Describing Artifacts. What design and anthropology share, but Design Anthropology disregards

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Abstract

By unfolding the tension between "artifacts" and "description" within the field of design and within the field of anthropology, the present article questions Design Anthropology (DA) on two grounds. On the one hand, DA's ability to take into account and account for descriptive artifacts in design practices. On the other hand, DA's ability to describe artifacts and their social role. By referring to the literature on design coming from the field of Science and Technology Studies, and by using two empirical cases of design practices, analyzed through an Actor-Network Theory framework, I will show that DA has not been able to embrace the practice of the description of artifacts as key common ground, on which to build an actual integrative discipline.

Keywords: Actor-Network Theory, Artifacts, Designing, Description, Mediation.

Introduction

In a recent contribution about anthropology and design, Valentina Frosini and Pietro Meloni (2019, p. 73, my translation) notice that "designers know that they not only design spaces and objects, but shape, through spaces and objects, social relations and lifestyles". I would like to add historian of design Victor Margolin's (2015) one to Frosini and Meloni's recognition. Margolin underlines that, since the birth of the design profession in the 19th century, designers have addressed social issues. Given such longstanding engagement of design with the social, one wonders why, up to few years ago, there was almost no dialogue between design and social sciences.

Elsewhere (Mattozzi 2018), I hypothesized that (Fig. 1a)

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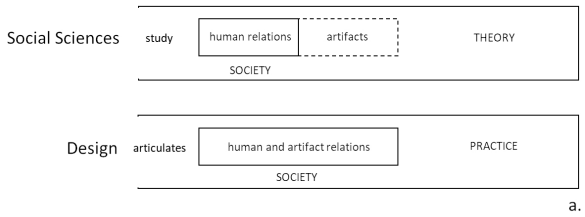

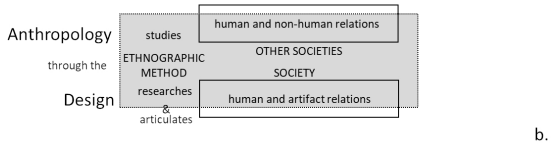

Fig. 1a. The traditional configuration of the relations between social sciences and design, which prevents any actual dialogue, given the discrepancies between what is considered (implicitly, for design) the social and the gap between theory and practice.

Fig. 1b. The rearticulation of the relations introduced by the sharing of the practice of the ethnographic method between anthropology and design, which creates a space for exchange and dialogue, also questioning the traditional concept social sciences have of the social.

- given that within the modern framework, social relations are considered to pertain to humans and artifacts are considered opposed to humans, social sciences have been concerned mainly, if not solely, with human relations (Latour 1994), thus unable to tackle artifacts and their contribution to sociality (Margolin 1995, Molotch 2011);
- though designers, as we saw, did not care about such division when practicing, they relied on a twisted version of it, when having exchanges with social scientists: they were concerned with practice, social scientists with theory.

This is why, the modern, fully unfolded, framework, made the encounter between design and social sciences impossible.

It is no coincidence, then, that the most advanced and fruitful attempt to integrate design and social sciences, namely Design Anthropology (DA), has emerged from anthropology (Fig. 1b). On the one hand, a discipline that is aware of other possible arrangements between humans and artifacts; on the other, a discipline founded on a specific descriptive practice – ethnography –, which has been shared with design.

The epistemological and methodological reflection about DA that I am going to propose starts from said observations and addresses precisely the tension between artifacts and descriptions, which I consider key elements to develop a discipline like DA or any other blend of social sciences and design.

I will propose this reflection from outside. External to DA, but also external to anthropology and to design, I am a sociologist working within the field of Science and Technology Studies (STS), using semiotics as a descriptive-analytic methodology, within an Actor-Network Theory (ANT) framework. Nevertheless, I feel very close to both, design and anthropology[1].

I will venture in this discussion by using, besides STS-ANT related literature, two empirical cases, which allow tackling directly the issue of artifacts and descriptions, for the way it concerns design – the second section of the article – and for the way the issue concerns social sciences and, more specifically, anthropology – the third section.

The first case regards prototyping practices and has been at first observed, described, and analyzed by Laura Lucia Parolin (2010a, 2010b)), whom I later joined in order to address more in detail the role of artifacts (Parolin and Mattozzi 2013, 2014). The second one regards domestication practices related to a design object. This second case, which I observed, has been described-analyzed more at length elsewhere, too (Mattozzi 2010, 2019). None of the two cases entails an ethnographic fieldwork as practiced in anthropology (Howell 2018)[2]. They are sociological observations of three practices.

Artifacts, which describe

One morning, Marco, product manager working for an Italian world leader producer of design furniture, visits Carlo, a craftsman specialized in foaming and resins working in the same industrial district. Marco asks Carlo to develop the prototype of the seat for a new chair, designed by a well-known Italian designer. Marco provides Carlo with various artifacts coming from the designer's studio

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1 A closeness gained mainly through everyday contacts: with designers, design researchers and design students, with whom I work at the Faculty of Design and Art of the Free University of Bozen-Bolzano, with the board of EV-AA, the Anthropological Association South Tyrol, of which I am vice-president, and with Elisabeth Tauber, with whom I share "my" office. I am grateful to all, especially to Elisabeth – even if I did not explicitly share this foray in her anthropological field with her, I am sure she will be able to see her influence. I also want to thank:

- the two anonymous reviewers, who, among many useful suggestions and critiques, made me understand that such closeness is far from being an actual sharing of the same positioning and urged me to make it explicit;
- the editors of this special issue, who, despite my different positioning, have been kind to invite me to take part in it and tolerant not only with the positioning I have taken, but also with the time I have taken.

2 Actually, the first case comes from Parolin's fieldwork (2010b, 2012), which, much broader than the case here presented, was originally designed almost in anthropological terms, though developed within the field of the sociology of organizations.

and from the R&D office of the company: some renderings and a first mock-up of how the seat of the chair should be assembled. The mock-up shows a sandwich, in which the supporting element in the middle is enveloped in foaming. Marco clarifies also that the board in the middle will actually be a metal plate. Marco asks Carlo to prototype the seat in order for it to be "soft but supporting". Carlo starts experimenting with foaming by literally translating Marco's brief: he works on the foaming that should provide softness, relying on the metal plate for support.

Carlo tries various foaming blends, which he himself tests through a full body contact. However, the various sandwiches he assembled do not provide the feeling, which he supposes would translate Marco's verbal description. The metal plate is not just "supporting", but also "hard". On the other hand, foaming blends are not just "soft", but also "yielding". They warp overall too much.

Therefore, Carlo starts reconsidering the properties and the role materials have and, with it, also the meaning and sensation of softness. Softness does not have only to do with a material that warps globally, but also locally, thus following the shape of the body. Therefore, he needs a material that allows not only global warping, but especially local ones.

Besides changing the composition of the foaming, Carlo decides to intervene also on the metal plate by drilling it. Even the drilled metal plate, with foaming passing through, does not deliver the looked for feeling.

After further experiments, which lead to replace the metal plate with a metallic mesh, Carlo changes strategy. He places a soft material, a felt, in the middle, stiffening it, rather than softening it, by injecting some resins in the felt's body. Together with the adequate mixture of foaming around the stiffened felt, Carlo finds not only an adequate translation for the brief, but also a new way of assembling seats.

For the same project, Marco visits also another craftsman, Giovanni, who is specialized in creating metal tube structures. He provides Giovanni with some renderings and a metal prototype – "a sort of structure", as Giovanni called it – asking him to adjust it for the leather upholstering, which will have to cover it. By comparing the aimed outcome, as shown in the renderings, with the "sort of structure" at hand, and by knowing how leather behaves, Giovanni concludes that the "sort of structure" would have never allowed the "soft but taut" drop of the leather upholstering along the front legs that he sees in the renderings. Because of that he rearranges the metal structure in order for the leather upholstering to be stretched, so that creases, i.e. local warping, can be avoided, however allowing a slight global warping, i.e. a slight curve.

The two vignettes proposed above took place in a relevant north Italian industrial district for furniture production[3]. The usual production flow of

3 For an extended account of the case, see Parolin (2010a) and Parolin and Mattozzi (2013, 2014). For a historical anthropological account of the same district, see Ghezzi (2007).

the district entails that *prototyping* and the consequent *making* of components is often outsourced to small enterprises by international, even if district based, companies. The two vignettes then show a way in which "Italian design" is enacted.

However, they do not show *designing*. The actual designer and his studio are absent – almost absent, given that their presence is delegated to specific descriptive artifacts, such as the mock-up of the seat, the renderings, the first prototype of the chair's metal frame, the words of the production manager.

Prototyping – what was actually shown in the two vignettes – is part of *making*. And indeed, it displays certain features outlined by Tim Ingold (2013; Gatt and Ingold 2013) for *making*, like the capacity to see forward, referred, in Giovanni's vignette, to the behavior of the leather, even in the absence of the leather, or the engagement with materials, especially relevant in Carlo's vignette. Nevertheless, as we can see from the two vignettes, *prototyping* cannot be reduced to *making*. Prototypes are indeed descriptive artifacts, which outline, also testing them, how the actual artifacts should be made. Therefore, *prototyping* is also part of *designing*. Prototypes, indeed, are (possibly) the last of a series of descriptive artifacts – briefs, sketches, renderings, blueprints, models, mock-ups, etc. – produced through *designing*.

Therefore, *making*, though an autonomous activity, is a phase, together with *designing*, *prototyping*, *exchange*, *domestication* (Silverstone, Hirsch and Morley 1992; Silverstone and Haddon 1996; see next section), *disposal* and *recycling* of what we can call design, in a broader sense[4]. Design, then, as the way in which artifacts take part in our modernized societies.

Designing is, instead, the phase of design in which prospective descriptions – descriptions for things to be – are devised and made. The descriptions produced through *designing* are, in a way, plans, but they are not "representations in mind in advance of its material realization" (Ingold 2013, p. 66), but material artifacts themselves[5]. Nor are they plans as "a full geometrical pre-specification of the intended work" (Ingold 2013, p. 55). They do not compel any execution, but certainly dispose *making*, without, however, determining it. As Ingold (2013) acknowledges for mediaeval drawings used in the construction of cathedrals, they are descriptive not prescriptive. We saw something similar take place in Carlo's workshop. In order to comply with the verbal brief "soft but sustaining", he had to reconsider the mock-up, which required a rigid element in the middle.

Moreover, we have to consider that these descriptive artifacts usually provide a description for other descriptive artifacts – as it happened with Carlo and Giovanni who, at that stage, had to produce only prototypes.

4 Parolin and I have started to elaborate a model for the design process comprising these phases.

5 For a typology of *designing* artifacts, see Fuad-Luke (2020).

Designing is then characterized by these chains of descriptions, which set it apart from *making*. *Designing* is, indeed, "a method of conceiving through signs (i.e. drawings, *di*segni)" (Vial 2015, p. 14, my translation), where "signs [are] aimed at instructing a future transformation" (Armando and Durbiano 2017, p. 145, my translation), so that *designing* "does not produce objects […] but what we could designate as 'images', in order to qualify all those intermediaries, which are sketches, infographics and other models [*maquettes*]" (Beaubois 2015, p. 60, my translation). Therefore, *designing* unfolds as a cascade of descriptions: briefs, sketches, post-it boards, technical drawings, blueprints, flowcharts, renderings, models, mock-ups, power point presentations for clients, up to prototypes. Each description begets the next, which, in turn, can beget the following or can require revising the previous one.

Many ANT related ethnographic studies of design processes carried out within STS have shown the relevance of these cascades of descriptions and how they are made, used, and managed in practice (Farias and Wilkie 2015; Houdart and Minato 2009; Yaneva 2005, 2009).

Within the literature referring to DA these aspects of *designing* are not neglected. For instance, Jamie Wallace (2011, p. 207), by "observing practices of design professionals" notices "their reliance upon the construction and transformation of multiple types of artifacts for carrying out their work" (Wallace 2011, p. 207). Or, Adam Drazin (2013, pp. 37-39) notices that in between ideas and products, people sketch out and produce all sorts of artifacts that "occupy the middle ground in an iterative design process".

However, DA tends to overlook *designing* as cascades of descriptions. DA, indeed, focuses much more on, and provides much more relevance to,

- *prototypes*, however more in their connection with *making* than with *designing*,
- users as designers – as acknowledged by Mette Kjærsgaard and Ton Otto (2013, p. 180), for whom, "[d]esign and use did not constitute separate stages in the process, as for the children playground 'design' was an integral part of its use", or as programmatically stated by Joachim Halse, for whom DA "portrays the culture of use in terms of the culture of design" (cit. in Tunstall 2013, p. 239).

As assumed also by many designers and design researchers, who talk about "continuous design", "design after design" or "design in use", there is no doubt that users and their practices contribute to design, seen – as intended here – in a broader sense. Nevertheless, such acknowledgement should not lead us into thinking that users take part in *designing* – at least not as much as they take part in design. And, most importantly such acknowledgment should not lead us into conflating different phases of design, such as *designing*, *making* and *domestication*. If we do that, we risk not telling crafts(wo)manship apart from design.

Nevertheless, the conflation of *designing* and *making* is what characterizes many DA reflections as, for instance the one proposed by Ian J. Ewart. Ewart (2013, p. 98) analyzes the role of sketches and technical drawings for the construction of a traditional bridge in Borneo and concludes: "Design, in other words, does not exist per se, but only as part of the performance of making". Regardless of the fact that design drawings could have worked in such a way in the case accounted for by Ewart, generalizing such finding to any design practice leads to completely undermine the autonomous role of *designing* in Western societies.

Ewart, in his contribution, relies heavily on Ingold's reflection on *making* (Ingold 2013). As we have started to see, Ingold, in his turn, promotes a specific version of *making* (and of design "as part of the performance of making"), which relies on the notions of flow and of engagement: *making* is a flow, in which we as humans – but usually Ingold refers to a human individual[6] – are engaged together with the materials, and from which something grows. Despite the interests of Ingold's reflection, as well of the possibilities it opens and insights it provides, it does completely neglect the fact that:

- *making*, as a flow, does not need to be seen only as a uniform engagement; it can be modulated through various forms of disengagements, detachments, distance takings;
- a flow of *making* can be intersected by other flows of *making*, which introduce other possible positionings in relation to the main flow – hence also the disengagements, detachments, distance takings mentioned above.

Taking into account design practices as described in STS ethnographic studies (Farias and Wilkie 2015; Houdart and Minato 2009; Yaneva 2005, 2009), I deem that *designing* and the descriptive artifacts it produces affect *making* in exactly these two ways.

On the one hand, *designing* can be considered as *making* in its own right – the *making* of descriptive artifacts – that intersects another *making* process. On the other, *designing* provides artifacts that allow modulating the engagement within the *making* flow.

Therefore, it is necessary to acknowledge the autonomy of *designing*, without conflating it with *making*, precisely in order to fully understand *making* within design processes. Thus, though I share Ingold's concern about the risk of considering *making* as the mere execution of a plan, I am also concerned about the risk of considering *designing* just as "part of the performance of *making*".

The emergence of the autonomy and specificity of *designing* has a clear historical relevance, given also by the changes it disposes at an organizational and cognitive (Latour 1990) level.

6 In one relevant case, the one of gothic cathedrals, Ingold (2013) considers a collective and cannot but acknowledge that there were templates and some drawings. These were descriptive artifacts, even if different from the ones used today in *designing*.

As for the organizational level, as we have seen in the two vignettes above, the various descriptive artifacts allow a division of labor and a distribution of tasks, through which designers' physical presence is not necessary in other phases, beyond the one of *designing*. Of course, the distribution of tasks allowed by *designing* can take the form of a Taylorist division of labor, with conception and management tasks separated from the executive ones. However, it is not necessarily the case, given also the possibility of more faceted organizational architectures where Taylorist features are mixed with others, more related to crafts(wo)manship, as the one behind the two initial vignettes.

Besides distributing tasks, descriptive artifacts allow also forms of gatherings, of negotiations, and participation in the *designing* phase: stakeholders – also non-expert ones – can discuss, not just about, but actually around a design project and sometimes with the design project in their hands – in the case of mock-ups and *prototypes*.

These possibilities are strictly connected with the cognitive relevance of these descriptive artifacts. They allow shifts and also multiplications of points of view (Latour 1990, 1992; Yaneva 2005).

On the one hand, these descriptive artifacts allow comparisons with what is presently designed or made, as well as with other design projects, with previous versions of the same project or with other finished artifacts. Comparison, in turn, requires a detachment from the engagement within a certain flow of *making*, in order to, by taking a somewhat distant position, have the possibility of looking or, more in general, perceiving two or more things at once.

On the other hand, a plan can provide an overall vision, which allows shifting from the specific portion or detail at hand, to the abstract whole (Parolin and Mattozzi 2013).

The second vignette shows all these dynamics taking place: Giovanni is able to intervene on a detail, by comparing the first prototype of the metal frame and the rendering, which outlines how the finished whole should look like.

Actually, the tension between details and the whole is a key feature of *designing* and, hence, design. It is through their management that actually style, "language", and novelty emerge. Of course the relation between the whole and the parts is relevant also for crafts(wo)men. However, in crafst(wo)manship such relation often relies on traditional proportions, whereas in design novelty – especially for quite stabilized artifacts like chairs – emerges through the fine management of details in relation to a whole. Precisely because within design there are no unquestionable and somewhat embodied standards, the production of novelty in terms of detail-whole relations depends on fine comparisons.

As the two vignettes also show, the presence of descriptive artifacts within the *making* of other descriptive artifacts, of prototypes or of the actual final artifact, together with the need to consider and compare these descriptive

artifacts, introduce, within the *making* flow, various degrees of detachments and disengagements. It is through them that the designer as a "reflective practitioner" (Schön 1984) can emerge[7].

By taking into account the presence of descriptive artifacts within *designing* as well as *making* practices in design processes, I conclude this first part by reconsidering Ingold's (2000) take on "weaving a basket" and on the idea of growth. My intention is, thus, to propose a distinction – a gradual one – between crafts(wo)manship and design. The difference relies in the possibility of having or not detached points of view on the process of "growth". Whereas the mollusk does not have an external point of view on what it is growing – it is completely engaged in the process –, the crafts(wo)man has a point of view external to the one of her/his hands – her/his eyes. Therefore, s/he can control what her/his hands are doing – and so s/he can modulate the thickness of the braid s/he is weaving. Within a design process, thanks to the presence of the various artifacts giving way to various design descriptions, further detached points of view are introduced, through which it is possible to compare different descriptions, in order to produce new design descriptions, new prototypes or new designed artifacts – as we saw in the two vignettes.

Artifacts to be described

Fig. 2. Squeezing oranges in the sink

7 Such kind of reflexivity is different from the kind addressed in Amendola (2009), which is a broader social reflexivity. I will indirectly consider such broader reflexivity in the final part of the article.

Take a look at the picture above (Fig. 2). Though the quality of the picture is low and the action taking place not so clear, if you know a bit about design you will very likely recognize the tool used in the sink: Juicy Salif*, the (in)famous, squeezer designed by Philippe Starck and produced by Alessi in 1991.*

I took the picture around 15 years ago. At the time, I was studying for my Ph.D. carrying out a thesis on artifacts, their meanings and their social role. Because of these interests, I started working as the teaching assistant of a course in semiotics of design at the Faculty of Design and Art of IUAV, the Architectural School of Venice. Since I was teaching design students, I also started to be interested not only in artifacts, but in designed artifacts and, more in general, in design – not knowing yet that this would become my actual field of research and teaching for a long time. Because of that, I knew about JS *and the controversy it had raised*[8]*. By many it was considered non-usable and not used as a squeezer, but only used, if used, as an object of contemplation. Thus, when I noticed it in the sink of a kitchen of a couple I used to see, I was startled. I took the pictures, initially thinking to use them just as an example for the students. But somehow, such peculiar use, elicited a reflection and a deeper research, the outcome of which not only found a place in my Ph.D. thesis, but also became the object of various articles (Mattozzi 2010, 2019) and an example on which I would iterate my progressive reflection on how to describe the mediation of artifacts.*

Through a few observations and talks with the couple, who owned the object I was able to reconstruct its biography and to account for its mediation and the interaction involving it, the woman, whose hand we see in the picture, and the space of the kitchen, where everything took place.

When I showed an interest in her practice and started to ask her about it, the woman of the picture was surprised, because she never really thought about it. It was just her routine to prepare the orange juice for her husband every morning. However, when urged, she said that her husband bought the squeezer after having seen it in action at a friends' party. He was struck and amused by the possibility of seeing the juice flowing down vertically – something which, indeed, we usually do not see.

8 For a summary of the controversy, see Mattozzi (2010).

Fig. 3. Squeezing oranges on the kitchen peninsula.

She also said that she started to use the squeezer on the kitchen peninsula (Fig. 3). However, given the height of the squeezer, she looked for a lower surface that would require less effort. Thus, she just turned toward the only place of the kitchen that provided a lower surface – the sink (Fig 2 and 4).

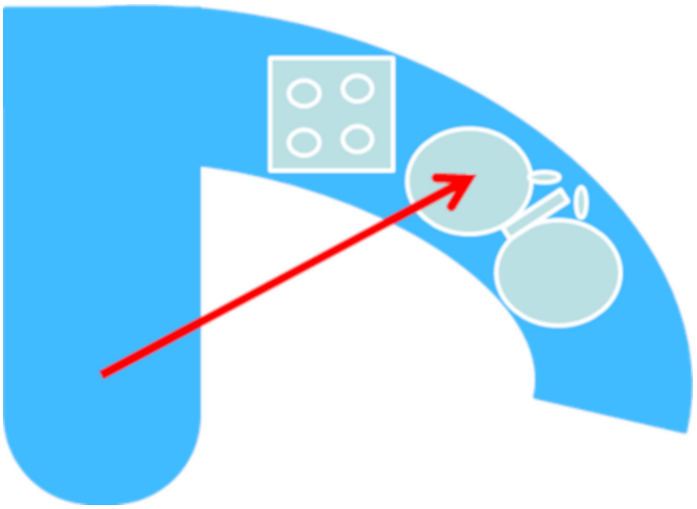

Fig. 4. From the kitchen-peninsula to the kitchen-sink.

She was actually already familiar with the squeezer in the sink, given that she would place it in there for cleaning purposes. Thus, the sink resulted particularly apt. Not only it allowed her to lower the point of pressure, but also made the issue of spillovers irrelevant – one of the common critiques waged against JS *regards the fact that "it spills everywhere" (Magistà, 2009, my translation). The sink is, indeed, made for spillovers. Not only the spillovers, but also the squeezer itself, once in the sink, resulted instantaneously cleanable. Indeed, thanks to the verticality that characterizes the squeezer – it is an artifact that, except for the base of the feet, does not display any horizontal surface – the water descending from the faucet flows over the body of the squeezer, following the same trajectories of the juice, removing possible leftovers. All this is much less time consuming and energy taking than cleaning a sieve. The missing sieve is another of the issues for which* JS *has been criticized. However, the very lack of the sieve – which, if present, would introduce a horizontal surface – makes it easily washable. A feature particularly welcomed by the woman whose arms we see in the picture, but never really noticed by designers or design critics.*

As we can see[9], the artifact – *JS* – contributed, through some of its features – especially height and verticality – to shift the practice of squeezing from the kitchen peninsula to the sink. Thanks to its height – combined with the height of the kitchen peninsula –, it disposed to make the woman, whose hands we see in the picture, lose part of her strength, part of her competence to squeeze, by preventing the use of her body weight. However, it is actually still thanks to *JS*' height – combined this time with the lower surface offered by the sink – that *JS* could be used comfortably by the woman, without the need to bend over too much. Through its verticality, *JS* disposes liquids to flow vertically along its body and then in between its legs. The juice first, and then the water removing possible leftovers. Thus, *JS* disposed cleaning as an easy operation. In the sink, squeezing and cleaning become basically one operation.

Such practice – an improvisation, in Ingold's and Hallam's (2007) terms, that leads to an innovation, i.e. the sink-squeezer – could be established and could grow – in Ingold's terms – thanks to a distribution of actions and competences – a network of allowances and prescriptions, permissions, and proscriptions (Akrich and Latour 1992; Latour 1992, 2000), disposed by the (human and non-human) actors involved in the practice and unfolded (or not) by them through actual actions.

Ingold (2013), still making reference to the framework seen in the previous section, assumes design-as-*making* as a lively continuous flow, as a continuous process of transformation, so that a stabilized configurations cannot but provide death to such process.

9 For an extended account of the case, see Mattozzi (2010, 2019).

Here, following Latour (2005), I propose a slightly different view of these processes, which regard *making*, but actually, any other phase of design can be included as, for instance, *designing*, *prototyping* – both seen before – as well as *domestication* (Silverstone, Hirsch and Morley 1992). The latter is actually what takes place in the present vignette, i.e. the "consumer's appropriation [of objects], by taking [them] home […] and in making […] them acceptable and familiar" (Silverstone and Haddon 1996, p. 46). These processes are not as continuous as Ingold wants them to be. Thresholds provided by stabilized configurations modulates them. Stabilized configurations do not necrotize the process of transformation, but rather provide its shape by relaying it, by relaunching it, not as neutral intermediaries sort of "repeaters", but as mediators (Latour 2005), which translate a movement of the process into another one[10]. *JS*, with its stabilized configuration, certainly did not stop the transformation of oranges into orange juice, nor the transformations of the practice of squeezing: it contributed to such practice by providing it with a specific "twist", thanks to some of its features.

Although these features are inscribed into artifacts, into their configuration – the "network within" (Parolin and Mattozzi 2014) of textures, consistencies, shapes, colors – and disposed by them, they remain virtual, and basically unknowable, unless unfolded in actual practices[11], carried out in a distributed way by various (human and non-human) actors – as we saw in the vignette.

Such dynamics of virtuality and actuality or of dispositions and unfoldings takes place, recursively, in each phase of the design process and in-between them. In this section, we have seen it at work within *domestication*. In the previous one, we have seen it at work in *prototyping*, where – if we take Carlo's case – each configuration of the seat disposed certain sensations, which, when unfolded, disposed a certain reflection, which, in turn, disposed a new configuration of the seat, and so on.

Describing-analyzing design – as intended here, as a complex process that from *designing* goes to *recycling* – and especially describing-analyzing the role artifacts play in it, means, then, being able to account for their specific mediations, for the way artifacts dispose certain actions and certain affects and for the way they are unfolded in practice.

Is DA and, more in general, anthropology able to describe-analyze and account for artifacts' features and mediations?

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10 Besides the rhetoric of the lively dynamics and death, Gatt and Ingold (2013, pp. 92) well know that a stabilized configuration does not kill a transformative process: talking about Gatt's work, they indeed acknowledged that "The documents Gatt produced during fieldwork were not adopted unchanged: that was not the goal. They provided a concrete starting point grounded in activists' concerns and experiences".

11 For such tension between virtuality and actuality, see Mattozzi (2019).

Anthropology, as well as DA, still tend to privilege what humans do with artifacts and what humans say about them. Without underestimating the relevance of these approaches[12], I deem that a more symmetrical and distributed approach is needed in order to actually account for the mediation of artifacts in design processes[13] – as I roughly did with *JS*.

Only thanks to such more symmetrical and distributed take on artifacts we, as social scientists, can actually engage with design and designers. This – and especially an attention to artifacts' details – is something that we can learn from designers – a first step through which "design can help reshape anthropology" (Marcus and Murphy 2011, p. 254), and not only anthropology.

The need for such more integrative approach that starts from the attention paid to artifacts' details and to how they contribute to the unfolding of action, emerges quite clearly if we look at Pink et al.'s (2017) work. This quite innovative work in DA fails to bring the two disciplines together, since there is a redoubling of descriptions. On the one hand Sarah Pink's ones, mainly focused on human movements, which only "inspires" the designers; on the other, the designers' ones, through a quite behavioristic method called PORTS, through which design concepts are actually developed.

The issue I raise here is not dissimilar to the one raised by Anna Tsing (2017) about learning from natural history how to describe more than human encounters: natural history, like design, "requires constant attention to form, texture, and color, constant speculation as to pattern" (Mathews 2018, p. 154).

Specifically for artifacts, the issue I am addressing resonates with Martin Holbraad's (2014, p. 231) question: "How, then, might ethnographers allow things to speak, not as proxies for their informants, but for themselves?"

While reconsidering what done with *Thinking through things* (Henare, Holbraad and Wastell 2007), Holbraad acknowledged that "[n]otwithstanding our claim to have found a way to let things speak for themselves, our argument seemed at most a method for allowing the ethnography of

12 Anglo-American material culture studies have focused on "reciprocity and exchange" (Ciabarri 2014, p. 13, my translation; see also Dei 2011, p. 5), giving more relevance to symbolic relations attributed by humans. As for DA, the essays in Gunn, Otto and Smith (2013) and Ventura and Gunn (2017) show that artifacts are rarely described and if they are, they are described through designers' words; Pink et al. (2017) mainly focuses on human movements.

13 Many anthropologists have problematized such asymmetry. There is not the space to fully address the issue here. In what follows, I will focus on two of the attempts that I feel tried to actually overcome such asymmetry. Others, like Alfred Gell's or Carlo Severi's ones, problematize it, but explicitly maintain the asymmetry. Jean-Pierre Warnier's one is human-body centered – but see n. 17. As for *technologie culturelle*, despite the "very detailed descriptions of technical operations", it has not been able to overcome a rigid separation of the social and the technical (Lemonnier 2012, p. 16).

things to speak on their behalf" (Holbraad 2014, p. 231), i.e. a method to record "ways of speaking and acting around things" (Holbraad 2014, p. 231). Holbraad attempts an answer to the question by proposing to look at how objects give way to concepts. While doing so, he completely dismisses Ingold's (2007a) approach to materials, judging it limited to "the material and sensuous level of things" (Holbraad 2014, p. 231). Not only Holbraad's critique of Ingold sounds quite ungenerous, but also it seems to me that it completely misses the point of Ingold's (2007) proposal. Ingold (2007a) asks "How should we talk about [the properties of materials]?" In order to answer this question he proposes three descriptive notions that environmental psychologist James J. Gibson introduced to describe bodies in interactions in an environment:

- medium – basically air, for humans – that allows to transmit energy and vibrations;
- substances, that penetrate and diffuse within the medium; they are relatively more resistant to penetration than the medium;
- surfaces, that provide substances with "relatively persistent layout, a degree of resistance to deformation and disintegration, a distinctive shape" (Ingold 2007a, pp. 4-5).

Ingold, thus, acknowledges that in order to talk about materials (multiple and empirical) and not about materiality (a singular concept), anthropologists need descriptive notions. For Ingold, then, in order to talk about materials, without being stuck only with the feeling of a specific material experience (what troubles Holbraad) and, at the same time, avoid the leap into pure concepts (what Holbraad would like to do), we need an intermediate "methodological" level. Such methodological level between the empirical and the theoretical-conceptual, is made of descriptive categories, terms, and models.

It is not only Holbraad that misses Ingold's point. Differently from archeologists (Knappet 2007; Nilsson 2007), who expressed an interest in Ingold's proposals, other anthropologists considered it "abstract", far from the "context of our ethnographic encounter as dynamic processes" (Miller 2007, p. 24).

Though Ingold (2007b, p. 16, n. 4) acknowledged "Gibson's tripartite scheme" only as "a useful starting point", he himself did not retrieve it, nor has attempted a more systematic trial of its adequacy (but see Ingold 2013, Ch. 7).

Regardless of Ingold's own persuasion[14] in the need of descriptive notions, I deem his move extremely relevant in order to develop a DA, which opens an actual space of dialogue between anthropologists and designers. Whereas, Ingold's move can appear awkward for an Anglo-Saxon anthropological *milieu*, it is not for a French one. Especially for what regards the *technologie culturelle*,

14 I thank Roberta Raffaetà and her doubts about Ingold's actual interests in these descriptive notion, for having motivated me to reread Ingold's article and the debate around it.

the French anthropological *milieu* has always been attentive to descriptive methodological issues[15] (Coupeye and Douny 2009; Dei 2011, pp. 12-15).

It is precisely in the course of the dialogue between the *technologie culturelle* and the emerging STS that the notion of *script* and the descriptive-analytical practice of *de-scription* were developed by Madeleine Akrich (1987, 2010) and Bruno Latour (1992, 2000; Akrich and Latour 1992).

The notion of *script* accounts, on the one hand, for how designers *inscribe* possible users' actions and roles in artifacts (Akrich 1987, 2010), and, on the other, for the way an artifact disposes users' actions (Latour 1992, 2000). It can be used to account for what artifacts do and make-do by providing or withdrawing competences, as I did for *JS*.

Though *script* is a relevant notion, which should be considered more by social sciences[16], it is not enough. Other terms, categories and models are needed to account for the way artifacts affect, as bodies, other bodies, mainly through their shapes, consistencies and textures – as it happened with Carlo and Giovanni. Elsewhere, Parolin and I (2013; Mattozzi 2017) have proposed to use the categories and the model elaborated in Jacques Fontanille's (2006) semiotics of the body. Such model is similar to the one used by Gibson mentioned by Ingold. It considers not only bodies, articulated in cores (substances for Gibson) and envelopes (surfaces for Gibson), but also the dynamics through which bodies interact, like penetration, envelopment, expulsion[17]. Carlo's task, for instance, required him to work on the envelope of the sandwich constituting the seat. However, he decided to intervene on the core, which was the hard component, first drilling it in order to soften it, and then replacing it with a soft element, which, however, had to be stiffened, through a penetrating hardening material.

Design-Anthropology-by-means-of-descriptions

Most of the discussions upon and within DA have revolved around the need to overcome a "one-sided" relationship between design and anthropology,

15 As Fabio Dei (2011) has noticed, the issue is related to the problematic one of metalanguage, which risks ending up in elaborating preformatted and generalizing categories, not able to account for the "variety of local material languages" (Dei 2011, p. 17, my translation). What Ingold (2007) is proposing, and what I will also propose below following Latour (1992, 2005) and semiotics, goes instead in the direction of an *infra*language: few descriptive notions, categories and models able to describe relations and, through such descriptions, able to let the local variety Dei is talking about emerge (Parolin and Mattozzi 2013).

16 For instance, it is completely ignored in Henare, Holbraad and Wastell (2007).

17 Warnier's body-centered approach to material culture uses similar categories. It is no coincidence, then, that one of his sources is Didier Anzieu's notion of skin-ego, used also by Fontanille.

"with a predominant emphasis on the benefits of anthropology for design", where anthropology is "usually reduced to its iconic method, ethnography" (Murphy and Marcus 2013, p. 252). Among various proposals for more symmetrical arrangements, Gatt and Ingold (2013) outlined the most radical one. Following what already proposed by Ingold (2008, 2013), they not only dismissed the idea of design-by-means-of-ethnography, questioned by many of the researchers working within the DA field, but also the one of "anthropology-by-means-of-ethnography" as "a practice of description", in order to replace it with "anthropology-by-means-of-design" as "a practice of correspondence".

As I have been trying to show, Gatt and Ingold's proposal is based on an inadequate view of design, which conflates *designing* and *making*, completely neglecting the role of descriptive artifacts.

I have been trying also to show the relevance of the description-analysis of designed artifacts in order to understand their social role.

Therefore, I suggest that, if a "correspondence" and reciprocal learning should take place between design and anthropology, they should be related to the very description-analysis of (designed) artifacts and of their social role. Hence, I deem that the common ground between design and anthropology – and social sciences more in general – is description, the practice of description (Mattozzi 2018).

Quite surprisingly, despite the relevance of the practice of description for anthropology – and, actually, for any science – no anthropologist, who has outlined analogies between design and their discipline (among others, Murphy and Marcus 2013; Ventura 2013), has considered description.

Such disregard is probably due to the fact that, though both design and anthropology practice description, ethnographic and design descriptions are of a different kind. Ethnographic descriptions are retrospective, whereas design descriptions are prospective – and it seems that this difference emerges since the first notes taken in notebooks (Frosini and Meloni 2019). Such difference has been broadly discussed within DA (among others, Gunn, Otto, Smith 2013; Pink et al. 2017; Ventura and Bichard 2016; for anthropology in general, Appadurai 2013), however, more in terms of a general attitude or orientation toward the future or toward the past-present, than in relation to descriptions.

Anthropological descriptions are retrospective – they describe something that has already happened – not so much in temporal terms, as usually seen within the DA debate, but in enunciational terms, as Latour has shown throughout his various ethnographies and then systematized in Latour (2012). Scientific descriptions – not only anthropological ones – need to trace and allow others to retrace the various passages from one reference to the previous one, in order to be able to get back to the phenomenon, which

produced the first inscriptions[18]. For instance, a number written in a scientific article, considered the final result of an experiment, can lead to a curve in a Cartesian graph, which, in turn, can lead to various traces drawn by a needle, which, in turn, can lead to some emitting source; as for anthropology, a report of an observation leads to a field diary, which leads to field notes, which lead to a certain situation observed by the ethnographer.

Design descriptions, are instead prospective. Sociologist Cristiano Storni (2012) talks about "proference", instead of reference, because they describe something that will take place. Each description begets a description aimed at a closer future, but nevertheless a future, up to the moment when what designed gets presentified. Basically, design descriptions are instructions or organizational *scripts* (Latour 2012) that tell what to do next – in the case of *designing* such next is producing further descriptions up to what Latour (1992) calls *shifting down*, i.e. the final externalization and fixation of all the descriptions into an actual artifact, not intended to produce further descriptions. Thus, a sketch provides instructions about what to draw in detail, which provides instructions about what to model with a 3D software, which provides instructions for the 3D printer, which provides a model, which provides instructions for the material distribution of a mold, and so on. Very rarely – and not for design concerns, but usually for historiographical or legal ones – people need to retrace backward the chains of *designing* descriptions.

Because of these differences, hoping to learn from design how to be future oriented as a science – as, for instance, Pink et al. (2017) planned – is hopeless. Pink et al. (2017) assume that by considering future expectations, hopes, what to do next, etc. in order to produce descriptions of activities and movements, will make their description more future oriented than considering memories, past events and so on. However, they mix up the enunciation and the content of the enunciation, the frame and what is framed. Resulting descriptions cannot but freeze a certain moment of something already happened – and this is, for example, very visible even in the results of a very designerly method to collect data as the Tactile Time collage (Pink et al. 2017, p. 120)[19].

Of course, sciences are too, in their own way, future oriented in the sense that they are, as historian of science Hans-Jörg Rheinberger (2007) recalls, by citing Nobel prize biologist Francois Jacob, a "machine for making the future". Sciences are, however, future oriented, not in the way they make descriptions, but in the results they reach, which rearticulate the world as we

18 There is also a second kind of retrospectivity, related to the requirement of referencing previous published researches (Volonté 2012).

19 This does not mean that anthropology and, more in general, sciences cannot study the future (see, for instance, Appadurai 2013). It just means that they cannot do it in a future oriented way.

have known it. And, of course, sciences take place in organizational settings, so that researchers need to know what to do next. Therefore, a certain description, besides referring to what happened before, can also suggest what to do next. Nevertheless, its main relevance – the knowledge it produces – resides in the reference to previous descriptions[20].

Despite these differences, I deem, as I already said, that the practice of description – and especially the practice of describing artifacts and their social role – is the common ground between design and anthropology – and social sciences more in general.

In order to fully appreciate the relevance of description as a shared ground, without dismissing the different role descriptions play in the two fields, we also need to consider that *designing* requires retrospective moments of description-analysis, too. Therefore, these can be one of the main sites of exchange between design and any science (Mela and Ciaffi 2009).

At present, except for specific fields like urban planning (Mela and Ciaffi 2009) and service design, these descriptions are traditionally focused on artifacts (see for instance, Bonsiepe 1965; Fig. 5). What anthropology – and social sciences more in general – can add are, instead, more dynamic, faceted and thick descriptions of past and present situations, as well as expectations of future ones. Bruno Latour and Albena Yaneva (2008), who developed a way (Yaneva 2013) to provide more articulated descriptions-analysis for architecture, insist on the fact that architecture needs to move away from "reduc[ing] things to drawings" (Latour and Yaneva 2008, p. 83) in a static way in a geometric space, in order to be able to capture them "as flows of transformations" (Latour and Yaneva 2008, p. 85).

This can be a valid suggestion for any kind of design. However, Latour and Yaneva try to produce these descriptions mainly using data gathered from the internet. Differently, I think that in order to actually take into account the tangibility of artifacts and the sensitivity of experiences they dispose, other data are necessary, for which an anthropology able to describe artifacts in detail would be key.

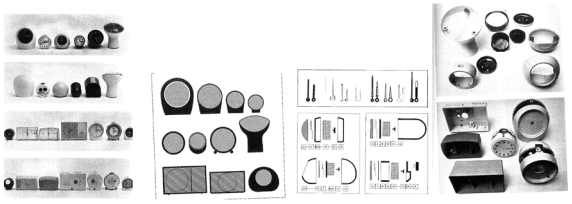

Fig. 5. Excerpts from a design-analysis (Bonsiepe 1965): the initial table-watches considered; typology of the "physiognomy"; varieties of hands; assembling topological sequences; shells subdivisions.

20 Also those present in other previous published researches (Volonté 2012).

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