

Conceptualising conjunctions: Understanding change in energy related practices in urban Southeast Asia

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Introduction

The outline of a theory of practice by Shove et al. (2012) suggests that the ways in which elements of practice – meanings, competences and things – circulate and link, help explain how practices are brought about, how they evolve, diffuse, and die. Shove et al. (2012: 22) suggest that by paying attention to the trajectories of elements, and to the making and breaking of links between them, it is possible to describe and analyse change and stability without prioritizing either agency or structure. This view has been employed in various studies that identify elements of practice and examine how these elements circulate (e.g. Shove & Pantzar, 2005; Gram-Hanssen, 2011; Shove et al., 2014).

However, when trying to understand how practices diffuse and change over time, two shortcomings of the elemental understanding of change stand out. First, it has not been fully acknowledged and conceptualized how the elements circulate *internationally* amidst the global mesh of practices. In fact, theories of practice have been criticized of being short of theoretical means to account for how practices can be connected at a distance (Nicolini, 2009: 179). What follows is that practice theory is inadequately addressing the role of the complex web of policy and business practices in the circulation of elements globally in a highly interconnected and ‘globalised’ world. And taking a step further, the *origin* of elements has not been addressed, or in other words, it has not been asked ‘where’ the elements really come from.

A second and a related shortcoming – and the one we choose to focus on in this paper – is pointed out by Shove (forthcoming) in her treatise on the roles of materiality in practices. According to Shove, the “language of elements and arrangements is of limited value if we want to know how and why specific patterns of production and demand arise and are engendered by correspondingly specific conjunctions of practice”. What the elemental approach overshadows is that objects form networks, and hence practices link in complex ways. Shove thus points to the limited value of elements in building a more relational and dynamic understanding of practices and their linkages. To overcome this, Shove proposes to distinguish between different roles of objects, and to treat objects not as isolated entities but as always integrated within and always inseparable from more extensive assemblages. Distinguishing things in the background, things in use and things that are used up provides a subtler approach that acknowledges distinct roles for different objects. However, this suggest more work in answering how different kinds of elements are brought together.

Against this, in this paper we seek to take the elemental idea of practices further by addressing some of its flip-sides – especially its power to explain change. To understand how practices converge and

diverge globally, our analysis steered attention to the ways things hang together and form 'conjunctions' rather than merely focused on the changes in distinct elements or practices. We play with the idea of conjunction and harness it to think about changes in the patterns of demand in a way that acknowledges their relational character. We conceptualise conjunctions as interconnections not only *within* practices but rather *between* practices and their elements.

Our writing is based on the recent empirical fieldwork conducted in Bangkok, Thailand and Hanoi, Vietnam in February and March 2016. We focus on Bangkok and Hanoi not only because of the increasing energy demand in these expanding urban areas, but rather because of the recent and projected rapid changes in systems of provision, patterns of domestic practice and related technological devices. Understanding the dynamics of this change calls for deeper analysis that acknowledges the different trajectories along with change happens, and recognizes how patterns of consumption become similar and/or different. Our focus is steered to 'urban middle class' – here loosely understood as the rooting of certain norms and conventions that are materialized through distinct social practices such as air-conditioning – as its rise represents specific challenges for sustainability, as noted for example by Hansen et al. (2016).

The fieldwork consisted of 25 household interviews in Bangkok and 5 household interviews in Hanoi. Dwellers of both private houses and condominiums were interviewed. We asked interviewees about their present and past everyday practices in the home and their use of electronically powered appliances such as kitchen appliances, air-conditioners, and washing machines. During the interview, a timeline with appliances was drawn, recording the different appliances the respondent had in different houses they had lived in. The interviewees also showed us around in their house, and during these house tours we asked more questions on their use of appliances. We also took photographs of appliances and rooms. At this point, we would like to note that our use of the empirical material is still very tentative as we are still in the process of interviewing when writing the paper. Also, these interviews are only part of the first phase of fieldwork, which will be followed by a second visit to Southeast Asia later in 2016. For these reasons, in this paper we only focus on Bangkok and changes in kitchens.

In our study, we hope to work towards a novel theoretical approach capable of conceptualising crucial processes of (international) circulation and convergence, and the necessarily localised reproduction of energy-related practices. In doing so, we further the sociological interest in household appliances that makes the broader argument for not treating household appliances as stand-alone objects, but situates objects within a changing sociological context, and within a dynamic environment of related technologies (Shove & Southerton, 2000; Hand & Shove, 2007). Our research views trends in domestic energy demand as outcomes of the complex intersection of local traditions; the international circulation of materials (including appliances); forms of competence and meaning and emerging habits, for instance of comfort and refrigeration.

From elements of practice to things hanging together

Conceptualizing how elements link and hang together is not a new task in social sciences. As noted, social practices have been conceptualized as linkages between different elements (Reckwitz, 2002; Shove et al., 2012), and practices further hang together to form bundles and a plenum (Schatzki, 2014). Beyond practice theory, concepts such as innovation junctions, consumption junctions and assemblages all underline things hanging together, and they do so in a way that recognizes linkages between different domains of doing, or practices if you like. First, *innovation junction* by de Wit et al. (2002) is seen as a space in which different sets of heterogeneous technologies are used in support of social and economic activities and in which, as a result of their collocation, interactions and exchanges among these technologies occur. Innovation junction fosters a location-based interaction and

exchange *among sets of technologies*. Technology development at innovation junction tackles with the existence of different sets of technologies at one location, for example in offices.

Another view to space as sites of junctions is provided by Cowan (1987), who defines the household as “the *consumption junction*, the place and the time at which the consumer makes choices between competing technologies”. Rather than focusing on the integrative aspects of technology, her understanding of junction emphasizes the role of the practitioner amidst things. In this account, the career of the practitioner is characterized by the changing arrangements of elements over time, and consumption conjunction helps unpack the role of the practitioner, who is positioned amongst the changing arrangements.

Finally, *assemblage* has been used as a concept to describe how different elements come together. Assemblage can be used both as a name for relations between objects that make up the world, and as an orientation to the objects (McFarlane, 2011). Deleuzian understanding of an assemblage is a kind of symbiosis, and co-functioning is its only unity. The understanding of assemblage differs from the very spatial links of a junction. According to MacFarlane (2011: 655), “there is no necessary spatial template for assemblage; the spatiality of assemblage is that of sociomaterial alignment, which brings into view a range of spatial forms, from those generated by historical processes of capital accumulation and social polarization to random juxtapositions and disruptive events and predictable daily and nightly rhythms of activity, atmosphere, and sociability.”

How conjunctions then evolve and are differently spread in time and space brings another challenge for the analysis. One way to look at change is to acknowledge the role standardisation plays in the life of conjunctions. For conjunctions to stabilize, links between elements need to be standardized, or put it differently, conjunctions evolve along what becomes standard. For example, it has been argued that objects need to be particular in order to travel in global value chains, and standardization plays a key role in this (Star & Lampland, 2009). Standards can be conceptualized in different ways but very bluntly put, they are the recipes by which we create realities: they invoke categories and span the material and the ideal, positive and normative, and ethical and factual (Busch, 2011). Norms and standards of doing are also relative in the sense that they can be assessed differently from different vantage points (Star & Lampland, 2009; Rinkinen, 2015). A further important feature of standards is that they are increasingly integrated with one another across organisations, nations, and technical systems (Star & Lampland, 2009). Standards are also widespread, and an ecology of standards surrounds any individual instance. Some appliances create standards for performances, thus affecting the demands for other appliances. When the sort of artful integration discussed by Suchman and Trigg becomes an ongoing, stable relationship between different social worlds, and shared objects are built across community boundaries, then (boundary) objects arise (Bowker & Star, 1999: 292). Moreover, many materials have a ‘closed script’, which means that their relation to other artifacts is tightly defined (Akrich, 1992). Design is a way to establish and institutionalize conjunctions, and affect the ideals of conjunctions and how they change.

In sum, conjunctions are about interconnections, plugging things together in space but also over time. The following section takes the task of describing conjunctions at home and thinking about how they have changed over time. As things form flat conjunctions, change is relational, not hierarchical. In the following we think about in which ways this has happened in Southeast Asia.

Emerging and establishing conjunctions in Bangkok

Kitchen conjunctions over time

Food is hugely important for people in Thailand. There is an enormous variety of cuisines within the country, and people – especially younger – like to move between traditional Thai-style home cooking

and restaurants with foreign styles of cooking (e.g. Japanese, Korean, Italian). In Bangkok, there is also an enormous variety in terms of outlets, ranging from cheap street foods to food courts, to restaurants in shopping malls and fancy hotels. Similarly, the traditional fresh markets are operating in an increasingly competitive food supply markets, where supermarkets are becoming more and more established forms of shopping. That said, many Thai people enjoy eating at home, and kitchens and to some extent the styles of cooking and diets have undergone vivid changes since the introduction of electricity.

The kitchens in Thailand can be described as traditional Thai-style kitchens, which differ from the kitchens in the UK, for example. First thing we noticed is the different understanding of storage space. Rarely having cupboards, especially above the work level, tables, floors and shelves are filled with kitchenware (see pictures 1 and 2). Second, cooking and food-related activities are often spatially spread within the home: the gas stove and some of the shelves are often located outside in the patio, the fridge is sometimes located in the living room. Often kitchens are located in the back of the house and they have access to the patio, where parts of the cooking are done. This has roots in the kitchens as seen in the traditional wooden Thai houses, where there is no separate space for kitchens but rather the house is in one open space. Cooking with charcoal was often done outdoors, as well as washing the dishes. From this the design of the house has moved to (more Western-styled kitchens) where cooking activities are in one separated space. This has happened along the introduction of electricity as kitchens are filled with appliances that are used more conveniently in one separate space.

Over the past decades, kitchens and cooking practices have undergone many changes. As noted, many of the interviewees had shifted from cooking with charcoal to the use of gas or electronic stoves. Many reported a shift from traditional storing of foods – food cupboards and daily shopping – to less frequent visits to the supermarket, less frequent cooking, and reliance on fridges and freezers.

When discussing the arrival of kitchen appliances, many of our interviewees reported that the first purchase after the electricity was often the rice cooker. Rice cooker liberated time and reduced the use of fuel. Second was the fridge, which made cooking and shopping less frequent, and liberated time. One of the early purchases was the fan, which was often used in the open space of the house, and thus also eased the heat for cooking. Kettles, ovens, electric stoves, hubs, toasters, water-purifiers, coffee machines, milk-steamers and smoothie-makers followed.



Picture 1. Storing appliances in a Thai kitchen.



Picture 2. Appliances and cupboards are self-standing.



Picture 3. A fridge located in the living room.



Picture 4.

Zooming to the use of appliances shows a lot of variance. People for example use fridges to store and cool different kinds of items such as meat, vegetables, fruits, but also water, medicine and cosmetics. Some things like chocolate and sugar, which are not an obvious fridge-dwellers in colder climates, are often stored in the fridge due to the warm weather and insects. Moreover, what people keep in the fridge orchestrates and reflects their cooking and eating. Milk is kept in the fridge, and meat is either frozen or refrigerated. Previously, Thai kitchens had a storage cupboard for storing food, and some remembers that food previously stayed longer than it does now. Storing food in the fridge means that people need to shop for food less often.

The fresh markets, and the availability and affordability of ready-cooked foods has been and still is significant in Thailand. Some of our interviewed families actually never cook their meals themselves. Yet, their kitchens are equipped with fridges, rice cookers, kettles and stoves. Some families, on the contrary, cook all their meals at home. In these cases, cooking is one of the important daily activities done at home, which is either done in the mornings or evenings, or both. Many reported that food is shopped once a week at the local market, and vegetables are stored up from a local fresh market or from a near-by food van during the week. It varies how often they go to the supermarket but younger people seem to go more often, for example to buy milk or yoghurt for their kids.

Our next steps will be to recognize linkages between practices and see how conjunctions in kitchens have evolved in the two different countries, Thailand and Vietnam. A further step is to compare the evolvement of conjunctions in these different cultural contexts. We conclude this paper with a brief tentative discussion on conjunctions and change.

Discussion and conclusions

People report changes in diets, styles of cooking, shopping, appliances, kitchen space, but also in the temporal organization of daily lives including how often and what time of the the day cooking and eating is done. It is easy to see and say that kitchens, kitchen appliances, cooking and eating practices have changed over the past decades in Bangkok. In our interviews, we identified individual histories with appliances, which tell different views on convergence and divergence. While many things change, many things linger and stay the same. But what is it really that has changed and changes – where should we steer attention to?

Our main intention in this paper has been to start experiment with the idea of things ‘hanging together’ in space and over time. Rather than having the trajectory of either one device or one practice as the main unit of analysis, we look at interconnections between practices. In doing so, we are not looking for a way to analyse practices in isolation but to connect them to broader patterns of consumption and institutions. However, this paper succeeds to make only very tentative observations.

Our use of the notion of conjunctions suggests a more relational understanding of objects and change. In particular, analyzing how conjunctions change over time provides an approach to conceptualise change, an approach that acknowledges for example the changing use of space in the home. We can see that conjunctions are ‘spread’ across different urban sites and spaces, and the conjunction of devices is not centered around home. Thinking spaces such as offices or households as sites which bring heterogeneous technologies together helps understand the relations between artifacts, especially their combined use and the extension of the functional characteristics of technologies, including the transfer of functional characteristics from one technology to another. For example, household appliances such as the fridge-freezer, washer-dryer, and laptops integrate functions and potentially reduce the number of appliances purchased.

Interestingly, we see change that is not linked to a one practice but to a field of things. Thus, what the accounts on circulation of elements fail to grasp, is that homes accommodate a variety of practices in and over time. Households are sites for tasks and projects involving the use of many objects at once: they only rarely deal with one object at a time. For example, a variety of systems of provisions is involved, and a wide of range of different elements are circulating and in different phases of stabilization. Domestic spaces are filled up with freezers, air conditioners, lighting devices, kitchen appliances, and the use of these overlap, sync, and cross. This suggests that an analysis that not merely looks at trajectories of practice but also the important points of intersection, overlap and mutual influence – how elements of practice are to a degree shared.

Moreover, thinking beyond specific sites of objects in use, such as homes, elements (devices, meanings, and competences) are also manifested and stored in different parts of the “practice world” (in infrastructure, homes, by commercial actors). This ecology of things has its own, complex change dynamics and does not follow one converging trajectory. For example, in Southeast Asia more storage space to cool food is needed due to the changes in the chain of supply, and the task of cooling is allocated more and more to the supermarkets and households. This changes how things move around, rest and evolve in the conjunctions of things. There are many, very complex mechanisms that support these moves. Change happens in different sites (work, technology, global markets). In material terms, all this suggests that change is not linked to one appliance, but rather to a complex field of things.

Thinking domestic household as “an assemblage of materials and practices involving ordinary consumption and habitual behavior” (Hand & Shove, 2007) turns attention not only to people as practitioners but rather to a set of practices that transpire in certain space. Cluster of objects are where practices intersect. Conjunctions offers an alternative to thinking about practices as entities and more open approach to material engagements (see also Rinkinen et al., 2015) and also to change.

In our study, we plan to pay more attention to the following things in order to understand changes in daily life:

- Sequences of material conjunctions
 - o How standards standardize these sequences?
 - o Is this sequencing a process of rationalizing rather than experimentation?
 - o Are some ‘nodes’ within conjunctions especially crucial?

- Resilience and fragility of conjunctions – for example conjunctions in relation to infrastructural arrangements and the co-existence of systems
- How conjunction evolve through different ways of expelling and excluding? How ‘inside’ and ‘outside’ categories change?

The idea of conjunction is a means to focus on the creeping nature of dependence in energy related practices. We are hoping to move towards an account for how seemingly innocent aspects of home are shaped by global circulation of technology, and ideas, influenced by multinationals, government sand multilateral banks.

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