 – How do material objects transcend the boundaries between professional and domestic practices?

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Introduction

Sustainability-oriented interventions in the built environment tend to involve interactions between many different practices. When aimed at the domestic sector, these interactions between professional and domestic practices play an important role in influencing the potential success of these interventions. A range of approaches has been developed that yield insights into organizational and domestic practices, and the “everydayness” within and between these (e.g. Wenger, 2000; Lamont and Molnár, 2002; Nicolini, 2009; Janda and Killip, 2010; Hargreaves, 2011; Nicolini *et al.*, 2012; Karvonen, 2013). From these earlier studies, the role of objects in and across practices emerges as central to understanding (aspects of) the *connection* between professional and domestic practices.

This Thinking Note explores this role further, using the example of LED lighting – an iconic example of a sustainability-oriented intervention in the built environment. A widely acknowledged problem with this kind of intervention, which relies on technical efficiency improvements as a means to reduce the environmental impact of consumption, is the phenomenon of rebound effects. In spite of improved energy efficiency of lighting technology, energy consumption for the use of light has been shown to be increasing due to an increased consumption of light (e.g. Herring and Roy, 2007; Evans *et al.*, 2012).

The exploration is structured in the following way. First, a number of central concepts from literature are introduced. Next, we discuss how and to what extent these concepts shed new light on the dynamic relationship between professional and domestic practices in processes of intended change. We explore whether such concepts for approaching relations between professional and domestic practices through objects are helpful with regard to making effective sustainability interventions, and what emerge as central themes for the development of practice-oriented approaches for that purpose.

Concepts for approaching relations between professional and domestic practices

This section distils a number of concepts from the literature that suggest approaching the relation between professional and domestic practices through objects. However, due to limited space we will for the purpose of this Note primarily concentrate on the main concepts proposed by Nicolini *et al.* (2012).

In the context of organization studies, Nicolini (2009) advocates for materiality and objects to play a more central role in practice theory, and argues that more work is needed to conceptualise how practices hang together. Building on these arguments, Nicolini *et al.* (2012) elaborate on the role of objects in relations between (professional) practices, and argue for the advantages and limitations of focusing on objects for understanding these relations. The paper builds on the idea that ‘material technologies and artefacts play a central role in organizing processes’ (p.613). This idea has become a ‘characterizing trait of contemporary social studies of technology, with authors such as Latour arguing that the stability of human social orders beyond particular contexts of action can only be explained when one allows for the work performed by objects’ (Nicolini *et al.*, 2012, p.613.). However, drawing on Star, Nicolini *et al.* (2012) argue that ‘although the material dimension of objects matters, such materiality derives from action, not from the sense of prefabricated stuff or ‘thing’ness’ (p.613, end). Materiality of objects is therefore only “there” or intelligible when practices are performed. Because ‘practice is a multifaceted and multi-dimensional phenomenon’ (Nicolini 2009, p.1395), Nicolini *et al.* (2012) advocate the use of different kinds of theoretical lenses to understand objects and materiality and their changing role and function over the course of collaboration. The lenses, they suggest, are “boundary objects”, “epistemic objects”, “activity objects” and “material infrastructures” (for further definition, see Nicolini *et al.*, 2012).

Similarly, Wenger (2000) discusses boundaries between “communities of practice”, which is useful to relate to Nicolini *et al.*’s focus on collaboration between different actor groups because it also refers to the role of objects. Wenger (2000, p.233) argues that ‘At the boundaries [of communities of practice], competence and experience tend to diverge: a boundary interaction is usually an experience of being

exposed to a foreign competence [...]. If experience and competence are too disconnected, if the distance is too great, not much learning is likely to take place either'. Whilst it would be an over-simplification to suggest that "the professional" and "the domestic" are, in themselves, communities of practice, Wenger's application of the idea boundary objects (artefacts, discourses, processes) operating at the boundaries between distinct practices clearly resonates with suggestions made by Nicolini.

Consequently, meetings and dynamics between professional (organizational) and domestic (everyday) practices may be captured if one looks at what happens at the boundaries of these practices, and how knowledge, use, competences and meanings are shared, mediated and negotiated by approaching objects through a range of lenses. Boundary objects – those that are recognized across practices, but perceived and related to in different ways within them (Star and Greisemer, 1989) – seem to form a particularly important concept, but we will also explore the relations through "epistemic objects", "activity objects" and "material infrastructure", which are elaborately introduced in Nicolini *et al.* (2012).

The example of LED lighting

This section will briefly explore the advantages and limitations of centralizing objects in discussing relations between professional and domestic practices, by taking the object of the LED light bulb as an empirical example and using the conceptual lenses suggested in the literature, which we have briefly presented above. Together with energy labels and the ban of incandescent bulbs, the LED light bulb has taken centre stage in the European policy approach to sustainable consumption and production, involving efforts to improve energy and environmental product performance and to foster uptake by consumers.

An incipient investigation reveals that domestic (LED) lamps play a role in many different practices, including professional practices of R&D, design and installation, policy making, environmental campaigns, sales and recycling and practically all domestic practices. From this wide range of practices, it turned out to be very difficult to identify distinct sets of professional and domestic practices to explore relations between. Even in the light of a particular objective such as reducing energy consumption for domestic lighting, a wide variety of more and less directly related professional and domestic practices come to the fore, such as publishing and reading, legislation and voting, shopping and packaging design to name a few. For the sake of this Thinking Note, however, we choose to go deeper into relations between professional interior design and domestic practices for making a "good" home. This choice was made because changing ideas of what a "good" home is like seem to have a direct relation to increases in the consumption of light. For discussions of complex relations between practices we refer to the Thinking Note on Systems of Practice.

LED lamps as objects play a role both in practices of interior designers and domestic practices of making a home. It is ambiguous, however, to what extent the light bulb, or even light, acts as some kind of material boundary object between them. They may form part of each, but play a lead role in neither. It is therefore interesting to look further into how lighting is negotiated across these practices through doings and sayings, for example by looking at the boundaries of (communities of) practices, and where practitioners "meet". One of the ways in which interior designers and home-making may "meet" is through stylised photos of designer's projects in magazines and catalogues. Here, lighting is part of the "made" home. It may be more insightful to use these objects as the way through which our practices are related, and look at them through the different lenses selected earlier.

Exploring the role of such photos as *boundary objects* would imply considering their multiple interpretations and studying how they are translated into actual interiors and in particular, their lighting patterns. It might then be relevant to look into the texts accompanying them, the carrier's context they are received in, and ask questions about what forms of interior design and types of homes they render as inappropriate. Viewing photos of interior designs as *epistemic objects* further seems like an interesting exercise. The 'deep emotional holding power' (Nicolini *et al.*, 2012, p.614) ascribed to them may imply an important role for them in shaping domestic interiors. Such photos however, do not fit the idea of *activity objects*, because they are too concrete to be seen as 'emergent, fragmented and contradictory' (for further elaboration, see Nicolini *et al.*, 2012, p.614). Their underlying ideas of a "good home" might form such an object though and be studied through this lens. Finally, thinking about the *material infrastructures* involved in the relation between professional and domestic interior design practices highlights the role of the media through which pictures of 'good' homes reach householders.

In concluding, changes in ideas of what a “good” home are like – and the appropriate lighting patterns that form part of this – are formed within communities of professional interior designers. Their ideas reach and engage with domestic practices of homemaking through stylised photos of interiors and their accompanying texts, in a variety of media. When aiming to reduce domestic energy consumption for lighting, it may thus be argued that these particular ‘meeting points’ might be an effective place for intervention. Whether it is the most effective place – this set of practices was selected relatively randomly from a wide range – and what such interventions might look like remains open.

Final thoughts

To conclude, in this Thinking Note we have picked up on the suggestion of Nicolini *et al.* (2012) to combine practice theory with a number of additional concepts to shed new light on relations between (professional and domestic) practices, and to centralise objects as bridges between separate contexts of action. Our brief illustrative presentation on LED light shows that such an exercise can highlight so far underexplored opportunities for intervention, but also that it has clear limitations. Any material object plays a role in a plethora of related practices and so far, there is little guidance on making a useful selection within these. It also became clear that changing your focal object may be necessary when going into depth on a particular relation. Which material objects should be centralised? In this regard, care has to be taken to prevent these objects to become topics of study in isolation. Objects obtain their meaning and role only when integrated into performances and Nicolini *et al.* (2012) highlight that object boundaries can differ, depending on what role the object plays, and when it plays that role. Verbeek’s (2006) elaboration on Akrich’s (1992) concept of scripts and how material artefacts inhibit and invite certain actions and interpretations might be helpful here.

Finally, returning to Wenger’s discussion of boundaries raises questions of how objects facilitate knowledge exchange between relatively separate communities of practice and what role they play in the processes of learning. In this regard, a focus on objects may be supplemented with an analysis of “brokers” (people who may introduce aspects of one practice into another) by Wenger (2000). Within the built environment, the movement of boundary objects between the professional and domestic is often facilitated by such brokers, for example, the intermediaries highlighted by Janda and Killip (2010). One example of this is interior designers and sales assistants that sell lighting products along with the practice and ideals of ‘home’ that they have come to represent. Thus, one suggestion to extend the current discussion of boundary objects would be to consider the brokers tasked with facilitating these transitions.

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