Pluralizing Perspectives on Material Culture

An essay on design ethnography and the world of things

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Abstract

The article proceeds from the premise that people are socialized into a man-made world shaped by people, which always already possesses a material dimension. It focuses on material culture and the world of things with which we are intricately bound in our everyday lives. The thesis posits that in our handling of things, we have incorporated implicit knowledge of our practices that in the context of design research should be made explicit. Only when we engage with things more intensively does their complexity emerge. Things have conditions for existence, material qualities, functions, and meanings that are ascribed to them, which change and are culturally variable. They are enmeshed with human identities and interactions. To investigate material culture ethnographically requires artificially estranging oneself from it—for instance by using participatory research methods.

Keywords: Blind Spot, Design Ethnography, Material Culture, Meanings, Things

Resumen

El artículo parte de la premisa de que las personas se socializan en un mundo creado por el hombre formado por personas, que siempre posee una dimensión material. Se centra en la cultura material y el mundo de las cosas con las que estamos intrincadamente vinculados en nuestra vida cotidiana. La tesis plantea que en nuestro manejo de las cosas, hemos incorporado un conocimiento implícito de nuestras prácticas que en el contexto de la investigación de diseño debe hacerse explícito. Solo cuando nos involucramos con las cosas con mayor intensidad emerge su complejidad. Las cosas tienen condiciones de existencia, cualidades materiales, funciones y significados que se les atribuyen, que cambian y son culturalmente variables. Están enredados con identidades e interacciones humanas. Investigar la cultura material etnográficamente requiere distanciarse artificialmente de ella, por ejemplo, utilizando métodos de investigación participativa.

Palabras clave: Punto ciego, Etnografía de diseño, Cultura material, Significados, Cosas

] Francis Müller

Introducción

n our everyday lives and environment, we are always surrounded by material culture. Whether we are in a library, a bar, an office, a dance hall, a doctor's surgery, a restaurant, a taxi, or a museum – we are surrounded by objects and things (Simon 1996, p. 2) that influence our behavior, the existence of which we typically do not scrutinize. We have assimilated implicit knowledge of how to handle these things; we have incorporated this knowledge: we know how to purchase a fare card for the underground from the ticket machine, we know how to tie our shoes, and how to use a smart phone. This material culture, which we ourselves have brought into being, has a substantial effect on our behavior and our interactions with other people. In this regard, the human being might be described as "an animal suspended in webs of significance he himself has spun" (Geertz, 1973, p. 5), whereby this web of significance is also of a material nature, which is of fundamental importance for design theory and practice. This article promotes design ethnography as a method to understand the material culture that surrounds us. It presents different theoretical positions in the sociological and anthropological discussion of material culture and ethnographic methods to explore the world of things. In this context it underlines the design-specific ethnographic approach that is quite different from ethnography in social sciences.

Everyday knowledge and blind spots

Every society, community, and even every group – at least in so far as it possesses a certain consistency – develops its own material culture. Within the confines of small social environments, we encounter varying objects and things: different things are present in a Buddhist temple than in a Catholic church. There are different things in a Kung Fu school than in a boxing gym, in a classical ballet school different things than in a tango school. There are different things in a laboratory than in a law office. Different things in a bar than in a university lecture hall. In a bar-

throom, different things than in the kitchen. In a bookshop, different things than in a art gallery. These things are intertwined with cultural practices and scripts that lead to behaviors appropriate to the situation, to certain modes of thought and conceptions of the world (Fleck 1947): in a chemistry lab, the world is interpreted differently than in a Pentecostal church. In a political Parliament differently than in an atelier of an artist. At the same time, there are things that are present in almost all of these places: screws, light bulbs, light switches, glass window panes, etc. These are things to which we pay little attention in everyday life, but their absence would make many tasks and actions difficult, if not impossible.

All things are formed, made by people, they are part of culture. We are born and socialized into a man-made, designed world. Most things are situated within the matter-of-course aspects of our everyday lives, where we often do not even perceive them at all. This leads to a blind spot (Maturana and Varela 1984, p. 5 ff.). This blind spot is the consequence of our everyday knowledge: when we see a supermarket, we know immediately - without having to look at all carefully—that it is a supermarket. We need merely to see a couple of features characteristic of a supermarket to know that is what it is. That is to say: we complete the picture on the basis of acquired and social knowledge. As the Polish philosopher Ludwig Fleck writes: "We look with our own eyes, we see with the eyes of a collective body" (1947, p. 134). We do not see the phenomena in our everyday lives in their "completeness," but only in their contours – and we fill them in on the basis of knowledge that is socially acquired. We see only a few significant signs that are typical and significant for a supermarket, and that suffices to make us certain that we are seeing a supermarket. A person who does not know what a supermarket is cannot see a supermarket. Rather, they will see a confusing jumble of brightly colored things, weird lighting, and unfamiliar signs.

We interact with things in a great variety of ways: we buy things, use them, consume them, repair them, alter

them, throw them away, destroy them. The things in question may be simple or highly technologically complex. A fork, for instance, is technologically simple, but even here there are significantly more variants than one might at first assume: "Once a more or less consistently functioning core has developed and, importantly, maintains historical stability, then forks will vary with cultural standards. A fork is just as much a matter of etiquette and social distinction as of the perfecting of its function" (Böhme 2012, p. 102). There are special forks for meat, fish, oysters, and cake. Different forks are used in fancy restaurants and hospital cafeterias, on airplanes and camping trips, and with take-out food. Forks can be made out of steel, plastic, wood, or sliver – and all these things have specific functionalities and significance. This great variety of fork styles, however, also have effect on us: we handle a silver fork at a fancy restaurant differently than a plastic fork. We have learned the "correct" way and automatically behave accordingly in the appropriate situation. Things thus affect us and determine our behavior. To handle a fork the "correct" way is a distinction technique (Bourdieu 1979).

A fork is a very simple object in terms of technology. A toaster, on the other hand, is significantly more complicated. While it may be mechanically trivial in comparison to, say, a smart phone. It's complexity was demonstrated by the designer Thomas Thwaites in his "Toaster Project" (2011)1: Using raw materials he found and processed himself, he built a replica of a mass-produced toaster by hand. In this way, he made manifest the complexity of the industrial process of mass production. This is already a relatively time-consuming endeavor for a toaster; with a smartphone, it would have been impossible. Almost no one who uses a smartphone knows how the technology functions. Neither is this necessary, since in everyday life it is sufficient simply to know how to use it. The technological complexity is hidden behind the smart interface. Smartphones demonstrate the power things have over us: in a little over a decade, they have fundamentally - and on a global level – altered the way in which we communicate, interact, and behave in private and public. We know how to handle our smart phones in everyday live: We phone with it, take picture, produce movies, buy airplane tickets, share information with friends; we handle all this with routine. It is only in a crisis – that is, when the smartphone stops working – that we are confronted with its complexity (Berger and Luckmann 1967, p. 23 f.; Latour 2002, p. 223; Schön 1983, p. 59 ff.). Thus, the crises makes visible blind spots. The exceptional situation develops epistemic qualities: reflection begins in the moment that everyday routine ends. In design, the artificial alienation from the familiar is something like a basic pre-condition, since design is always seeking to conceive the world differently, which is why Bruno Latour ascribed revolutionary powers to the discipline (2009, p. 358).

Functions, meanings, distinctions

Meanings are not inscribed in things; rather, they are based on social attributions (Blumer 1969, p. 4 f.). This is particularly apparent in the case of religious objects: crucifixes, saints, insignia, chalices, candles, prayer rugs, swords, holy scriptures, altars and shrines, etc. manifest transcendence (Durkheim 2008, p. 205 ff.). They signal in a material way a difference between a profane and a sacred space. They point - from an immanent standpoint - toward the transcendental, the absent, and the mysterious. They are symbols from the beyond that are materialized in this world. They thus bring into the world the idea - in material form - of other transcendent realities. The Mexican "Día de los Muertos" exemplifies this. The dead are commemorated with certain rituals, symbols, emblems, and objects (shrines, pictures of the deceased, saints, and votive offerings). This in turn is embedded in ritual settings and social practices such as communal meals. Everyday things, such as for instance an apple, are transformed into something sacred the moment they become part of a shrine for a deceased person on "Día de los Muertos." This significance is not inherent to the apple. Rather, it is generated by the collective and by the ritual context.

Things have conditions for their existence: They are designed and made by people for some kind of reason. They have a structure and material qualities: They could be hard, soft, elastic, rough, smooth, matte, colorful, light, heavy, etc. In addition to these material aspects, they are enmeshed in the context of their everyday functions and meanings (Lueger and Froschauer 2018, p. 65). The functionality of a thing raises the question of whether things make universal affordances manifest, or whether the handling of a thing is always learned? If Klaus Krippendorff is right then such calls to action are inscribed at least in certain things: "A baseball bat is formed in such a way that even someone who has never heard of baseball would grasp it by the 'right' end and could swing it or hit with it" (2013, p. 150). In that context, it is also possible to differentiate between things of utility and symbolic things (Habermas 1996, p. 180 f.): While the form of a thing of utility points to its intended purpose or function, symbolic things - such as emblems, icons, and signs - primarily have a culturally constructed meaning. Of course, there are also hybrids: The smartphone is an object that merges into its numerous digital functions. It enables communication with those who are physically absent and access to a universe of information. At the same time, however, the physical smartphone itself can be a status symbol and an extension of one's identity. This is evident, for instance, when smartphones are adorned with colorful cases. Heather speaks – on the basis of studies of young female teenagers in the Dominican Republic and Jamaica – of "mobile intimacies" and a "mobile aesthetic" (2016, p. 160 ff.) that are combined in smartphone cases and acrylic nails to aestheticize and shape identities.2 This example shows, that the things we consume – as smartphones – do not simply satisfy our needs, but also convey symbolic expression. They lead to identification, social differentiation, and distinction. Mary Douglas and Baron Isherwood fundamentally reject the theory of satisfying need: "Forget that commodities are good for eating, clothing, and shelter; forget their usefulness and try instead the idea that commodities are good for thinking; treat them as a nonverbal medium for the human creative faculty." (Douglas and Isherwood 1978, p. 62).

To define eating, drinking, clothing, etc. as simply the satisfaction of need is to assume a mechanistic conception of the human and to obscure symbolic categories and meanings. We define ourselves through eating: from veganism to "from-nose-to-tail". Whether one nourishes oneself in an ascetic and self-disciplined or a hedonistic and pleasure-oriented manner, one cultivates an image and makes a social statement. One uses certain consumer goods and eschews others, then, in order to represent oneself and to communicate. Consumer goods do not simply satisfy needs; rather, they are vehicles for symbolic expression. They are societal lynchpins. They lead to communication and enable social differentiation and distinction. Mary Douglas and Baron Isherwood have fundamentally refuted the thesis of meeting needs, which originated in the field of economics and was uncritically adopted in discourses of sufficiency:

"Instead of supposing that goods are primarily needed for subsistence plus competitive display, let us assume that they are needed for making visible and stable the categories of culture. It is standard ethnographic practice to assume that all material possessions carry social meanings and to concentrate a main part of cultural analysis upon their use as communicators" (Douglas and Isherwood 1978: p. 59).

The Inextricability of Identity and Things

The things with which we surround ourselves and that we consume contribute to the development of our habitus, through which our social identity is objectivized and materialized (Bourdieu 1979). The way we dress, for instance, is a means of establishing social identity. We make a different impression and experience the world differently when we walk through the streets in sweat pants as opposed to an elegant suit. Accordingly, Habermas states that clothing is experienced as a part of one's own person that reinforces

the body's boundaries (1996, p. 67). Clothing is inextricably bound up with our identity, clothes are our "social skin" (Turner 1980). In his convincing article, "Why Clothing is not Superficial" (2009), the British anthropologist Daniel Miller demonstrated that the Western concept of identity is a cultural construction. In Europe, especially, the prevalent concept of identity is one shaped by the Romantics, which posits that identity resides deep in a person's interior and therefore represents something like an ontological essence. But in this regard, Miller points to Peer Gynt, the protagonist in the eponymous play by Henrik Ibsen, who searches for the inner core of an onion, but instead encounters only more layers (Miller 2009, p. 13). That is exactly what happens to a person who is searching for their identity. Human identity has no core, no essence; it is embedded in a social fabric. It is reflected in others. It arises through reflection, which means that a subject can perceive themselves as an object (Mead 2015, p. 135 ff.).3 Using Trinidad as a case study, Daniel Miller demonstrates that external appearance counts far more as the "true" person, whereby clothing, jewelry, makeup, etc. function as constitutative of identity (2009, p. 13 ff.): "We possess what could be called a depth ontology. The assumption is that being - what we truly are - is located deep in ourselves and is in direct opposition to the surface" (2009: p. 16). Miller thus shows that consumer culture forms identity and is interlinked with the things of our everyday world: an idea that is rejected in western, and especially German-speaking societies because surface appearance is connoted negatively as "superficiality" and the "true self" is supposed to keep itself removed from the material world. At least from an anthropological viewpoint we have to reject those assumptions, because human identities are intertwined with things.

Some of these things are a part of our completely personal private sphere, which we prefer not to share with others. Habermas describes these things as an "identity kit" (1996, p. 122 f.). By this, he means sanitary items like a tooth brush, towel, and comb, clothing and shoes, glasses, prosthetics, beds, and purses or wallets with personal identification. Things with biographical connections

- 3 Cooley speaks of the "looking-glass self" (1922, p. 184).
- 4 https://www.ikeahackers.net (accessed April 7, 2019).

– that is, "memory objects" (Hahn 2014, p. 37 ff.) – often retain an emotional meaning. Souvenirs for example enable the adoption of a temporally or geographically distant perspective (Habermas 1996, p. 285). Heirlooms transcend the here and now in a similar way. They "lend a social, familiar identity [...] and a historical identity" (Habermas 1996, p. 292). Gifts represent social bonds (Godelier 1999; Mauss 2001). Such things transport deep emotional and symbolic meanings and they transcend territorial and temporal spheres.

Living spaces in particular amass personal things that materially manifest people's lifestyle and are biographically meaningful. Daniel Miller visited people in one hundred apartments on a London street who shared information with him about the things he found there—revealing their personalities and biographies in the process. Miller thus disproves the widespread idea that modern society is becoming increasingly more materialistic and shallow. His concludes "that possessions often remain profound and usually the closer our relationships are with objects, the closer our relationships are with other people" (Miller 2008, p. 1).

Non-intentional design and adaption of things

The practical handling of things can diverge from what their producers intended: Things are frequently adapted, enhanced, or misused. The latter is described as "non-intentional design" (Brandes and Erlhoff 2006) — when things are used for something that the engineers and designers did not have in mind (Suchman 1987). This is the case, for instance, when I store my pens and pencils in a beer mug. Our apartments are full of such examples. This means, that all humans have design skills; design is then an informal and democratized practice (Cross 2007, p. 47). More strategic are phenomena such as IKEA hacking, 4 in which IKEA mass products are altered and adapted—a creative act that is at the same time a subversive statement against the Swedish furniture giant's global homogenization of living spaces (Liebl 2008).

] Francis Müller

Things can also serve to reserve personal space. For instance, sun glasses or sun block left on a lounge chair on the beach signal a person's claim to it, symbolically marking a "possessional territory" (Goffman 2010, p. 38). We do the same thing in meetings when we stake our claim to a certain spot with our laptop, smartphone, and writing pad. Things therefore fulfill situational functions that were not planned by the engineers and designers, but can be important and inspiring especially for designers. These things are embedded in everyday practices that cannot be inferred from a sheer analysis of the things themselves. To understand things, it is necessary to determine in what creative practices and contexts they are enmeshed and what meanings they have.

Things circulate in time and space

Things change physically in historical contexts, and they transform societies also. Technology demonstrates this in an extreme way: Since the advent of the first computers in the 1940s in the USA to the newest generation of smart technology today, technological development has fundamentally altered society — and on a global scale. At the same time, their functions change, whereby functionalism here is understood in the anthropological tradition as problem-solving. The smart phone, for instance, solves problems that did not exist previously and actually only came into the world with the smart phone itself. It has transformed our everyday life and our social conduct radically.

Moreover, the meanings of things change too. Jeans, for instance, were once work pants, but in the 1950s turned into a subversive symbol of freedom, and later became a mass-produced consumer good. A television set was a sign of affluence and prosperity in the 1950s in western societies. Today it often has negative connotations as a symbol of shallow entertainment. How we value a television, therefore, depends on the one hand on the social-historical epoch but also just as much on the social milieus in which we move. In many cities, the automobile has lost its once high value as a status symbol due to increasing concern for

the environment, while there is a great variety of bicycles which signal quite distinct lifestyles. These significations of the things are not stable, they are therefore transformed through historical processes of interpretation and value change.

In the context of the theory of material culture, it is important that things have "biographies." This is evident in consumer goods – that is, things that are mass produced and marketed: "The characterization of an object as a 'consumer good' is a temporally delimited context of many things and must be understood as a part of object biographies" (Hahn 2014, p. 42). Before things can become consumer goods at all, they are conceived, designed, and produced. At some point, things reach the zenith of their biographies. The zenith of an iPhone consists perhaps of the moment at which the CEO presents the newest model. After that, the iPhones will be sold, they will be used and altered; and they will lose economic value. When an iPhone becomes old, obsolete, or no longer functional, its value is reduced to the resources that went into it, such as rare minerals and gold. The rest becomes trash. Other things - for instance, disposable plastic bags - become trash after just a single use. How trash is defined is dependent on a variety of factors, as Hans Peter Hahn demonstrates using the example of cans and rubber tires, which in poor societies become the starting point for other implements and household objects (2014, p. 43). This too is an example of non-intentional design.

Then there are other things – such as art works and archaeological finds – that survive for centuries, because they represent certain values. Museum objects are "the material carriers of memory" (Böhme 2012, p. 363). They are considered archaeologically relevant to a specific historical epoch. They are removed from the context of everyday use and loaded with scholarly significance. If we assume a society that has no archaeology and does not value historical things, then the things that are kept in museums today could be classified and handled as trash. Such an attitude was for instance demonstrated by the Taliban in Afghanistan when they destroyed the Buddhas of Bamiyan in March 2001.

The selection of which things are valuable and which are not is made not only by archaeologists. Anyone who is moving or has to clean out the home of a deceased relative must decide whether things are objects of value or utility or garbage (Böhme 2012, p. 121 ff.). These things then possibly wind up at flea markets and second-hand shops, they are offered for sale on the internet, they are exchanged by their owners at swap meets, or they end up in a charity clothing drive. This means that a piece of clothing perhaps designed in Italy and produced in Thailand is sold and worn in Mexico. Later on it may land probably in Honduras, where someone wears, buys, swaps, or alters it. Things – and especially consumption goods such as clothes, cars, and technological tools - circulate around the global world. They are planned, produced, distributed, sold, consumed, adapted, and also destroyed in global contexts. Where and under what precise circumstances they were produced frequently remains obscure – in the case of textiles just as much as with smartphones - which also has to do with the often ethnically problematic conditions of production.

Contingency of the things

Ultimately, the things in our everyday world are lent their definitiveness not least through language, given that naming is always also a classification. Anselm Strauss writes: "An object which looks so much as an orange – in fact which really is an orange – can also be a member of an infinite number of other classes" (Strauss 2009, p. 22). An orange can be the fruit of a citrus tree of the Rutaceae family. It can be a vitamin-rich source of nourishment. It can be sold as a product in a supermarket or an informal street market. At an art school, it can be used as an object in a still life; at the carnival in Ivrea in Northern Italy or in Basle in Switzerland, it is a projectile; and at the Día de los Muertos in Mexico, it is an offering for the dead. An orange can therefore be an object of biology, nourishment, economics and law, or religious ritual. Its identity always depends on the perspective of someone. Its identity is contingent, contradicting the concept of identity, which after all posits that a thing is

one. This paradox is inherent to the notion of identity.

All these various theoretical aspects of material culture present certain challenges for design research and results in various methodological quirks. How should we do research about material culture? Which scientific methods should we apply? In his essay From the World of Science to the World of Research? Bruno Latour describes science and research as follows: "Science is certainty; research is uncertainty. Science is supposed to be cold, straight, and detached; research is warm, involving, and risky" (1998, p. 208). The scientific analysis of isolated things may give information about materiality or production process, but it gives only limited information about their meanings. Because meanings are ascribed, the process of such attribution must be observed and analyzed.

This raises the following questions that might be answered more by ethnographic research than by strict science: Where does a thing come from? Where is it situated in space? Who uses it? How is it used? In what contextual complexes of action is it embedded? What emotions does it evoke? How do people communicate with each other through these things?

Design research and the discovery of unknown territories

In this context, I would like to suggest design ethnography (Crabtree et al. 2012; Cranz 2016) as a method for design research – not least because designers already use similar methods, albeit mostly intuitively. Design ethnography is quite different from strict and positivist science. But it matches perfectly with Latour's understanding of "research"; it is warm and risky.

Ethnography seeks "to map the processes in and through which people make their world" (Dellwing and Prus 2012, p. 53). Its focus is "What people do, what people know, and the things people make and use" (Spradley 1980, p. 5). To conduct ethnographic research means making everyday implicit knowledge explicit. To conduct ethnographic research means diving into different environments and social situa-

FRANCIS MÜLLER

tions, taking part in them, and at the same time maintaining an (artificial) distance that promotes reflection. Ethnography is an immersive method. Ethnography entails primarily a form of data collection in which one inserts one's own body into another environment: "It's one getting data [...] by subjecting yourself, your own body and your own personality, and your own social situation, to the set of contingencies that play upon a set of individuals, so that you can physically or ecologically penetrate their circle of response to their social situation [...] (Goffman 1989, p. 125). Robert E. Park, one of the founders of the sociological Chicago School, told his students:

"You have been told to go grubbing in the library, thereby accumulating a mass of notes and liberal coating of grime. You have been told to choose problems wherever you can find musty stacks of routine records based on trivial schedules prepared by tired bureaucrats and filled out by reluctant applicants for aid or fussy do-gooders or indifferent clerks. This is called, getting your hands dirty in real social research. Those who counsel you are wise and honorable; the reasons they offer are of great value. But one more thing is needful; first hand observation. Go and sit in the

lounges of luxury hotels and on the doorsteps of the flophouses; sit on the Gold Coast settees and the slum shakedowns; sit in the orchestra hall and in the Star and Garter burlesque. In short, gentlemen, go to get the seat of your pants dirty in real social research" (Park, cited in Prus 1996, p. 119).

Robert E. Park's call to his students articulates Latour's characterization of the difference between cold, linear, and detached science and warm, involving, and risky research. Research is for both something genuinely uncertain and leads into unknown territory. Ethnography is therefore not a strictly scientific or positivist method, which has epistemological consequences: "Ethnographic truths are thus inherently partial – committed and incomplete" (Clifford 1986, p. 7). It is within the context of design ethnography in particular that this emancipation from positivist objec-

tivity and the ethos of truth-seeking harbors creative potential. The method consists of making practical and implicit knowledge explicit (Schön 1983, p. 50 ff.; Polanyi 1985). By observing, articulating and transposing into text practical and everyday knowledge, we make it explicit and can reflect upon it. Sarah Pink, for instance, has conducted various studies in which she ethnographically investigates how long-lasting every day practices – for instance in the kitchen (2012, p. 48 ff.), in the garden (2012, p. 84 ff.), or doing the wash (2012, p. 66 ff.) – are carried out and what specific knowledge the respective actors bring to them.

"What if ...?"

The social sciences operate descriptively with regard to empirically perceptible reality and draw theoretical connections. But although realities are still the starting point in design, at the same time design is always oriented to an (uncertain) future. Design asks: "What happens if we look at it this way?" (Halse 2013, p. 182). Design thinks in alternatives. Design is speculative. Speculation requires one to avoid preconceptions and judgments and to attempt to look at social realities from a different perspective. A design object is, after all, not yet there during the design process, and therefore cannot be examined with a typical ethnographic research approach (Halse 2013, p. 282). The "natural" context in which a new design object would be used cannot be investigated empirically. At best, one could conduct studies with similar design objects that already exist. Or, prototypes could be made for intervention in everyday situations. Such interventions could then be described broadly as experiments – whereby these are understood as open-ended and explorative, not as the binary type intended to verify or falsify a hypothesis. Joachim Halse and Laura Boffi speak of "Design Interventions as a Form of Inquiry" and define the method as follows: "In short, we propose that design interventions can be seen as a form of inquiry that is particularly relevant for investigating phenomena that are not very coherent, barely possible, almost unthinkable, and consistently under-specified because

they are still in the process of being conceptually and physically articulated" (2016, p. 89).

In this connection, Halse and Boffi speak of speculative interventions that are mixed with description. These interventions are driven by speculative questions such as "what if?" and "what could be?" (2016, p. 89). Design proceeds from empirical observations and hypotheses that genuinely alter people's interactions as well as their identities. Design operates with a conception of the human that, to a certain extent, it itself creates. Design is therefore always anthropocentric — even when it is critical of anthropocentrism or actually believes it can overcome it (Giaccardi et al. 2016, p. 235).

These design-specific characteristics have a great influence on design ethnography, which is clearly distinct from strictly positivistic scientific methods and eschews induction and deduction. To proceed inductively entails a generalization of one's observations, although it is possible that they are relevant only to the specific case, and not universally applicable. To proceed from the outset deductively entails constructing and testing hypotheses based on certain prior knowledge. This begs the question of where this prior knowledge comes from, especially since at the start of the inquiry there is still very little known about the field of research. A hypothesis-driven approach is not compatible with the playful and explorative openness that is absolutely inherent to design research and design praxis. It is relatively banal to enter into a social environment armed with medially constructed prior knowledge in order to "test" it there. If you know what you are looking for from the beginning, you observe reality through tunnel vision and will therefore overlook many details that might have proved to be highly relevant further in the design process. Hypotheses should therefore be understood at best as a working method that serves as an entry point into a field, but once there they can quickly become obsolete and should accordingly be set aside (Malinowski 2007, p. 30 f.). Much more appropriate to design ethnography is abduction, the method that goes back to the American semioticist Charles Sanders Peirce

Abduction, Fuzziness, and Serendipity

Reichertz compares abduction with a leap into the dark: "You don't really know what awaits you: the void or secure ground" (2013, p. 22). In this regard, abduction corresponds to the riskiness that, according to Bruno Latour, characterizes research. The design theorist Michael Erlhoff pleads in this context for the potential of fuzziness: "Fuzziness, namely, defines particularly the kind of undogmatic competence of the open approach to all processes and problems that is inherent to design" (2010, p. 41). An abductive approach entails an iterative process in which observations and incorporated implicit practical knowledge (from participants in a field) are made explicit. This is a cyclical process in which one gradually sensitizes oneself to an environment until one understands something about its cultural grammar. The point consists in the fact that the research does not only find something in the data but also adds something to them, which makes abduction constructivist (Bryant und Charmaz 2007, p. 44 ff.). This opens up new possibilities particularly within the context of design ethnography, since here the creation of form is part of the process of generating knowledge. In this way hypotheses can be developed that are actually conjectures or guiding principles that are transferred into design in iterative processes.

Serendipity is also an important aspect to consider in the context of abduction. Serendipity means finding something that one was not even looking for because one did not know it existed. Penicillin, LSD, and Viagra are prominent examples in the history of science of things there were discovered "accidentally" rather than intentionally. It is in the nature of searching that one enters into new territory. This is why the design theorist Peter Friedrich Stephan calls for understanding "not knowing no longer exclusively as a deficit but rather as a resource" (2010, p. 85). Michael Dellwing and Robert Prus contend that very open, interactive ethnography is serendipitous per se. At the same time – as the examples from the history of science clearly demonstrate – the hard sciences are not entirely without se-

] Francis Müller

rendipity either. It is just that ethnography is allowed to be much more open about it (Dellwing and Prus 2012, p. 206). What remains covert in the hard sciences can and should be laid open and articulated in design ethnography. Operating with serendipity requires above all openness, attentiveness, and sensibility.

This goes hand in hand with the fact that during ethnographic research, one becomes immersed in other social worlds in order to investigate, for instance, the material cultures and meanings of things found there. Methodologically, this can be achieved by observations and conversations in people's environments. In this context, Sarah Pink suggests the method of "walking with video," in which the interview subjects are filmed on little tours of their territories while showing and elucidating places and things (2015, p. 111). A similar direction is taken by the method of "photovoice" (Wang 1999; Harper 2012, p. 188 ff.), in which certain groups are instructed to take their own photos of their environments from their "native's view point" (Geertz 1999), which are then interpreted and analyzed together. A further continuation of the participatory approach is cultural probes (Gaver et al. 2004). In this method, the people in the investigated environment are given small tasks - for instance, keeping a journal, taking pictures, keeping receipts, recording paths on maps, etc. What is important is that the methods enable playful and intuitive access. The cultural probe method is conceived as open and lends itself easily to expansion, supplementation, and change. It is suited to the study of material culture and the meanings of things because it provides insight into personal environments and spaces without physically disrupting them with the presence of the researcher. In this way it is possible to ascertain what sorts of meaning things have - and if the photos or records alone are not conclusive, the researchers can still interview the probe's subjects afterward.

Participant produced images of things

Estimates suggest that worldwide, 1.8 billion photographs are uploaded to the internet daily – 700 million of

them on Snapchat and 350 million on Facebook. One could therefore find entire universes of pictures online related to every conceivable category of things that can be described as "participant produced images" (Pink 2013, p. 86 ff.) – albeit without the prompting of a researcher. This can be for example selfies or other photos published on Facebook or Instagram. The analysis of such images must take account not only the represented objects but also of the context: What sort of pictorial material is this? What does it show? What does it document? What are the conditions of its production and the technical constraints? What is the nature of its staging? What are its components? What colors dominate? What symbols are visible? What is its narrative structure—that is, the story that the image suggests (but doesn't enact)? What associations does it evoke? How and where is it used? Was the picture manipulated with filters? The assumption here is that images are always produced, edited, and disseminated for potential viewers - and thus an attempt is always made to meet those viewers' expectations. In that regard, all the images published on the internet are oriented to very particular norms specific to certain communities and spheres. The images therefore have less of a documentary and much more of a staged character – and it is precisely here that they point toward societal norms.

Images can also be elucidated not only by the researcher alone, but also in a participatory process together with the producers of the pictures – a method known as "photo-elicitation" (Harper 2012, p. 155 ff.; Pink 2015, p. 92 ff.). Photographs are used to elicit narratives and subjective attributions of meaning that also always have intersubjective references:

"Photo-elicitation relies on the idea of the photograph becoming a visual text through which the subjectivities of researcher and participant intersect. It can evoke memories, knowledge and more in the research participant, which might have otherwise been inaccessible, while simultaneously allowing the researcher to compare her or his subjective interpretation of the image with that of the research participant" (Pink 2015, p. 88). While in the social sciences, ethnography tends to investigate "natural" situations — that is, ones that are not altered by the researcher — the participatory approaches taken by design ethnography put much more emphasis on interventions (Otto and Smith 2013, p. 11). While ethnographic research in the social sciences often takes several years, design ethnography is more focused and quicker — such as "short term ethnography" (Pink and Morgan 2013). Moreover, design ethnography operates more experimentally and playfully, which in fact demands all the more reflection, to ensure that the findings are up to the demands of intersubjective comprehension.

The playful search for new contexts of interpretation

In her definition of ethnography, Sarah Pink connects knowledge accumulated through field work with her own experiences. She describes ethnography "as a process of creating and representing knowledge or ways of knowing that are based on ethnographers' own experiences and the ways these intersect with the persons, places and things encountered during that process" (Pink 2013, p. 35). When we are familiar with living environments it is all the more challenging to refrain from hastily classifying things and to observe the mundane with a phenomenological gaze. It is necessary to attempt "alienation from one's own culture" (Hirschauer und Amann 1997) or "defamiliarization" (Bell et al. 2006). This is all the more difficult when the environment is habitual for us. The participatory and experimental methods discussed above, which attempt to pluralize perspectives, can make a valuable contribution here.

One example of such experimental design ethnography comes from Giaccardi et al., who suggest deploying things as "co-ethnographers" or "autographers" (2016, p.

235 ff.). In their research project "Thing Tank" they took three everyday things - an electric tea kettle, a refrigerator, and a tea cup - and mounted tiny cameras on them that take photos automatically. In the process, the "autographers" - that is, the things - provide coverage of blind spots: for instance, the contact or interaction that they have with other objects. "A thing perspective opens up possibilities for understanding the limits of human action on time and space and the ways in which non-human things are directly informing and creating the everyday realities in which people live" (Giaccardi et al. 2016, p. 243). In this way, reality is as if reconstructed through the perspective of things. The visual data generated in this way are supplemented with interviews of the four residents of the household being studied. These participatory methods playfully pluralize perspectives and demonstrate that material culture, the world of things, is much more ambivalent than it appears to us in the everyday.

Conclusion

In everyday life we experience material culture and things as clear-cut. This clarity however is not based on the actual materiality and ontological existence of these things but rather on socialization processes in which we internalize our knowledge about the things. That is why an anthropological perspective and a design ethnography approach relativizes this clarity. Things become contingent. Or, as Böhme puts it: "Things are deeply familiar to us. When we want to know what they are, they become strange to us" (2012, p. 35). This in turn is a good starting point for the creative process: In the context of design, the challenge lies in striving to attain this artificial estrangement of things, to see them differently and pluralize the perspectives on them, in order to nullify everyday certainties and search for new creative and interpretive contexts of signification.

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