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Cycles of *Dispositions–Unfoldings*. A Retro-ANT View of Practices

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Abstract

The present contribution intends to probe a view of practices as cycles of disposition and *unfoldings* or, which is the same, of *virtualities* and *actualizations*, and to show how such view allows not only to take artefacts into account, but also to account for their contribution to the unfolding of practices. A specific practice, related to squeezing oranges in a sink by using *Juicy Salif*, the (in)famous Philippe Starck's squeezer, is exploited as empirical ground for exemplification. In order to probe the proposed view of practices as cycles of disposition and *unfoldings*, the present contribution engages in an epistemological and in a methodological reflection. On the one hand, it investigates the role of *dispositions–virtualities* in past and present approaches to practices. On the other, it recovers the disused Actor-Network Theory's notion of "script" as a way to describe-analyze artefacts' dispositions or *virtualities* and thus accounting for their contribution to practices. In the end, the paper, by investigating the role of *dispositions–virtualities*, recovers the structuralist legacy to the reflection on practices, showing how Actor-Network Theory can be considered a "distributed structuralism".

Keywords: Actor-Network Theory; Actualization; Design; Script; Structuralism; Virtuality.

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1 Introduction



Fig. 1. Squeezing oranges in the sink.

The picture above (Figure 1) is not sharp enough to clearly see what is happening — I took it around fifteen years ago, with an early non-professional digital camera. Nevertheless, even if the picture were sharper, it would be still quite difficult for you to discern what is happening, unless you know about design. Then, you would recognize that the hands at the center of the picture are using *Juicy Salif (JS)*, the squeezer designed by Philippe Starck and produced by Alessi in 1991, in a sink.

I am going to exploit such practice, part of a larger practice related to breakfast preparation, in order to reflect upon practices and approaches to practices.

It is not the first time I analyze this case (Mattozzi, 2010), but it is the first time I tackle it as a practice. However, already in the previous article I resorted to the notion of *script* and to the descriptive-analytical practice of *de-description* (Akrich, 1992; Akrich & Latour, 1992; Latour, 1988; Latour, 1992; Latour, 2000) in order to attempt what I will try to achieve here — taking into account and accounting for the specific contribution of the squeezer to such practice.

The present article is, then, empirically grounded. However, it has an epistemological-methodological character.

Methodological, because I will address the issue of *how to* describe–analyze artefacts taking part to practices or, better, *how to* describe–analyze the contribution of specific artefacts to the *unfolding* of a specific practice.

Epistemological, because, in order for the proposed method — related, as I said, to *de-description* or *script analysis* or *script approach* — to be not only recovered, but actually recognized as a descriptive-analytical method and used as such, I need to open a space in the present epistemological arrangement. I need, in other words, to create the conditions of possibility for it to be thought as a method.

Given the fact that, by referring to *script* and *de-description*, I will stick to “classical ANT”’s descriptive notions, categories and models — in order, though, to delve into them and probe their present productivity —, I consider mine as a *retro-ANT* contribution to the reflection on practices.¹

1. Because of space constraints, I will limit the discussion to the debate around practices and, thus, I will not address directly issues related to after- and post- ANT. However, I hope to show that delving into “classical ANT” can outline ways to tackle them. Somehow, claiming my approach as “retro-” allows me to presentify “old” categories, without the need to justify them through a full historicization. Elsewhere (e.g., Mattozzi, 2010), I also addressed the issue of how to extend and

My *retro*-approach and the necessity of an epistemological clarification will also lead me to reconsider the structuralist legacy to approaches to practices. Indeed, we need to take into account that the first reflection on practices, carried out by Pierre Bourdieu, Anthony Giddens and Michel de Certeau, emerged as a way to problematize structuralism, and not to dump it, as it later happened. By recovering such legacy, I will finally show how ANT can contribute to rearticulate it, through what I will call a “distributed structuralism”.

2 A Squeezer in the Sink

Whereas many of the readers will be surprised to see a squeezer used in the sink, those who know a bit about design will be very likely surprised to see specifically that model of squeezer used — in the sink or anywhere else.

Indeed, *JS* has spurred, within the product design field, a controversy (Gonzalez, 2007; Mattozzi, 2010) — “is it an object of use or contemplation?” (Julier, 2013, p. 88). Many design critics, scholars and practitioners have questioned its usability and there is a general agreement on the fact that *JS* is “unusable” (Koskinen, 2005, p. 21), up to proposing that *JS* is not even a designed product, given its many flaws, like the fact that “it spills everywhere and [that] it does not have anything to keep seeds apart from the juice” (Magistà, 2000, my translation). Others have acknowledged some qualities of *JS*, even if not directly related to squeezing, such as the fact that

- it elicits conversations (Lloyd & Snelders, 2003, p. 246), as also Starck seemed to have proposed (Julier, 2013, p. 90),
- it allows an aesthetic experience, which, at least, “pleases the eyes” (Russo & DeMoraes, 2003, p. 146)
- it can also produce visceral reactions, being “bizarre, but delightful” (Norman, 2005, p. 113).

Some others have however acknowledged the fact that the “form of its main body [...] spells out its method of use” (Khaslavsky & Shedroff, 1999, p. 47) and that, in the end, it disposes a “sensual experience”, showing “a way out of the purely instrumental approach to daily routine utensils” (Brix, 2008, p. 37) and that this produces a seduction (Gonzales, 2007).

At the time, when I saw for the first time *JS* used in the sink in the house of my family’s friends, I knew about the controversy, since, while finishing my Ph.D. thesis about artefacts, their meanings and their social role, I also started working as teaching assistant in the Faculty of Design and Art of IUAV, the Architectural School of Venice, thus getting more and more knowledgeable about design. Thus, when I saw it used in that way within the everyday practice of preparing breakfast, I was startled. I took the pictures (Figures 1 and 2) — asking the woman to pose for Figure 2, given it was a dismissed practice — initially thinking of using them just as an example for the students. Of course, my curiosity and request for pictures elicited a conversation. However, besides being surprised of my surprise, the woman in the picture did not say much, given that she never really reflected upon her practice. It was somehow taken for granted, having become a routine. However, she said that her husband bought the squeezer, after having seen it at a party, fascinated by the display of the falling flow of juice. Once in the house, it became part of the kitchen tools.

She started to use it for the everyday morning orange juice² of the husband. Initially, she used to squeeze oranges on the kitchen peninsula (Figure 2). However, given the height of the squeezer, given the height of the peninsula, such everyday routine required quite an effort — a bit too much, given also her age. Therefore, she aimed at a lower surface, which she encountered just behind her — the sink

integrate the *script* model. I will not address the issue here, limiting myself in using just the tools proposed by Akrich and Latour.

2. Up to the moment one of the reviewers made me notice that usually *JS* is considered a lemon-squeezer, I never thought that squeezing oranges with it could result almost as awkward as using it in the sink. It is true that official pictures usually portray *JS* in relations to lemons, however Alessi’s catalog addresses it as a generic citrus squeezer and it also displays a picture of it with oranges.



Fig. 2. Using *JS* on the kitchen peninsula

(Figure 3). Not only it was the only other surface available around, but she was already familiar with it, since she would wash *JS* in it, after use on the peninsula.

Once *JS* in the sink, she was able to exert all her strength and her body weight (Figure 1). Eventually, another issue found an arrangement, which, considered positive by the woman in the picture, allowed the stabilization and the routinization of this practice: cleanliness. The fact that *JS* is easily cleanable — precisely because it lacks the sieve, considered by many a lack — has, as far as I know, never been noted by both praisers and critics of the object: water follows the same flow of the juice and takes away all the pulp scraps left over the squeezer. Using it into the sink just makes this cleaning procedure easier and, basically, instantaneous. Moreover, once in the sink, also the issue of spill-overs — still related to cleanliness — found its appeasement. The sink is indeed a place for spill-overs, made for tools like colanders, which are built to spill.

3 Domestication and Design

The practice we saw in the picture is a vivid case of domestication (Silverstone, Hirsch & Morley, 1992; Silverstone & Haddon, 1996), i.e. of “consumer’s appropriation [of technologies and objects], by taking [them] home or into other private cultural spaces, and in making, or not making, them acceptable and familiar” (Silverstone & Haddon, 1996, p. 46).

It may be that approaches to domestication did “not go quite far enough”, not providing “a more encompassing account of the co-production of practice” (Shove & Pantzar, 2005, p. 62). Nevertheless, we cannot but acknowledge that “domestication theory” is one of the first attempt to consider practices within the sociology of consumption. Indeed, practices have started to be taken into consideration when the notion of “appropriation” has been borrowed from anthropology “in order to capture the importance of people ‘domesticating’ mass-produced and alien products, endowing them with particular personal meanings and converting them into items to be made use of and enjoyed for their own practical purposes” (Warde, 2014, p. 283).

We need also to acknowledge that “domestication theory” has been not only one of the first approaches to problematize what happens to goods when brought “home or into other private cultural spaces”, but also to problematize what happens before “domestication” and how what happens before affects “domestication”. Indeed, Roger Silverstone & Leslie Haddon (1996) besides “domestication” ad-

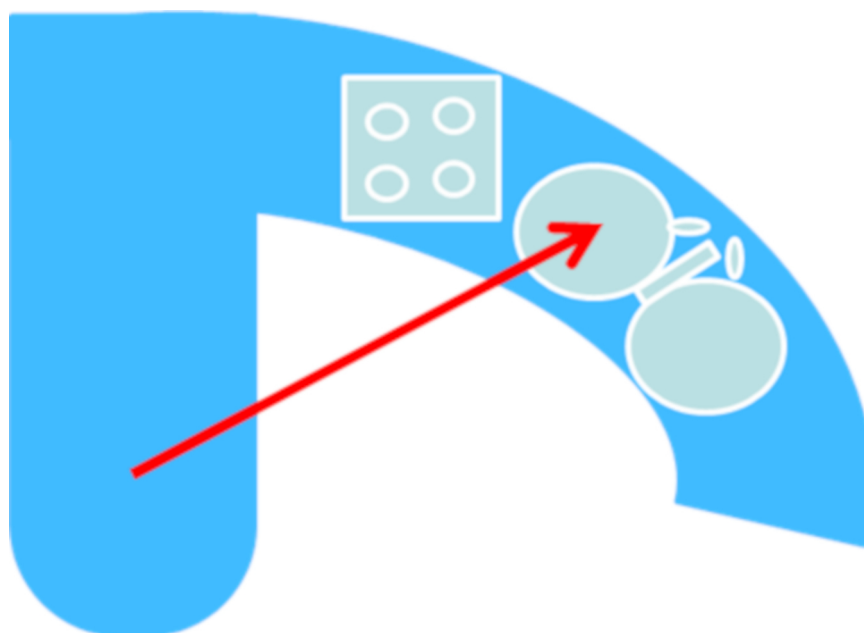


Fig. 3. Map of the kitchen and movement of JS.

dressed also “design”. For them, “design” is not only tasked with “creating the artefact”, but also with “constructing the user” and “catching the consumer”. Whereas “catching the consumer” is more related to marketing and to designers as a cultural intermediaries (Du Gay et al., 1997) and, hence, to consumption as purchase, “constructing the user” is more related to consumption as “a process whereby agents engage in appropriation and appreciation” (Warde, 2005, p. 137).

It is no coincidence that, as an example of researches that explores how design construct the user, Silverstone & Haddon mention Science and Technology Studies — specifically, Woolgar (1991). Other relevant references for “constructing the user” could have been Akrich (1992) and Latour (1992; Akrich & Latour, 1992), who, in the same period, proposed the notion of *script*, in order to account for, on the one hand, how designers inscribe possible user actions and situations in artefacts (Akrich, 1992), and, on the other, the way an artefact predispose user actions (Latour, 1992 & 2000).

Because of the anticipatory work that Silverstone & Haddon (1996) saw taking place within the designing phase, they (p. 46) concluded that “[d]omestication is anticipated in design and design is completed in domestication.”

4 What Practices Are Made of

I can rephrase Silverstone & Haddon’s sentence by saying that design *disposes* domestication and that domestication *unfolds* design.

What *disposes* provides possibilities or impossibilities — what we could also call affordances or, using Akrich and Latour’s (1992) vocabulary, *allowances* and *prescriptions*. These possibilities or impossibilities can or cannot be *unfolded* or can be *unfolded* only partially. It is the *unfolding* process that extracts from what *disposes* certain possibilities or impossibilities.

Getting back to the squeezer case, the height of the squeezer, for instance, has been *unfolded*. However, initially, with the squeezer on the peninsula, it has been *unfolded* as hampering and withholding user’s competences. Then, once the squeezer in the sink, it has been *unfolded* as allowing user’s competence.

Nevertheless, height could have been not *unfolded*, if, for instance, JS were used as a weapon by brandishing it through the bulb used as a handle. In such a case, the bulb were *unfolded* as a graspable part, something that does not take place while squeezing.

Disposition–unfolding, is then a relation, which does not entail any form of determinism or “essentialism” (Jarzabkowski & Pinch, 2013) and that only in very specific and exceptional cases, where the relation *disposition–unfolding* is drastically constrained, can be seen as a cause-effect relation.³

The relation *disposition–unfolding* entails a translation, a process through which something is extracted by a translating *dispositif* from a source and placed in target transformed. In ANT terms, a “displacement [...] through other actors, [which/]whose mediation is indispensable for any action to occur” (Latour, 1999, p. 311)⁴ — JS’s height, through the peninsula or through the sink, is translated, in one case as enabling and in the other as disabling user’s efforts.

As we can see, through the translation, some features of an artefact are *actualized*, others are not. They remain *virtual*. The relation *disposition–unfolding* can be then seen as a tension between a *virtuality* and an *actuality* (Deleuze, 1995; Latour, 2005; especially for design, Marenko, 2018). An artefact, then, entails a *virtuality*, i.e. “manifold tendencies and propensities” (Marenko, 2018, p. 4) related to actions, but also to meanings, perceptions, etc. These tendencies can get *actualized* in various ways and at various degrees.

Virtualities, however, are not only presupposed by artefacts, but by any configuration with a relative stability, be it provided by artefacts, living bodies, routines, activities, rules, conventions, symbols, representations, practices themselves.

Therefore, within the framework that I am outlining, practices can be seen as cycles of passages between *virtualities* and their *actualizations* or, which is the same, between *dispositions* and their *unfoldings*. I refer to “cycles” because each *actualization–unfolding* will give way to a relative stable configuration, which in turn, will work as a *virtuality–disposition* for another *actualization–unfolding*, and so on.

The practice of squeezing oranges in the sink, for instance, *actualizes* JS and its action as inconspicuous, contrary to the kind of *actualization* very likely Stark and Alessi intended to *dispose* in the artefact, by making it taller than usual home squeezers and by making the flow of the juice visible. As I was told, the husband of the woman using JS in the sink, bought it because it *disposed* the visibility of the juice. Given that the configuration JS+sink *disposes* a certain inconspicuousness of the squeezer, as well as of the juice, and given that, consequently, such configuration, does not comply with the initial wish of the husband, then the configuration JS+sink *disposes*, in turn, a certain kind of husband-wife relation and of familial practices.

5 How to Account for Practices

Within the framework I am outlining, accounting for practices means to reconstruct these passages, by observing and describing—analyzing *unfoldings* and, from there, reconstructing the *dispositions* then *unfolded*.

These cycles of *dispositions* and *unfoldings* are evidently dense, being also reversible and being intersected and intersecting other cycles — for instance, squeezing oranges in the sink intersects with providing the right lighting, in a secluded place like the sink in that kitchen, or with cleaning the sink and emptying it from possible dishes and cutlery left from the night before, something that usually the husband does.

Accounting for practices requires, then, some sort of discretization of such density. Therefore, no account can reconstruct all the passages defining a practice. What to focus on depends, like in any scientific observation, on the tension between an observing *dispositif* and what is observed — such tension being a practice too, of course, in which the observing *dispositif* *unfolds* what *disposed* by what is observed.

Despite the definition of practices I am proposing results very general and very abstract, and despite it could work to define practices’ hypernyms, like processes or becomings, I deem it provides a framework in order to actually consider the details through which a practice is constituted. These details, specific and concrete, characterizing *unfoldings* and their *dispositions*, are actually what needs to be attended to

3. For a critique of simple causality within the framework of approaches to practices, see among others, Schäfer (2017, p. 36) and Shove, Pantzar and Watson (2012, p. 144). For a way to reconsider, within ANT, issues usually addressed through the notion of “causality” in a way similar to the one I am proposing, see Latour (2005, p. 39, n. 30) and Mol (2010, pp. 257–258).

4. For the relevance of ANT’s notion of translation for approaches to practices, see Schäfer (2017).

in order to describe practices as practices. Or, said in another way, in order to account for practices it is not enough to ostensibly single out *unfoldings* and their *dispositions*, but it is necessary to describe—analyse in detail how *unfoldings* empirically take place, as well as how the *disposition* then *unfolded* are configured.

Of course, extending the notion of practice to any process, thus beyond “social” or human-related processes, as long as its empirical details are attended to, is just a way to *unfold* ANT’s principle of symmetry for practices. Such methodological stand does not prevent to recognize differences in the way emerging actors take part to a practice and then to associate such different ways to different kind of beings. Nor, such methodological stand does prevent to find out that a specific practice is made of “materials”, “competences” and “meanings” (Shove, Pantzar & Watson, 2012). It just asks not to assume these as *a priori* elements of practices.

6 What Practices Are Not (Always) Made of

Readers familiar with the present debate on practices will have recognized that the approach I am proposing distances itself from the most diffused ones that tend to see practices as composed by specific elements and by their relations. Specifically, my approach distances itself from *The Dynamics of Social Practices* (Shove, Pantzar & Watson, 2012), which, not only assumes practices to be always composed by “materials”, “competences” and “meanings”, but also, implicitly, reproduces a human/non-human dichotomy and an asymmetry between them in the very descriptive model — and, thus, before the observation of what *actually* happen in practice. Indeed, for Shove, Pantzar and Watson (2012) competences can be predicated only of humans. In order to support such claim, they set competences as completely separated from materials. By doing that, they are unable to see that competences can be predicated also of materials, or, that, more adequately said, competences are *unfolded* in practice and can be inscribed in, and thus be a *disposition* of both “people” and “materials” (Akrich & Latour, 1992; Latour (Johnson), 1988).⁵ For instance, *JS*, because of the absence of any horizontal surface and of the presence of converging grooves (Julier, 2013, p. 88), is able to let the juice flow down and make it stream in one point — something a traditional squeezer is not able to do, given that the sieve will make the juice drip in a scattered way. Moreover, through these same features, but also thanks to its verticality, it also provides a competence: it makes the user able to see the flow and the stream of juice. As Latour has many times noted, we need to always consider what an actor *does* — in relation to the *competences* it/s/he possesses — and what it/s/he *makes do* — in relation to the *competences* it/s/he provides.

In order to clarify this point, let us consider a more comparative example related to shaving as a practice. Shaving presupposes a competence — a *know-how* — related to the distance and to the angle at which the blade must be moved: if the blade is too close or too vertical in relation to the skin, then abrasions and cuts will result. This competence can be a skill embodied in a person through training — a barber, for instance — or inscribed in a material through design — notoriously, the safety razor “knows” at what distance and at what angle blades have to be kept. However, these inscribed competences are just *dispositions* and are not necessarily *unfolded* in practice — a drunk barber will very likely not *unfold* his/her competence; the presence of a pimple will not *unfold*, for that specific spot of skin, the competence of the safety razor.

What relevant, then, are not the elements constituting a practice, but, on the one hand processes, i.e. the tensions between *dispositions* and *unfoldings* and, on the other, the right descriptive-analytical tools to describe and compare how concretely *dispositions* and *unfoldings* take place in practice. As I will claim, these tools are provided by Akrich and Latour (1992; Latour, 1992)’s *script* framework.

5. As acknowledged by Shove, Pantzar and Watson themselves, *The Dynamics of Social Practices*, through its triadic model, introduces a simplification. Even considering all the best intentions of the authors, engaged in promoting a practice approach to decision makers in order to address in an adequate way sustainability issues, I wonder if the simplification Shove, Pantzar and Watson produce is not excessive. Shove et al. (2007, p. 57), for instance, maintained a higher level of complexity, assuming “that competence is distributed across human and nonhuman entities”.

7 Virtuality in Approaches to Practices

The notion of *disposition* has always been relevant for the reflection on practices, being related, for instance, to that of Pierre Bordieu’s “habitus” as well as to Shove, Pantzar and Watson’s (2012) “competences”.

However, the relation and the possible coincidence between *dispositions* and *virtualities* has been much less explored, given also that *dispositions* are usually referred — as we have seen for competences — to humans and human bodies, whereas *virtualities*, when considered, have been referred, to structures by Anthony Giddens (1979) and, on Giddens’ trail, to artefacts by Wanda Orlikowski (2000).

For Giddens (1979), structures, intended as sets of enacted rules and resources that mediate social action, are *virtual*. Giddens (1979, p. 256), indeed, insists on the fact that structures “exist[...] only in a virtual way, as memory traces and as the instantiation of rules in the situated activities of agents.” As clarified in Whittington (1992, pp. 695–696), when Giddens says that structures are *virtual*, he means that they “have no reality, except as they are instantiated in activity or retained mentally as remembered codes of conduct or rights to resources.”

Orlikowski (2000) tried to use Giddens’ framework in order to account for technologies as bearers of structures, which are also in this case, as Giddens stated, only *virtual* and then non-existing, if not in practice, when *actualized*. Practices, indeed, “enact structures that are emergent through recurrent interactions with the technology at hand” (Orlikowski, 2000, p. 407).

Though the way Orlikowski (2000) translates Giddens in relation to artefacts is inspiring and close to the framework here proposed, the way Orlikowski (and Giddens) sees *virtuality* differs radically from what I am proposing, which is instead derived from Latour (2005), who, in turn, derives it from Gilles Deleuze (1995).

Whereas for Giddens, the *virtual* is not real and something *virtual* has no existence,⁶ except as “memory traces”, for Deleuze (1995), and consequently for Latour (2005), the *virtual* is real as much as the *actual*. They are two different but connected modalities of the existence. Moreover, the *virtual* is multiple (Marenko, 2017), whereas Giddens and Orlikowski see it more univocally, as a rule, which can be followed or not, or as a resource, which can be used or not.

Giddens’ and Orlikowski’s difficulties in considering *virtuality* as real are, eventually, not dissimilar from those of other practice scholars, who explicitly reject *virtuality* (Schatzki, 2002) or who do not consider *virtuality* at all. Take, for instance, Shove et al. (2007). In that essay, Shove and colleagues discuss how the value of design has been thought: or as inscribed by designers in artefacts, and therefore embodied by these artefacts; or as attributed by users; or as emerging from complex configuration of practices. In all three cases, value is considered as already *actualized*:

- in artefacts, e.g. *JS* as strange object, which elicits conversations, as Starck is rumored to have said (Julier, 2013, p. 90);
- in users’ interpretations, e.g. *JS* as a convenient tool which is easy to clean, as seen in the case here presented;
- or within practices, e.g. *JS* as an object more for contemplation than for use, given its lack of usability and given that it has been more and more promoted in such a way by Alessi, who has produced a gold coated version, on which packaging is clearly indicated that such object is not for use.

By considering only *actualizations*, approaches to practices miss relevant methodological aspects, which can be appreciated only through an historical detour into the epistemology of social sciences.

8 Virtuality: A Different Kind of Positivity

Deleuze’s perspective, later adopted by Latour, is the apex of a long tradition able to address the *virtual* as real, which has its origin not in philosophy, but in social sciences.

6. For Sewell (1992) even more.

Structuralism has always addressed structures as real, though not as *actual*. For Ferdinand de Saussure (1959, p. 14), for instance, language [*langue*], which is usually taken as a paragon of structure (see, for instance, Giddens, 1979, p. 10), “is concrete, no less so than speaking [*parole*]”, therefore structures, though *virtual*, exist in time and place (see also, Maniglier, 2006; *contra* Sewell, 1992). A language [*langue*] is, indeed, temporally and geographically situated.

As noticed by Patrice Maniglier (2006), in his reconstruction of the relations between de Saussure and structuralism, because linguistics, from where structuralism has emerged, does not work, as other sciences do, “with objects that are given in advance” (Saussure, 1959, p. 8), but by reconstructing their *virtuality*, it has needed to give way “to a new kind of positivity, a new way of being a fact”, which presupposes entities constituted only by relations, and, more specifically, by relations of difference (Maniglier, 2006, p. 12).

Such “new kind of positivity” — a *virtual* positivity, later framed by Deleuze as “transcendental empiricism” —, which is connected to the relational epistemology, allegedly assumed by most approaches to practices (Gherardi, 2019), is what Giddens, Orlikowski, together with the majority of approaches to practices, miss — or explicitly reject, as Schatzki (2002) does.

In this way, approaches to practices, focus only *actualizations* and then:

- they do not see any relevance in tools able to describe relations, which take place at a *virtual* level. These approaches tend to be content with the description of what *actualized* and with its framing in or through a theory.
- they are unable to fully appreciate mediation and, thus, to address mediating instances and translations. *Virtuality*, indeed, by taking place between two *actualizations* and reintroducing each time multiplicity is able to reopen the process, and thus produce a mediation, as intended by Latour (2005) and by Antoine Hennion.

ANT is very likely the sole approach to practices, which, by recovering the Saussurean-semiotic relational ontology (Mol, 2010, p. 257) and by extending it “ruthless[ly]” to all materials (Law, 1999, p. 4), has been actually able to grasp the “new kind of positivity”, connected to *virtuality*. However, ANT, not so differently from other approaches to practices, has been able to address such kind of *virtual* positivity more as a programmatic statement, than as an actual methodological framework.

Latour seems to be the only exception, having practiced and developed ANT as an actual methodological endeavor — both in terms of data gathering methodology and of descriptive–analytical methodology, the latter being what concerns us here. Indeed, he is the only ANT scholar that has been, along its entire trajectory, interested in developing an *infralanguage* in order to be able to describe relations. *Script* and the various correlated descriptive–analytical tools are part of this *infralanguage*.

Before Latour, structuralism has worked in a similar way by devising descriptive–analytical tools (Descola, 2016) able to describe relations in order to address the *virtual* positivity.

9 Virtuality: Structures in Practice

Therefore, other approaches to practices, by missing *virtuality* as existing and thus missing the “new kind of positivity”, miss also the methodological relevance of structuralism and postSTRUCTURALISM.⁷ They rely on a caricatural version of structuralism, as the one proposed by Andreas Reckwitz (2002), who reduces it to some of Levi-Strauss’ claims, rather than looking at structuralists’ and postSTRUCTURALISTS’ actual practices — quite contradictory for someone that tries to give relevance to practices. By doing so approaches to practices see structures only as overarching systems residing in minds, imposing themselves on individuals, i.e. as “social whole [having preeminence] over its individual parts (i.e. its constituent actors, human subjects)” (Giddens, 1984, p. 1) or as, for sociology of consumption, “cultural structures outside the reach of consumers” (Halkier & Jensen, 2011, p. 102).

7. I distinguish here between postSTRUCTURALISM, which is a way to delve into structuralism in order to escape some of its earlier contradictions by radicalizing its tenets, and POST-structuralism, which is a reflection that comes after structuralism, somehow revising some of its tenets, but in the end fleeing structuralism.

Structuralists scholars — which practice is actually much closer to what Reckwitz (2002) defines “cultural textualism”, rather than what he defines “cultural mentalism”, identified by him with structuralism — addressed, however, also structures that are not necessarily general and overarching, but local and situated, which pertain only to specific texts or configurations of actions, activities, symbols, practices, etc.

For instance, as for visual configurations, French linguist Emile Benveniste (1969) denied that there could be a visual language, intended as “visual *langue*”. He, however, acknowledged that each painting can be considered as having its own “*langue*”, its own structure, its own system of relations, constituted by differences among shapes and colours, which would constitute what I call a *virtuality*.⁸

Structuralists scholars also questioned and problematized a rigid separation between structure (language, *langue*) and agency (speaking, *parole*). Among others, Benveniste (2014, p. 141) — still him —, by introducing the notion of “enunciation”, has been able to give relevance to the “individual act of use”, or of appropriation, through which language [*langue*] is “enacted”. Algirdas J. Greimas & Joseph Courtés (1982, p. 131, italic is mine), have redefined Benveniste’s enunciation as “the domain of mediation that guarantees the process by which language *virtualities* become discourse utterances.”

Unfortunately, practice scholars have very little considered such “domain of mediation”, except for Michel de Certeau.⁹ He has explicitly “adopt[ed] the point of view of enunciation”, defined as “a realization of the linguistic system through a speech act that actualizes some of its potential” (de Certeau, 1984, p. xiii).

De Certeau has used enunciation in order to account for most disparate practices, not only those related to language, as a general overarching structure. Among these practices, he has considered also those related to artefacts, for instance, when discussing “pedestrian enunciations”¹⁰:

[...] a spatial order organizes an ensemble of possibilities (e.g., by a place in which one can move) and interdictions (e.g., by a wall that prevents one from going further), then the walker actualizes some of these possibilities. In that way, he makes them exist as well as emerge. But he also moves them about and he invents others, since the crossing, drifting away, or improvisation of walking privilege, transform or abandon spatial elements. Thus, Charlie Chaplin multiplies the possibilities of his cane: he does other things with the same thing and he goes beyond the limits that the determinants of the object set on its utilization. [...] the walker [...] on the one hand [...] actualizes only a few of the possibilities fixed by the constructed order (he [sic] goes only here and not there), on the other he increases the number of possibilities (for example, by creating shortcuts and detours) and prohibitions (for example, he forbids himself to take paths generally considered accessible or even obligatory). He [sic] thus makes a selection (de Certeau 1984, p. 98).

As we can see, when a structuralist legacy is present, as in de Certeau, then *virtuality* as real becomes relevant. Indeed, despite de Certeau made different terminological choices from the ones here proposed — “possibility” instead of “*virtuality*”; “selection” instead of “extraction” — he basically refers to the same kind of dynamics I refer to, as indicated by the fact that he underlines that within practices “possibilities” are made “to exist and emerge”, and that there are “possibilities” and “prohibitions” — *allowances* and *prescriptions*, in Akrich and Latour’s (1992) terms.

By reading this excerpt, we could say that I am just reintroducing de Certeau’s take on practices in the present reflection, which has tended to forget his contribution. However, my intention is not so much reintroducing an approach, but rather providing it with descriptive–analytical tools, thus enabling the practice scholar to account in detail for the passage between *dispositions* and *unfoldings*. As already announced, these tools are taken by Akrich’s and Latour’s methodological proposal about *script* and *de-script*, which has been in turn elaborated by borrowing tools developed within the structural semiotics proposed by Greimas.

8. Such lead has been key for semioticians of the Greimassian approach in order to study images and objects.

9. Latour (see, among others, 2013 [2012]) has worked a lot on enunciation too, but in a slightly different way.

10. In the English translation, the paragraph is called “Pedestrian Speech Acts”.

These tools are here used to especially account for the role of artefacts within practices, by assuming that each artefact possesses a specific structure, which constitutes its *virtuality* — as suggested by Benveniste (1969). Contrary to what Orlikowski (2000) would say, these structures are describable–analyzable. However, I assume that these structures are describable–analyzable only from their *actualizations* within practices — as language [*langue*] is only describable from speech [*parole*].

10 Missing Artefacts

The relevance of the tension *disposition-unfoldings* for studying practices clearly emerges when trying to account for artefacts' contribution to practices.

Notwithstanding all the efforts carried out by approaches to practices in order to take artefacts into account, as for accounting for artefacts — i.e. describing-analyzing in detail their contribution to practices — we are still in the situation Latour pointed out thirty years ago:

[...] sociologists still feel estranged when they fall upon the bizarre associations of humans with nonhumans. Part of their uneasiness has to do with the technicalities of complex objects and [part of it] with the absence of a convenient vocabulary allowing them to move freely from studying associations of human to associations of nonhumans (Latour [Johnson], 1988, p. 298).

As a consequence of such estrangement and of such lack of descriptive-analytical methodology — the “vocabulary” —, in approaches to practices artefacts are often tackled through interviews to users (see, for instance, Magaouda, 2011), or they are scantily described using the words of the designers, as it happens, for instance, in Truninger (2011). The latter research is not based only on interviews, but also on observations of actual interactions with *Bimby*. Nevertheless, actions considered are only those of human ones, so that the artefact is never described in detail. For instance, one of the users complained about the complexity of *Bimby*'s interface — “That really looks like the cockpit of a plane!!” (Truninger, 2011, p. 50) —, however no description of such interface is provided, and thus there is no account of how the artefact could have *disposed* such reaction. Also, the pictures of the artefact present in the article never really focus on the interface, they just provide a general overview of the artefact. The only detail shown in pictures is an action of a user (Truninger, 2011, Figure 3, p. 51).

As we see, such lack of a descriptive–analytical methodology results in a bias toward humans, thus instantiating an epistemological–ontological positioning through method.

Something very similar takes place in the seminal article by Shove and Pantzar (2005) about Nordic Walking. The sticks, the main artefact — or “material” — related to the practice of Nordic Walking, and around which the entire practice turns, are described toward the mid of the article, when the various components of the practice are listed. Shove and Pantzar (2005, p. 54) acknowledge that sticks have a “straight handle and a strap that goes around the hand,” that “[d]ifferent types of tip are available to suit different ground conditions” and that “styling was influenced by the ski sticks” with bright colors, but that “more urban models in black, silver and yellow have since become popular.” They do not say much else, nor really connect these features of the artefact to the practice. Such move could be somehow justified by the fact that Shove and Pantzar (2005, p. 45) explicitly say that they do not focus “on the objects in question [...], but on the practice of which they are a part.” They deem that therefore have “no option but to consider the dynamic, yet also interdependent, relation between practitioners and providers” and thus, no option but to conduct interviews with them. However, they consider such relation in order to shed light on the “the dynamic relationship between sticks and the image and performance of the practices they sustain” (Shove & Pantzar, 2005, p. 48). Unless you assume that artefacts cannot be taken into consideration at all, the reasoning they propose does not hold: they want to analyze a practice, that according to their definition comprises artefacts; notwithstanding that, because it is a practice, they feel the obligation to interview practitioners and providers, leaving artefacts completely aside, even though, eventually, they want to focus on the relation between artefacts and meanings, neither of them addressed directly.

Somehow, an approach to practice becomes an excuse to reiterate a bias toward humans. Through their interviews, a focus group, the analysis of some newspaper articles and some observations, they claim

to show how the practice of Nordic Walking got diffused and established mainly thanks to the fact that the use of sticks for walking had been shifted from an image related to “infirmity” and “frailty” to one related to “health” and “fitness”. Assuming that this were the main shift, in order to account for it, they should have described-analyzed the ways, in which one or more specific features of the “material” *dispose* an association with an “image”. For instance, among many features, the height of the stick is relevant to *dispose* a certain posture. The higher Nordic Walking sticks *dispose* a straight and open — with the open arms — posture, whereas crutches or walking sticks used by elderlies — usually shorter —, *dispose* a completely different posture — bent and wrapped inward. This is so because in one case sticks accompany the movements of the body, in the other, they need to support the weight of the body in order to give stability to it. Shift in posture, disposed by artefacts, is relevant for the “image” because it is seen by bystanders and can be depicted in media that want to promote the practice. Moreover, posture is also felt by practitioners, who can appreciate right away the difference between, say, Nordic walking poles and crutches, especially in relation to breathing. In my terms, then, the height of the stick *disposes* among others, a certain posture, which, if *unfolded*, *disposes*, among others, a certain image, which, if *unfolded*, *disposes*, among others, a certain interest for the practice, which, if *unfolded*...

The issue, then, is to take artefacts into account and account for their role. However, not by taking into account artefacts themselves, but the relations they enjoy — “height” is clearly a relational property. These relations take place around and within artefacts. We should then also pay attention to “the network within” (Parolin & Mattozzi, 2014), i.e. we should follow Latour’s (2005, p. 233) suggestion: “when faced with an object, attend first to the associations [relations] out of which it’s made and only later look at how it has renewed the repertoire of social ties.”

I deem that pursuing other ways of taking artefacts into account leads inevitably to some contradiction and eventually in not being able to account for artefacts. Let’s take the example of Orlikowski (2000). For her, attention must be paid to “human actions” and only from there to artefacts, which do not have existence, beyond the one provided by human actions. Despite such supposed inexistence, she has anyway the need to describe them as autonomous from human actions. She writes (Orlikowski, 2000, p. 413):

- [a.] Physically, *Notes* consists of both “clients” — the software installed on users’ personal computers, which mediates interaction with the *Notes* system — and “servers” — the software installed on network computers which facilitates communication among the users and supports their access to shared databases maintained locally and remotely within the *Notes* system [...]
- [b.] the Notes technology has a highly distributed architecture which supports collaboration among a variety of distributed users [...]
- [c.] it allows users to customize their interface with the technology and provides them with the tools to develop their own applications within the Notes system.

As we can see, she not only describes them “physically”, but she is also led to acknowledge that artefacts *dispose* — it “supports ...”; it “allows ...” Notwithstanding all that, Orlikowski is not willing to account for these features.

The same kind of contradiction is present in Nicolini, Mengis and Swan (2011), who adopt a framework based on Orlikowski’s (2000) mentioned article, as well on Susan Leigh Star approach to artefacts. Therefore, Nicolini, Mengis and Swan (2011, p. 612) state that “the work performed by objects becomes apparent only when we focus on how [humans interact among them and with the artefacts] in practice” and that “the material dimension of objects [...] derives from action, not from a prefabricated stuff or ‘thing’-ness.” Nevertheless, not only, like in Orlikowski’s case, they need to describe artefacts before they describe human actions with them — for instance they need to acknowledge that the arrangement of a room in “several long rows of desks” hamper communication also because the group they are observing is handling a “small object” —, but they even talk about the “inherent nature” of objects (Nicolini, Mengis & Swan, 2011, p. 612).

As mentioned before, the way out of these contradictions is not, however, to simply state that physical objects have a social reality or to admit that their “inherent nature” is directly socially relevant. The

way out is instead to consider relations — associations (Latour, 2005), “of any kind” (Akrich, 1990, p. 84, my translation). Addressing relations, is not only epistemologically–ontologically convenient, since it allows escaping the dualist traps mentioned before, but also empirically productive, given that it provides actual empirical evidences to describe–analyze and compare. However, these empirical evidences are, as noted earlier, not provided by entities, but of another kind: they are provided by differences¹¹ (Maniglier, 2012, p. 12), given that difference can be considered the basic relation. What are, indeed, if not differences, the relations mentioned by Nicolini, Mengis and Swan (2011), when saying that the room is characterized by “several long rows of desks” and that the scientists they observe need to handle a “small object”: what is a row, if not something that differs from a column, on the base of a difference between horizontality and verticality? How can something be “long” if not compared with something “short”? How can be something “small” if it does not differ from something “big”?

Structures for structuralism, are, first of all, these intertwinings of differences, which cannot but be *virtual*. I think the same can be said for networks, as Latour (2005) describes them.

11 Virtualizing the Script

Latour (1988) did not stop noticing the methodological difficulties social sciences have in tackling artifacts. As we already mentioned, he, together with Akrich, developed a descriptive-analytical methodology – the *vocabulary* he mentioned, i.e. his *infralanguage* – enabling scholars to account for artefacts in practices, by carrying out *de-description*.

However, not only such methodological proposal has been very little taken into consideration, but it has often not even been acknowledged as such. For instance, Shove, Pantzar and Watson (2012, p. 14, italic in the original), considers ANT unable to tackle “ordinary questions about what [...] cyborg/hybrid entities are actually *doing*”, neglecting any methodological relevance of it. Other approaches to practices, more sympathetic to ANT, as the one proposed in Nicolini, Mengis and Swan (2011) or in Gherardi (2019), or inscribing themselves within an ANT framework like, for instance, Bruni (2005), give also way to the same neglect.

As already mentioned, I deem that such neglect is (also) related to the neglect of *virtuality* as existing. Indeed, if *virtuality* and its mediational relevance are neglected, there is no need to describe it — social scientists gather only *actualizations* in the form of (human) words or movements. Consequently, there is not even the awareness of the need and of the relevance of a “vocabulary” to describe *virtuality*. Therefore, Latour (2005)’s insistence on method of description and the consequent relevance of *infralanguage* for such endeavor cannot but remain unnoticed and unacknowledged.

Such neglect of the methodological relevance of ANT has had its toll especially for the notion of *script* and *de-description*, which have been forgotten or explicitly rejected also by ANT scholars (e.g., Mares, 2014). The ground on which *script* has been rejected is that it has been perceived as addressing solely normative aspects of artefacts.¹² Namely, *script* has been mainly seen as *prescriptions* inscribed by designers, embodied by artefacts, and, then, resisted or accepted by users. Though favored by Akrich (2012)’s interpretation of *script*, such critique completely overlooks a possible more faceted conception of *script*, favored instead by Latour (2000).

Such exclusively normative reading of *script*, does not seem to take into account that the *script* also provides *allowances* or affordances (Akrich & Latour, 1992; Latour, 1992), but it also neglects any autonomy of artefacts, making them the intermediary carriers of designers’ intentions — thus, contradicting ANT’s conception of mediation. Such reading is only possible if the relevance of *virtuality* — and thus of mediation — is neglected and thus *script* is considered only within a sequence of successive actualizations — which, again, would contradict ANT’s tenets.

Indeed, if *virtuality* is actually considered, though designers’ designs can find an *actualization* in the designed artefact, the designed artefact gives way to a new *virtuality*, which, in turn, not only can be *actualized* in various ways once used, but exceeds designers’ designs, by providing *allowances*, as well as *prescriptions*, not necessarily planned by the designers, emerging in the situation. Starck did designed *JS*

11. Which is what Schatzki (2002) fiercely rejects.

12. I must thank Attila Bruni for a clarifying conversation on the topic.

as high in order to be conspicuous, thus able to “elicit conversations” (Julier, 2013, p. 90). However, he, very likely, did not think that such height could dispose an *actualization* of *JS* in the sink, which, in the end, neglects *JS* conspicuousness.

I will then consider *script* in all its facets, as a way to address *virtuality* — “the world inscribed in the object” (Akrich, 1992, p. 209) — and *de-description* as a way to describe such *virtuality*, and form its *actualization* — “the world described by its displacement” (Akrich, 1992, p. 209). If, we consider a practice as a cycle of *virtualities* and *actualizations*, then *de-description* becomes the main procedure through which to account for practices, at least when artefacts are present.

12 Back in the Sink

All along the article, I have referred to the case of *JS* used in the sink in order to exemplify various issues I was addressing. I want to conclude the article by returning to the case and, by using Latour’s *infralanguage*, by providing a re-*de-description* of it, which draws together what said before. For certain aspects, it can result in a repetition — as many conclusions do — but I also hope it will provide — as many conclusions do — an overview of the issues tackled, albeit in an empirical way. Thus, even though I am going to tell basically the same story I told at the beginning, I will assume a different point of view.

Among the various differences emerged from the way *JS* has been *unfolded*, verticality(/horizontality) and height (high/low), are the most relevant, given that they *dispose* most of the interactions that took place in the described situations.

JS does (contribute to) squeeze oranges. It is able — almost as any other squeezer —, given that the bulb — when pressed against a citrus through an horizontal rotation — is able to break the wedges’ envelopes keeping the juice, in order to make it flow along the rest of its body. However, what distinguishes *JS* from other squeezer is not so much what it *does*, but what it *makes do*. Among the various things it *makes do*, the fact that it *makes* the juice’s flow visible and, through it, *allows* a bystander — not so much the person who is squeezing — to see and enjoy the vision of the juice is key — at least for our case. As we noticed, *JS* not only *makes* the juice visible, but it *allows* the convergence of various flows in one point, from which the juice streams down in the glass, becoming even more visible.

It was for this reason that the husband was fascinated by it and decided to buy it. Such visibility of the juice is *disposed* by both the height — disposed, in turn, also by the “three slender legs” (Julier, 2013, p. 88) — and by its verticality, given that *JS* does not display any horizontal element, which could interrupt the flow of the juice.

Purchased by the husband for the way it worked, once in the kitchen, *JS* could not be *unfolded*, but for squeezing, on the workbench which, in that kitchen, *disposes* the surface for transforming food — the peninsula. For the way it has been *unfolded* — especially its height — in everyday kitchen practices, such peninsula *allows* the average user — and for sure the woman in the pictures — to exert effort without bending. However, once coupled with *JS*’ height, the configuration of *JS*+peninsula, prescribed the use of an uncomfortable posture, which, in turn, prescribed the exclusion of the woman’s weight, and thus prescribed more effort by the woman’s arm..

On the peninsula, *JS* is, however, extremely visible and somehow such positioning would *allow* bystanders sitting at the dining table to enjoy its spectacle.

Height and verticality are *unfolded* also in the sink, where *JS* allows water to flow along its body like the juice, thus *making* water remove all the left overs, without any stopping.

In the sink, which offers a lower surface, height does not *prescribe* an uncomfortable posture, nor the exclusion of the woman’s weight, therefore it *allows* a comfortable squeezing, besides a comfortable cleaning. Actually, the configuration *JS*+sink *allows* to closely connect the two, and thus it allows the co-location for the integration of two practices (Shove, Pantzar & Watson, 2012, Ch. 5). Moreover, in the sink, spillovers are not such a nuisance as on the peninsula and they can be removed, together with the removal of leftovers from the squeezers, thus strengthening even more the integration between squeezing and cleaning and thus making the practice of squeezing oranges with *JS* quite stable.

The sink, through its lower surface and its high walls surrounding *JS*, *prescribes* the latter and the juice to be basically invisible.

In order to conclude I want to notice three things:

- what has taken place in that kitchen — i.e. the invention of the sink-squeezer — is the outcome of an action that is situated and distributed among the woman, */S* and the kitchen furniture. Despite such distribution, it is possible to describe in what way each actor has contributed to the action.
- each *disposition*, be it provided by the configuration of the artefact, or by the configuration of more artefacts or by the very practice is first of all a network of differences: keeping/fleeing (the juice), flowing/dripping, smooth/grooved, horizontal/vertical, scattered/converging, high/low, allowance/prescriptions, doing/making do, visibility/invisibility, etc.
- by looking at how these configurations change and at how one *disposes* the other, we can account for various “social” relations. Other sociological approaches to consumption, would have probably focused more on issues such as conspicuous consumption, the relevance of a certain cultural and economic capital to afford and appreciate such squeezer, as well as gender issues related to husband-wife relations and the division of housework. By taking into account artefacts as actors contributing to the *unfolding* of a practice, these issues are not neglected. Rather they find an actual grounding, which can provide insights about how such issues are dealt with in everyday life. Indeed, what we saw is that through a negotiation with the artefact, a good that dispose a very patent conspicuous consumption happened to become, in relation with a certain setting, a convenient tool that has to do very little with conspicuousness. At the same time, such dynamics is related to the specific way, in which the woman in the picture has appropriated the tool, by connecting it to cleaning practices, thus renegotiating her husband wishes, with her exigencies.

13 Conclusions: Structures All the Way Down (and Up, and In Front, and On the Back)

In a way, Shove, Pantzar and Watson (2012, p. 14, *italic is mine*) are not wrong in saying that ANT is unable to tackle what “entities are *actually* doing.” Indeed, according to what I argued in the present paper, ANT is unable to fully tackle what “entities are *actually* doing,” without previously describing what entities are *virtually* doing.

What entities are *virtually* doing is, however, something that completely escapes Shove, Pantzar and Watson’s approach, as well as most of the approaches to practices, thus making them unable to account for the contribution of artefacts to practices.

The aim of the present paper has been to not only provide a way to account for what artefacts are *actually* and *virtually* doing, being the two things strictly interconnected, but also to outline the epistemological conditions for making such endeavor relevant. I did that also by recovering historical approaches that already thematized *virtuality*, as de Certeau did — though not using the term “*virtuality*”.

It is very likely no coincidence that Latour and de Certeau are basically the only practice scholars able to consider *virtuality* as real. They both directly experienced, and contributed to, the passage from structuralism to postSTRUCTURALISM and, more specifically, they both attended Greimas’ structural semiotic seminar in Paris in the 1970s and 1980s.¹³ From such structural semiotics, they have both drawn notions, categories and models, all of which embed *virtuality*.

Given that practices have often been seen as a way to overcome structuralism, such reference to structuralism could sound strange. Nevertheless, practices have first emerged, in Bourdieu’s, Giddens’ and de Certeau’s works, as a way to problematize structuralism. Only later structuralism has been seen as something radically different from the study of practices.

However, one thing is to refer to structuralist general notions, trying to find other notions, categories and models able to intermediate between structure — seen as overarching and general — and agency, as Bourdieu, Giddens and, up to a certain extent, de Certeau did. Another thing is to delve into the

13. De Certeau “at the Greimas’ seminar [...] meets linguist Jean-Claude Coquet [...], who] is very interested in Benveniste’s linguistics of enunciation” (Dosse 2007, p. 298, my translation). Also Latour, whose relation with Greimassian semiotics is broader and more explicit, develops his enunciation framework after meeting semiologist Manar Hammad at Greimas’ seminar (Latour, 1988). I must thank Francesco Galofaro and especially Lucia Amara for having pointed the relation between de Certeau and Greimas to me.

structuralist methodology, extending it and therefore redistributing both structure and agency, as ANT has done.

In the first case the dichotomy structure/agency is maintained, though complexified; in the second is overcome. By overcoming it, ANT has given way to what we could call a “distributed structuralism”, which I deem is the adequate framework for the study of practices.

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