

Korean  
Retail + Market + Pack

Kwaja vs.  
Kansik.

Position in store  
Isle + shelf  
What is it next to?

Kansik = Small  
Kwaja = Fold

Influence  
meaning  
of pack.

Don't be  
diff just  
to be different  
+ a special pack must  
have high perceived  
added value

Buy, Prepare  
+  
Consume on  
the spot.

Fresh

# DESIGN ANTHROPOLOGY

## THEORY AND PRACTICE

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## **Design Anthropology: A Distinct Style of Knowing**

*Ton Otto and Rachel Charlotte Smith*

### **DESIGN AND ANTHROPOLOGY**

This book is about design anthropology, which is a fast-developing academic field that combines elements from design and anthropology. The following chapters comprise innovative case studies and theoretical reflections that provide an introduction to the field from the perspective of anthropologists participating in its development. In this introductory chapter, we sketch the contours of this new field and its emergence from the early uses of ethnography in design in the late 1970s up to the present. We argue that design anthropology is coming of age as a separate (sub)discipline with its own concepts, methods, research practices, and practitioners, in short its own distinct style and practice of knowledge production. But first we discuss the two separate knowledge traditions from which this new discipline has developed.

Design is a pervasive aspect of modern society with a large number of practitioners and a great range of subfields, such as industrial design, architecture, systems design, human-computer interaction design, service design, and strategic design and innovation. Design as a process of thought and planning is often depicted as a universal human capacity that sets humankind apart from nature (Cross 2006; Friedman 2002; Fry 2009; Chapter 8, this volume). To design is to conceive of an idea and plan it out, “give form, structure and function to that idea” (Nelson and Stolterman 2003: 1), before executing it in the world.<sup>1</sup> In this general sense, designing is a universal aspect of human practice, but the way it is carried out varies considerably across different societies and cultures (Chapter 5, this volume). In contemporary (post)industrial and digital societies, design has become a separate domain of activity because economic and organizational developments have engendered a specialist workforce of designers. These specialists create a variety of solutions in different social and economic contexts: they generate ideas for products that are mass produced by industry; they develop digital systems that perform new functions in workplaces as well as private homes; they design services

for public sector institutions; they create strategies for innovation in business and marketing; and they develop plans for urban and rural developments and sustainable forms of living. Design professionals are trained in design schools and other higher education institutions, as well as within companies, and are increasingly supported by a range of academically based design studies. In modern societies with their emphasis on innovation and change, which are often considered as intrinsic values (Suchman 2011), design has arguably become one of the major sites of cultural production and change, on par with science, technology, and art.

Anthropology<sup>2</sup> is the comparative study of societies and cultures, based on detailed empirical research in concrete social contexts. When it was established as an academic discipline in the late nineteenth century, its focus was on studying the cultural institutions and practices of non-Western societies. Today anthropologists carry out research in almost every imaginable social context, from high-tech companies and scientific laboratories in urban centers to remote rural villages in developing countries. A key characteristic of the discipline during the twentieth century was the development of *participant observation* as the dominant method of field research. Considered the core of ethnography,<sup>3</sup> which is the description of cultures, participant observation involves the long-term immersion of a researcher in a social setting with the aim to observe and document everyday practices comprehensively and in detail. In order to get access to everyday events and actions and understand their meaning for the participants, the researcher has to spend time with the people and engage with their lives. The result of an ethnographic study is an ethnography—usually a written report or book, but possibly also a film or exhibition—representing a particular social setting and cultural context and producing theoretically informed arguments about it. The term *ethnography* refers thus both to the process of inquiry—the immersion in social life to understand and describe it—and to its product: the final ethnographic representation.

As the comparative study of societies and cultures, anthropology has an obvious and long-standing research interest in processes of social and cultural change, human creativity, and innovation (Barnett 1953; Hallam and Ingold 2007; Liep 2001). This includes design, even if the anthropological study of design as a modern phenomenon is still in its infancy. However, the major relationship between design and anthropology has been through ethnography. From the late 1970s, designers became aware of the value of ethnographic data and methodologies, in particular to get a better understanding of the needs and experiences of users and the contexts in which products and computer systems were used (Blomberg, Burell, and Guest 2003; Reese 2002). But it is not just the usefulness of ethnographic research and information for design that is at stake here; there appears to be a genuine affinity between design and ethnography as processes of inquiry and discovery that includes the

iterative way process and product are interconnected and the reflexive involvement by researchers and designers (see Chapter 14, this volume). Tim Brown, the CEO of the international design and innovation firm IDEO, clearly acknowledges this affinity when he writes that designers need to go out and observe people's experiences in the real world rather than rely on extensive quantitative data to develop their insights. He continues: "As any anthropologist will attest, observation relies on the quality of one's data, not the quantity" (2011: 382). Like ethnographers, designers have to begin with immersion in real-life situations to gain insight into experiences and meanings that form the basis for reflection, imagination, and design (Nelson and Stolterman 2012: 18). Or as Friedman states: "The design process must integrate field-specific knowledge with a larger understanding of the human beings for whom design is made, the social circumstances in which the act of design takes place, and the human context in which designed artifacts are used" (2002: 209–210).

There are, of course, also significant differences between design and anthropology. The main aim of anthropology, like in most academic disciplines, is to produce generalizations and theories about human societies based on but reaching beyond the particularities of ethnographic case studies. Design, on the other hand, is directed toward the future and the creation of specific products and solutions, an "ultimate particular" (Stolterman 2008). Although the design process may start from "wicked" or ill-defined problems (Buchanan 1992; Gaver 2012), integrating processes of observation and reflection similar to anthropology, its purpose is to create products, processes, and services that transform reality. Its success is measured by the material and social impact of particular solutions, rather than by the validity of its generalizations.

As the differences between design and anthropology give design anthropology its special character, we will now sketch what we see as the major contributions by these two fields to the new subdiscipline. Further details of specific design anthropological practices and concepts are discussed in the final section of this introduction and in the following chapters. Here we only give a brief characterization of the constitutive differences that produce the creative tensions in this new field and set the conditions for both its challenges and its potential.

First, design is clearly *future oriented*; its success is measured by the relevance the designed products and conceptual solutions have for people's everyday lives. Although anthropology has an interest in social change and people's imaginations of the future, as a discipline it lacks tools and practices to actively engage and collaborate in people's formation of their futures. One of design anthropology's challenges is to develop such tools and practices of collaborative future making (see especially Sections I and III, this volume). Second, whereas participant observation by anthropologists might be considered a form of intervention, its ultimate purpose is to observe and document

rather than to effect change. Generally anthropologists have been quite concerned to minimize their impact on the people among whom they conduct their studies. In design, the situation is radically different, with both process and product aiming specifically at *intervention* in existing realities. Learning from design practice, design anthropologists are developing methods that employ various forms of intervention, both to create contextual knowledge and to develop specific solutions. The field of design anthropology is thus more oriented toward intervention and transforming social reality than traditional anthropology has ever been.<sup>4</sup> Third, design is (almost) always a process of *collaboration* between different disciplines and stakeholders, including designers, researchers, producers, and users. Anthropology still maintains a tradition, which is only slowly changing, of the lone researcher who conducts individual fieldwork and produces a solo piece of scholarship. Design anthropology radically breaks with this tradition as its practitioners work in multidisciplinary teams, acting in complex roles as researchers, facilitators, and cocreators in processes of design and innovation (all chapters but especially Section IV, this volume).

Anthropology also brings three key constitutive elements to design anthropology. First is the key role of theory and cultural interpretation. Whereas ideation, the generation of design concepts, is a central element of design, it does not have a sustained tradition of *theorizing* the context of usage and *interpreting* the cultural meaning of things.<sup>5</sup> This is the forte of anthropology, with a long history of cultural interpretation (Geertz 1973), contextualization (Dilley 1999), and holistic explanation (Otto and Bubandt 2010) through cross-cultural comparison and the development of theoretical concepts. Design anthropology integrates this rich tradition of contextualization and interpretation into the tasks of design, emphasizing the generative role of theory in developing design concepts and critically examining existing, often implicit conceptual frameworks (see Sections I and II, this volume). Second, against design's concern with creation, innovation, and "future-making" (Björgvinsson, Ehn, and Hillgren 2010), anthropology systematically *investigates the past to understand the present*, including its modes of anticipating the future. It is a great challenge for design anthropology to extend the temporal horizon both forward and backward, to anchor images of the future in reliable constructions of the past, thus avoiding the risk of "defuturing" that is inherent in design (Fry 2011) and of generalizing and essentializing modern values of innovation and change (Suchman 2011) (see Chapter 7 and Section III, this volume). Third, especially through its hallmark practice of ethnography, long acclaimed as useful by designers, anthropology endows design anthropology with a unique *sensitivity to the value orientations* of the various groups affected by design projects—including disempowered groups, consumers, producers, and audiences. The task for design anthropology is to integrate and develop these traditional qualities into new

modes of research and collaboration, working toward transformation without sacrificing empathy and depth of understanding (see especially Section IV, this volume).

## THE EMERGENCE OF DESIGN ANTHROPOLOGY

In this section we point to central historical developments in the collaboration between anthropology and design that reflect our anthropological vantage point and interest in the field.<sup>6</sup> Design and industrial communities have generally been much more prone to adopt approaches of social research, here under ethnography, and to invite anthropologists into their fields, than vice versa. Management researchers and designers collaborated with anthropologists in industrial settings as early as the 1930s to study social and physical aspects of workers' productivity, beginning with Lloyd Warner's involvement in the well-known Hawthorne study<sup>7</sup> (Baba 1986; Reese 2002; Schwartzman 1993). The study was the first to show how informal social processes affected the output and efficiency of factory workers. It was followed by a number of anthropological industrial studies through the 1940s and the 1950s, developing techniques for interaction analysis to predict elements of interpersonal behavior and create insights for business management. Industrial anthropologists were involved mainly in business management up until World War II, when new military fields of expertise developed that involved social scientists more extensively in product development through what was termed *engineering psychology* and *human factors analysis* (Reese 2002: 19–20). Such studies focused on behavioral and psychological factors of workers, or pilots, to gain control over the machinery, prevent accidents, and develop various industrial products and equipment. Both in the United States and in Europe, where the influence from labor movements promoted concerns with workers' health and safety (Helander 1997; Reese 2002: 20), research into engineering, human factors, and behavior in the workplace led the way for social scientists' involvement in industrial design and business management.

In the 1980s, the foundational work of Lucy Suchman (1987) and others in the Work Practice and Technology Group at Xerox Palo Alto Research Center (PARC) furthered ethnographic research in software design through the study of human behavior around computers in the workplace (Blomberg, Burrell, and Trigg 1997; Blomberg et al. 1993). From the 1980s, ethnographic research became part of the interdisciplinary design and research communities of computer-supported cooperative work (CSCW) and human-computer interaction (HCI), where social scientists, computer scientists, and system designers shared knowledge about the use of technology in work practices (Wasson 2000: 380). Research in these fields focused mainly on workplace settings of human-computer interaction and system design, with ethnography functioning

as a data collection method to gain insights into the *real-world* experiences and needs of users (Bentley et al. 1992; Harper 2000; Heath and Luff 1992). The computer science foundations of CSCW and HCI placed a strong emphasis on the cognitive and behavioral sciences for understanding users in industrial and corporate settings. As a result the dominant ethnographic method developed in this field was the analytical framework of ethnomethodology, with its detailed attention to situated action and observable patterns of human behavior translated into abstract conceptual values and directions for design (Button 2000; Garfinkel 1967, 2002; Shapiro 1994). Suchman's book *Plans and Situated Action* (1987) was one of the first studies dealing specifically with the relationship between design and anthropology, focusing in detail on the interactions between people and computers. Through comprehensive ethnographic investigations, inspired by ethnomethodology and conversation analysis, as well as activity theory (Vygotsky 1978), Suchman mapped out work flows, plans, and situated action and showed how cultural conceptions had effects on the design and reconfigurations of technologies.

In the early 1990s, E-Lab LLC, the Doblin Group, and a number of other U.S. consultancy and design firms, greatly inspired by Xerox PARC, played an important role in introducing ethnographic methods to industrial design and product development. The approach of E-Lab was unique in that it employed an equal number of researchers and designers to work together in teams, using ethnographic methods (participant observation, video recording of everyday consumer behavior, qualitative interviews, and analysis) as its main research strategy (Wasson 2000: 379). Other central figures in the field were Jane Fulton Suri at IDEO and Liz Sanders from SonicRim—still highly influential in the field—who applied creative participatory design methods as well as generative tools and frameworks from experimental psychology to work with users and understand the needs and behavior of consumers. By the mid-1990s, the wave of interest in ethnography in industrial and commercial design had caused many companies in the United States and Europe to employ anthropologists, psychologists, and sociologists to study the behavior and needs of users and consumers. During this period, more fragmented behavioral and psychological approaches were increasingly replaced by holistic and broadly contextual, ethnographic approaches to understanding products and their use (Reese 2002: 21, Wasson 2000).<sup>8</sup>

The praxis and challenges of the use of ethnography in design that developed out of the industrial and corporate collaborations have been addressed by anthropologists and sociologists placed centrally in the field, such as Suchman (1987, 2007, 2011); Blomberg and colleagues (1993, 2003); Suchman, Trigg, and Blomberg (2002); Anderson (1994); Shapiro (1994); Forsythe (1999); Star (1999); Wasson (2000, 2002); and Van Veggel (2005). Common to these contributions and their inherent critiques is that they argue for the relevance of ethnography in and for design as more than simply a methodology

for the study of a readily available world of users outside the design studio. They challenge the way data gained from field research have conventionally been collected, analyzed, and transformed into "specifications for end-user requirements" (Anderson 1994: 151), or what Dourish (2006, 2007) critically terms "implications for design," before being handed over to designers, engineers, or other professionals. They further address the challenge of collaboration and the power relations of the corporate settings, in which anthropologists have been drawn into the field of design on an unequal footing with designers, engineers, and other practitioners (Blomberg et al. 2003; Veggel 2005). In these industrial contexts, the expectations toward anthropologists have generally predefined the often limited premises for contributing to the process of design. Wasson's (2002) depiction of the bow tie model, in which the intermediate phase or "knot" between research and design is used to create shared frameworks of understanding and tie the disciplines together, has been widely used as a model for understanding the integration of ethnography into design. Blomberg and colleagues (1993, 2003) have presented a guide to the basic principles of ethnography for design, along with tools such as experience models and user profiles, to facilitate shared analytical frameworks as well as ways of involving users in the process of design. As such, rather than distinguishing between descriptive observational ethnography and creative design work, they suggest uses of scenarios, user profiles, opportunity maps, and experience models as interdisciplinary ways of bridging the contrast between understanding present practices and designing for future ones. In their view, anthropologists and designers collaborate in both research and design activities as "change agents" (Blomberg et al. 1993: 141).

The principle of involving users in processes of design that Blomberg and her colleagues highlight has been most clearly articulated by the field of *participatory design* that emerged mainly in the United States and Europe, especially Scandinavia (Kensing and Blomberg 1998; Muller 2002; Schuler and Namioka 1993; Simonsen and Robertson 2012). The Scandinavian tradition of participatory design (Bjerknes, Ehn, and Kyng 1987; Ehn 1988, 1993; Greenbaum and Kyng 1991) developed out of the 1970s and 1980s trade union projects (DUE, DEMOS, and UTOPIA) that were critical of the negative impact of new technologies on people's working conditions. The most prominent ideal characterizing the Scandinavian tradition was workplace democracy, which focused on the inclusion and active participation of employees in shaping their own working conditions (Bansler 1989; Bjerknes, Ehn, and Kyng 1987). In this political sense, the approach of participatory design advocated technologies and work processes that augmented the skills and tools of the workers and enabled them to control their work practice rather than technologies that aimed to replace the workers (Ehn 1988). Therefore much effort was spent on developing design techniques and methods, such as design games, simulations of work-technology relations, and cooperative prototyping (Bødker

1991, Greenbaum and Kyng 1991), that would enable disempowered groups to actively participate in and contribute to the design processes. Concerns about the loss of these values of user participation due to the rise of commercial interests in user behavior have been frequently voiced (Beck 2002; Kyng 2010). The tradition of participatory design in Scandinavia continues to be refined and developed, partly driven by government-supported research grants for collaborations between academic researchers and public and private organizations (see, for example, Binder et al. 2011, Iversen and Smith 2012). It constitutes an important context for many contributions to this book (see Chapters 3, 4, 7, and 10, this volume) dealing with areas as diverse as product development, public sector health services, waste handling, and museum exhibition practices.

As the field of human-computer interaction design has expanded its scope beyond workplace studies and system development, the turn to values and experiences has occurred more generally within the field of HCI. In response to the rise of industrial and commercial interest in ubiquitous and pervasive computing, academic researchers in this field have addressed the need for integrating human values into critical and reflective approaches to design (Bannon 2005; Dourish 2007; McCarthy and Wright 2004; Sellen et al. 2009; Sengers et al. 2005; Zimmerman 2009). These human-centered approaches move from a technology and system-focused design practice and an understanding of users as end users or evaluators of technology to a more radical practice of design as cocreation that addresses a larger context of social relations, experiences, values, and ethics. These more critical voices echo Suchman's (2007) concerns in their focus on everyday behavior and imagination, rather than cognition and intended practices, as well as their attendance to the ongoing appropriations of technology by people in their daily lives, beyond the traditional focus on usability and interface design. The strong affiliation to participatory design (Muller 2002) informs an outspoken concern with the role of users and how designers can involve and deal with stakeholders and participants in collaborative processes. It also feeds into a concern to create spaces for critical reflexivity and dialogue about human experience more generally (Hunt 2011). Dourish (2006, 2007) makes the link between design and critical reflection, and the potential of anthropology in this, very blatant, as he critiques the limited focus on ethnographic methods in and for design and points to the transformative potential of classical anthropological studies for understanding relations between people and technologies anew.

Interest in users and participatory design more generally has also been well represented in the commercial and corporate contexts of user-centered design and innovation (Brown 2009), as well as in the fields of organizational development and business management. Significant academic contributions connected to these contexts have dealt with ethnography, design, and customer experiences in industrial and corporate cultures (see, e.g., Cefkin

2010; Nafus and Anderson 2006; Sanders 2008; Squires and Byrne 2002; Suri 2011). Squires and Byrne's edited volume *Creating Breakthrough Ideas* has presented one of the most elaborate discussions of the interrelation between anthropology and design in this field, focusing on the value of ethnography and the role of cultural perspectives in applied processes of design, product development, business, and innovation. The work of anthropologists in corporate and commercial settings is clearly related to the long tradition of anthropological studies of organizations and corporate cultures (Gellner and Hirsch 2001, Jiménez 2007; Orr 1996; Schwartzman 1993; Wallman 1979; Wright 1994), as well as business anthropology (Baba 2006; Cefkin 2012; Jordan 2003; Ybema et al. 2009). The term *business anthropology* was used in the 1980s to describe anthropologists working outside academia with consumer behavior and marketing, but now involves "any application of anthropology to business-oriented problems" (Gray 2010: 1). There are many overlaps between the applied anthropological domains described as *business anthropology* and *corporate ethnography*, and design anthropology. A central venue for these corporate and academic fields of interest is the interdisciplinary Ethnographic Praxis in Industry Conference (EPIC), held annually since 2005, to promote ethnographic practices and principles in business and industry.<sup>9</sup>

There is an emerging interdisciplinary body of literature on design and anthropology that focuses on relations between people and objects, production and use. Most notably, Clarke's (2011) edited volume *Design Anthropology: Object Culture in the 21st Century* and Gunn and Donovan's (2012) edited volume *Design and Anthropology* deal with design's turn to the user and what impact this has had on the understanding of objects and products, their creation and use. Clarke's volume, in addition to being strongly rooted in design, builds on anthropological studies of materiality and consumption, objects and taste, and the cultural processes that shape experiences and products (Appadurai 1986; Bourdieu 1979; Gell 1998; Henare, Holbraad, and Wastell 2007; Miller 2005). Gunn and Donovan (2012) shift the focus to the broader contextual relations between designing, producing, and using, and emphasize the social and emergent aspects of creativity in design and the shaping of *things*. They deal with these issues from three different methodological positions in anthropology, design, and philosophy (Ingold 2012; Redström 2012; Verbeek 2012), thus expanding the scope for interdisciplinary collaboration.

Whatever the focus or aim of connecting anthropology and design, the commitment to concrete practice and reflective action is essential to both. This is reflected respectively in the fields of anthropology and design by the pronounced influence of Tim Ingold and Donald Schön, who are now also inspiring practitioners of design anthropology. Ingold's (2000, 2011, Hallam and Ingold 2007) phenomenological notions of *moving along* the lifelines, paths, and flows of social life have been central to understanding creativity,

improvisation, and innovation as cultural process, and in this book (Chapter 8). Ingold and Gatt build on this position to conceptualize design (and “anthropology-by-means-of-design”) as a practice of correspondence to the ever-changing circumstances and entanglements of people, objects, and environments. Schön’s (1987, 1991 [1983]) prominent accounts of design practice as *reflection-in-action*, responding to design situations through a dialogic engagement with the conditions and materials at hand, have, along with Dewey’s pragmatism (1980 [1934]) and contributions such as Dourish (2001) and Sennett (2008), furthered the understanding of designing as a reflexive engagement with concrete experience, based on the intrinsic relation between knowing and doing.

## A DISTINCT STYLE OF KNOWING

With the emergence of a field of anthropological inquiry linked with design, the question arises whether we can talk about a new field of study characterized by distinct objects, methods, procedures, and training practices. A number of prominent anthropologists, including Paul Rabinow, George Marcus, and Tim Ingold (see Rabinow et al. 2008 and Chapters 8 and 14, this volume), suggest that design provides inspiration for anthropology to develop its research practices in order to be better equipped for the study of the contemporary world. They propose that anthropology as a discipline should change and that design practice and thinking can give direction to this change. Lucy Suchman, who spent a large part of her career working on design teams, takes a different position. Critical of the overly optimistic approach to innovation and change that prevails in a large part of the design world, she argues that “we need less a reinvented anthropology as (or for) design than a critical anthropology of design” (2011, 3). Rather than aiming to change the practice of anthropology, she wishes to direct the critical potential of this research tradition toward the study and contextualization of design and technological innovation as a specific mode and site of change in modern society.

We take a third position by arguing that design anthropology is coming of age as a *distinct style* of doing anthropology, with specific research and training practices. Evidence for this emerging field includes the growing number of anthropologists working in and with design, PhD theses that identify with the label *design anthropology*,<sup>10</sup> conferences and publications in this field, as well as the increasing number of university courses and research centers dealing with design anthropology (see Chapters 12 and 14, this volume).<sup>11</sup> With Rabinow, Marcus, and Ingold, we hope and expect that this style will have an impact on anthropology more generally. Its development is prompted by challenges in the contemporary world, which put greater emphasis on designerly ways of thinking and planning (see later in this chapter). And like Suchman we

intend design anthropology to have a critical impact on design as well, making it a more broadly humane and “decolonized” (see Chapter 13, this volume) practice through the adoption of the specific anthropological attributes we identified earlier. These include the critical use of theory and contextualization; the extension of the time horizon to include the past and long-term future to ensure sustainability; and sensitivity to and not least incorporation of the values and perspectives of the people whose worlds are affected by design.

Our use of the term *style* is inspired by philosopher Ian Hacking and historian of science A.C. Crombie. The latter identified six major “styles of scientific thinking” in the development of the modern sciences and arts (Crombie 1988, 1994). Hacking (1992) prefers the term *styles of reasoning*, since reasoning is done in public as well as in private, by thinking but also by talking and arguing and showing. We have chosen the term *style of knowing* to indicate that the production of knowledge involves more than thinking and reasoning: it also comprises practices of acting on the world that generate specific forms of knowledge, and it is in these practices we see a major shift.<sup>12</sup> According to Hacking, styles have a number of characteristics. To start with, they have a history, that is, they are invented at a certain point in time and develop subsequently—they may also become less popular again or disappear altogether. Second, each style introduces a number of novelties, which could include types of objects studied, forms of evidence used, ways of assessing truth or validity, and the manner in which generalities, modalities, and possibilities are identified. Finally, each style should have a certain stability to be recognized as such, which primarily refers to enduring standards of quality assessment and validation.

Although design anthropology as we describe it is young, we believe it conforms to Hacking’s definition of a new style. It introduces a number of novelties that derive from the experimental integration of anthropological and designerly practices. These include interventionist forms of fieldwork and design that work through iterative cycles of reflection and action, and employ methods and tools such as video feedback, scenarios, mock-ups, props, provo- and prototypes, tangible interactions, and various forms of games, performances, and enactment. Design anthropology also comprises various forms of interdisciplinary collaboration inside and outside the design studio to produce concepts and prototypes, the scaffolding of collaboration with stakeholders and various types of publics, and an intentional focus on facilitating and contributing to change. Finally, design anthropology is characterized by a particular use of theory aimed at generating concepts and new frameworks or perspectives.

Later in this chapter, we further develop these style elements of design anthropology under the headings of the four sections of this book: concepts, methods, and practices; the materiality of design; the temporality of design; and the relationality of design. But first we give a tentative sketch of four different modes of the key method of anthropology—ethnographic fieldwork

through participant observation—that have developed over time to make it plausible that the new research practices of design anthropology point to an emerging theoretical paradigm and thus to the development of certain, more or less stable, standards of quality assessment and validation, which are characteristic of the style.

Generally credited to Bronislaw Malinowski (but see Stocking 1983, 1991), the early form of ethnographic fieldwork was presented as a way to gather more reliable data than through anthropology's previous dependence on reports by travelers, explorers, traders, and resident missionaries. The focus was on firsthand observation and the theoretical context was provided by the dominant positivist paradigm that in Durkheim's formulation looked at "social facts" as things (see Holy 1984). Quality assessment and validation happened through debate within the academic community. A further development of the ethnographic method was grounded in the hermeneutic approach championed by Clifford Geertz and others in the 1960s, who suggested that culture could be read as a kind of text. Rather than an observable thing, a social fact was seen as a cultural construction in need of interpretation by the anthropologist, and validation had to include the community sharing the cultural tradition. With the postmodern turn in the 1980s and the rise of praxis theory as the dominant theoretical paradigm (Ortner 2006), greater attention was given to the epistemological and political position of anthropologists in relation to the communities they worked with. Social facts were seen as the result of actions by human agents, who by their actions reproduced but also impacted on the structures under which they operated. Deprived from the quasi-objective or distanced position in the field of study, anthropological validation now included aspects of dialogue, multivocality, and circumstantial activism (Marcus 1998). Part of this development was a continuing methodological reflection on ethnographic fieldwork, in particular the concept of the field itself that comprises the complex social relations and research questions ethnographers engage in: for example, dealing with multiple field sites and working with specialist informants, as well as using modern forms of interaction and communication such as the Internet (Faubion and Marcus 2009; Rabinow et al. 2008). These reflections have prepared the way for what we see as the next stage of ethnographic methods that are intentionally interventionist.

With the introduction of interventionist strategies as part of design anthropological fieldwork, we see the possibility of the rise of a new paradigm that gives greater weight to the human capacity for change through intentional design. This might be seen as a further development of praxis theory, but with a greater emphasis on the conditions for change. Whereas praxis theory appears more preoccupied with social reproduction than with change, the new paradigm takes the aspect of *emergence* in human social reality seriously (Mead 2002 [1932]). Since the present includes both its past and its future potential, anthropologists have to develop ways to include the

anticipation and creation of new forms in their ethnographic descriptions and theorizing. Gatt and Ingold (Chapter 8, this volume) point to a possible way to connect with people's future by "correspondence." Thus a social fact is no longer merely seen as the result of human action as in praxis theory, but as something that carries the potential of change in its very execution. A new criterion of success would be how design anthropologists are able to correspond and collaborate with people as co-creators of desirable futures and to be the facilitators of knowledge and meaningful practices that transform the present.

Designing and intervening in social and cultural contexts is in many ways a large leap for anthropologists. However, we consider this a necessary step in the face of contemporary local-global transformations and the corresponding academic requirement of developing responsive conceptual frameworks and interventionist practices. A growing body of literature addresses the entanglement of culture and design from a more transformative and imaginative stance (Balsamo 2011, Dourish and Bell 2011). What emerges from these interdisciplinary approaches to technology and change is that culture and design are not separate analytical domains or extensions of each other. Rather they are deeply entangled, complex, and often messy formations and transformations of meanings, spaces, and interactions between people, objects, and histories. It appears now an accepted premise that culture is always already an ingrained and situated part of design practices, but the reverse is equally valid and relevant: by designing objects, technologies, and systems, we are in fact designing cultures of the future (Balsamo 2011).

Designerly ways of thinking and acting are competences more and more sought after in contemporary society. There is an increasing focus from creative industries, government organizations, universities, and design schools alike on the potential impact of design and innovation on solving pressing societal issues. This is connected with fundamental shifts in the global economies from the West to the East, the rapid advance and development of information technologies, and the growing ethical, political, social, and ecological concerns of sustainability (Friedman 2012; Fry 2011). These emergent markets for design in different local and global contexts are at once compelling and fraught. Their promise is to create sustainable, innovative, and financially potent solutions to socioeconomic issues around the world. However, as critics point out (Chapter 13, this volume; Hunt 2011, Latour 2008; Suchman 2011), such ventures need to set modest and realistic goals, build upon humanistic approaches, and foster sensitivity to the cultural and socioeconomic contexts and values of local populations to create sustainable and morally justifiable change and to avoid recasting users as natives and replicating forms of colonialism that anthropology was a part of during the twentieth century. It is in this context that design anthropology finds its place, opportunity, and challenge.

## ASPECTS OF DESIGN ANTHROPOLOGY

This section discusses key aspects of design anthropology as a style of knowledge production and practical intervention that straddles two separate knowledge traditions with markedly different objectives, epistemic assumptions, and methods. We sketch key aspects of this style of knowing and introduce the following chapters under the four headings that provide the book's overarching structure.

### Concepts, Methods, and Practices

As a contrast with classical ethnography, design anthropologists generally do not engage in long-term fieldwork in one particular social and cultural setting, but rather carry out a series of shorter field studies and interventions, often in different social and cultural settings. In addition they have a specific approach to the use of theory and the generation of new concepts. Malinowski pointed to the key role of theoretical concepts in ethnographic research (1922: 9). For him, these concepts should alert the researcher to "foreshadowed problems" that open up for further questioning and investigation.<sup>13</sup> In later methodological literature, these concepts have been named "sensitizing concepts" (Van den Hoonaard 1997). Whereas these concepts guide the empirical research process and ethnographic description, the role of concepts in design anthropology moves beyond analysis and description to the generation of *design concepts*.

Adam Drazin (Chapter 2, this volume) gives a careful analysis of the role of these design concepts and concludes that they occur in a certain phase of the design process. Whereas the data gathering and analysis at the start of a design project is referred to as *information or data*, design concepts happen in the next phase, when designers and researchers work together to sketch emerging ideas, group themes together, and discuss possibilities for development. The design concepts in this phase have a transient and material existence, as they are expressed in drawings, network diagrams, and PowerPoint slides. They are continuously in flux and finally give way to the production of prototypes. Drazin's analysis bears similarity with the bow tie model produced by E-Lab and described by Wasson (2002: 82–83, in particular the second model), where there is a clear transition from data gathering and analysis, to frameworks (the knot in the tie), to design concepts, and then to prototypes. But, in contrast to the E-Lab model, Drazin depicts the development of design concepts as a common endeavor of all team members throughout the process of research and design.

Mette Kjærsgaard (Chapter 3, this volume), in her analysis of a design project for playgrounds in Denmark, presents a similar view on the continuing interaction between designers, design anthropologists, and various other

specialists. She focuses on the design workshop as a place where the different perspectives, types of information, materials, and interests are brought together to produce common design concepts. She emphasizes that these different "knowledge pieces," as she calls them, do not neatly fit together as in a jigsaw puzzle. Rather, through a ritualized process of creative juxtaposition, debate, and montage, these pieces are transformed into shared design concepts that form the basis for formulating a design strategy and preparing prototypes. Whereas the design anthropologists are part of the whole process, from the gathering of data, to workshopping the "knowledge pieces" and developing prototypes, Kjærsgaard reserves a specific role for them, based on their disciplinary skills and orientation: to identify implicit assumptions and frameworks in the analysis of data and development of design ideas, thus opening up the design process for alternative solutions through a reframing of these assumptions (see also Suchman 2011).

Kyle Kilbourn (Chapter 4, this volume) develops the idea of design anthropology as a different style of knowing. He argues that the difference with other styles—including anthropology and design—can be found in what design anthropologists use to think with, directing our attention to the tools of their engagement with social reality. Kilbourn distinguishes a number of (non-textual) tools that characterize design anthropological modes of intervention in the field. First, he points to forms of conceptual association and synthesis through visual means ("perceptual synthesis"); second, he describes ways of comparing experiences through games and other means ("experience juxtaposing"); and finally, he mentions various forms of performance as ways to explore the social embeddedness of possible future practices ("potential relating") (see also Chapter 10, this volume). Kilbourn further discusses the specific form of theoretical practice he finds characteristic of design anthropology, through the consecutive movements of the researcher, first into a specific collaboration and context of practice ("moving in"), then to other contexts that relate to the first one ("moving along"), and finally "moving out" to the critical exploration of potentiality. Thus, he describes an important shift in design anthropology, from using theory primarily to analyze and explain to the generation of conceptual alternatives and future possibilities.

### The Materiality of Design

The importance of the materiality and even agency of things for understanding human practice and culture has been highlighted in recent anthropological and philosophical theorizing (Henare, Holbraad, and Wastell 2007; Ingold 2007; Latour 1999; Miller 2005; Verbeek 2005). Although this forms an important theoretical backdrop for analyzing the impact and function of material objects in human society, here we are more concerned with the materiality of

the design process itself. With this we refer both to how the manipulation of materials and objects are part of and influence the possibilities of design, and to the concrete practices of exchange and interaction that constitute the design process. Earlier we mentioned how design and design anthropology rely on a range of forms to produce and communicate knowledge in addition to language and text, in particular the material practices of visualization, prototyping, and performance (Chapter 4, this volume). The ethnographic descriptions of design processes presented in Chapters 2 and 3 clearly illustrate the centrality of the material dimension in designing: the importance of the design space and its material tools, the use of concrete, material renderings of “knowledge pieces,” and generally the material quality of design concepts. The primary products of design anthropological interventions are not necessarily articles or ethnographic monographs—even though these may be welcome products—but design proposals to be carried out in (material) reality.

Chapters 5 and 6 are ethnographic case studies of design processes, rather than examples of design interventions in which anthropologists participate. These chapters add to our theoretical understanding of how design works and contribute to the reflective practice of design anthropology. Ian Ewart (Chapter 5, this volume) investigates the relation between production and design by comparing the construction of two different bridges in the Kelabit highlands of Borneo. One is a bamboo bridge of a type that is built frequently and habitually by villagers on the basis of an embodied and intuitive design rather than an explicit plan. The other is a new kind of suspension bridge, the construction of which started out with an explicit design drawn on paper, but it was modified to a large extent by practical solutions to unforeseen problems. In spite of the obvious differences between the two processes, Ewart argues that common to both is that design happens as part of production “on the go and in the hand,” rather than as a separate stage prior to the process of making.

Elizabeth Hallam (Chapter 6, this volume) also highlights the importance of materiality in processes of designing by focusing on the relationship between design and use of anatomical models employed in the teaching of medical students. It is through the ongoing use of these three-dimensional models in teaching that their limitations are revealed, prompting further design activities to improve the models in a dialogic fashion between students and teachers. Hallam shows how the properties of particular materials, in this case hook-up wire, inform the design practice both physically and conceptually, through a process in which critical reflection and embodied practice mutually impact on each other.

Chapter 7 by Rachel Charlotte Smith is a case study of a design anthropological intervention. The overall design framework is posed by the challenge that cultural heritage museums, with their traditional focus on material objects, face in the digital age. To tackle this challenge, the design anthropologist

and her design collaborators developed an experimental exhibition project to investigate and give shape to the emerging heritage of so-called digital natives—young people fully immersed in the use of information technologies and digital social media. The project facilitated a dialogic design process involving teenagers, anthropologists, and designers and resulted in the material-digital representation of the emerging sense of identity and heritage among the youngsters through various interactive installations. This case challenges conventional distinctions between the material and the virtual, tangible and intangible heritage, and clearly illustrates the crucial importance of design anthropological interventions in a collaborative exhibition project.

### The Temporality of Design

As mentioned previously, the robust future orientation of design is a great challenge for design anthropology, both theoretically and methodologically. Understanding how change happens and how it can be directed by human agency is one of its key theoretical undertakings. Therefore, conceptual and methodological frameworks have to move beyond basic notions of causality and the projection of statistic trends into the future to fully capture the emergent character of the present. According to philosopher G. H. Mead’s (2002 [1932]) ideas about the present as the *locus of reality*, we only exist in the present, which is always in a state of emergence. This does not mean that Mead diminishes the existence and relevance of the past and the future, but he emphasizes that these are only accessible as dimensions of the present even though we imagine them as independent and irrevocable entities. In the act of giving shape to the future, we thus evoke a past that makes this future possible.<sup>14</sup> This does not imply that anything goes in the sense of designing a future. To the contrary, the envisaged future has to encompass a possible past, one that does not deny the limiting conditions created by past presents. In line with Mead’s vision, the following chapters in various ways move design anthropology’s gaze toward the future while at the same time allowing for the past to be a key part of future making. This is important to counteract the generic risk of designerly “hubris” (Suchman 2011, 16) and actual “defuturing” (Fry 2011, Hunt 2011), which is the result of the contraction of the time horizon to the immediate future and a shallow past.

In Chapter 8, Caroline Gatt and Tim Ingold address the theoretical and practical challenge of the changed temporal orientation of design anthropology. They argue that *anthropology-by-means-of-ethnography* has to be replaced by *anthropology-by-means-of-design*. They see ethnography as primarily interested in description, which becomes retrospective once it is completed as a product. In contrast, they argue, *anthropology-by-means-of-design* should be understood as a practice of *correspondence*. *Correspondence* refers to being

in accordance with the flow of events, to moving forward with people in the pursuit of their dreams and aspirations rather than dwelling on their past. Correspondence is about improvisation rather than innovation and about foresight rather than prediction. It is a natural part of participant observation, but with an emphasis on what is produced during fieldwork rather than after fieldwork, such as social relations, practical knowledge, and new practices for the people involved (Glowczewski et al. 2013). Gatt and Ingold call these products “dialogically designed anthropological artifacts” that contribute to the transformational effects of participant observation, or rather “observant participation.”

Correspondence is not always easy to establish, and people involved in design have differing views about how to anticipate the future. Wendy Gunn and Christian Clausen (Chapter 9, this volume) look at implicit and contrasting forms of temporality brought into play in the design of indoor climate products and control systems. This industrial field is dominated by engineers and manufacturers who privilege quantitative and technical approaches, which differ from design anthropologists’ emphasis on improvisation and design in collaboration with the user-cum-producer. Gunn and Clausen analyze the influence and engagement between these different knowledge traditions in a collaborative design project that stretches over three years. Equally steeped in a concrete case study, Joachim Halse (Chapter 10, this volume) asks the question of how design anthropology can be part of transformative actions instead of only studying them. Inspired by Mead and Kapferer, and working within the Scandinavian tradition of participatory design, he focuses on design events as special generic moments of *becoming* in which people experiment with possible futures. He describes the techniques of collaborative doll scenarios and full-scale enactments and shows how these bring the particularities of place and time into the design process. In this way, design anthropology can contribute by developing particular “technologies of the imagination” that assist people to critically assess, contest, and develop new ideas in specific contexts.

### The Relationality of Design

An important distinctive feature of design anthropology is the way its practitioners work in multiple relationships and often complex roles with different stakeholders, including designers, researchers from other disciplines, and sponsors, as well as users and publics. Whereas anthropological participant observation always involves entering relationships at different levels—sometimes sensitive or precarious—with sponsors, doorkeepers, and collaborators, the challenge to design anthropologists appears to be compounded because of design’s focus on intervention and change. Thus design anthropologists find themselves working (mostly) in multidisciplinary design teams, alternating between being researchers, facilitators, and co-creators in the design process.

Whereas many of the chapters address these complex relationships (see in particular Chapters 3, 4, 7, 8, 9, and 10, this volume), the chapters in this section address some issues of these relationships in particular.

In Chapter 11, Brendon Clark draws attention to the importance of creating publics for design innovations, which can provide critical feedback on the positive and negative implications of the ideas from different social perspectives. Inspired by DiSalvo (2009), Dewey, and Goffman, Clark argues that these publics are not given and that developing the means for generating them can be part of the work of design anthropology. He illustrates this point with a case study of a second language learning project in Sweden. By organizing a series of collaborative design activities that involved various forms of performance, he was able to generate additional experiential information about potential action and directions for design.

Christina Wasson and Crysta Metcalf (Chapter 12, this volume) discuss the challenges that face anthropologists and designers who wish to collaborate across organizations, in particular between industry and universities. They argue that the development of new industry-academic partnership models has not necessarily made this collaboration easier because of specific transaction barriers that have to do with legal and administrative definitions and implementations of intellectual property rights. The chapter builds on their experience of successful collaboration, over seven years and five projects, between a university professor teaching design anthropology and a research scientist and her team in a private company. Interesting, they assert that the model they have used, which is based on personal relations between the lead researchers rather than on contractual obligations, actually works better than the new industry-academic partnership models.

Dori Tunstall (Chapter 13, this volume) criticizes Western design for potentially continuing the neocolonial attitudes that have historically plagued anthropology, thus affirming existing global inequalities. In her view, design anthropology has a major task in developing a methodology that decolonizes design and anthropological engagement and contributes to a genuine and humane transformation of social relations. In particular she understands design anthropology as pursuing anthropology’s major quest of defining what it means to be human by focusing on how design can translate values into tangible experiences. Using her involvement in the Aboriginal Smart Art project as an illustration, she develops a program for a decolonized and humane design anthropology driven by values of creating conditions of compassion among human beings in harmony with their wider environments.

In the epilogue, Keith Murphy and George Marcus address another relational issue pertinent to design anthropology as an emerging style of knowing, namely the overall relationship between the two fields of design and anthropology. They observe that this relationship has been historically one-sided with a dominant emphasis on how anthropology, especially ethnography, can

support design rather than the other way around. They find that the time has come to turn this around and look at the ways design practice can benefit the development of an anthropology able to meet the complex challenges of the contemporary world. At the Center for Ethnography at the University of California, Irvine, they experiment with applying various design studio methods to transforming ethnographic practice. This feedback of design into the discipline of anthropology is a worthy conclusion to a book that claims design anthropology has come of age as a distinct style of knowing, with implications for both design and anthropology.

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## NOTES

1. The word *design* has a long history of use in English, but the brief definition presented here aims to capture the prevalent meaning in modern usage (see *Oxford English Dictionary*, accessed online October 3, 2012).
2. In the following we use *anthropology* to mean social and cultural anthropology, not the other subdisciplines of the four-field approach popular in the United States: biological anthropology, archaeology, and linguistics.
3. Ethnography also includes other methods such as different forms of interviewing and systematic research of artifacts and documents.
4. There are some notable exceptions, including action research (Huizer 1979; Tax 1952), strands of applied and development anthropology (Gardner and Lewis 1996; Van Willigen, Rylko-Bauer, and McElroy 1989), and the movement to decolonize anthropology (Harrison 2010). See also Flyvbjerg (2001).
5. We are aware that we are making some broad generalizations in this brief introduction for the sake of clarity of our argument. Here and elsewhere it is possible to find exceptions to these general characterizations. In the present case, one can point to architectural theory and critical design, among others.
6. See also Wasson (2000) and Reese (2002) for historical overviews of the collaboration between ethnography and design, particularly in the fields of industrial design, business ethnography, and user-driven innovation.

7. In the Hawthorne studies, anthropologist Lloyd Warner and psychiatrist Elton Mayo collaborated with staff from Harvard University and the Western Electric Company, Chicago. They later founded the Committee on Human Relations in Industry at the University of Chicago and the social research consulting firm Social Research Inc., focusing on business management (Reese 2002).
8. Intel Corporation, IBM, Microsoft, Xerox, and Sapient Corporation employ large numbers of anthropologists in their labs and research units of user experience. Well-known examples of this include anthropologist Melissa Cefkin, employed by IBM, and anthropologist Genevieve Bell, employed by Intel since 1998, who now directs the User Experience Group within Intel Corporation's Digital Home Group in Portland, Oregon.
9. It continues to expand its scope from academic and industrial contexts to corporations and nongovernmental organizations (NGOs) and governmental organizations, as well as partnerships with core institutions such as the American Anthropological Association (AAA) and the National Association of Practicing Anthropologists (NAPA).
10. In Denmark we can mention Clark (2007), Pedersen (2007), Halse (2008), Kilbourn (2010), Kjærsgaard (2011), and Vangkilde (2012).
11. At the time of writing courses in design anthropology were offered by a number of universities including Swinburne University of Technology, University of Aberdeen, University of North Texas, University of Southern Denmark (Mads Clausen Institute), Aarhus University, Harvard Graduate School of Design, as well as the MA in culture, material, and design at University College London (UCL), and the MSc course in design ethnography at University of Dundee. In addition, numerous courses provided by design, architecture, and art schools, introduce various forms of ethnographic research methods, experience research, and social science approaches as part of their curricula.
12. Kwa (2011), who has developed and popularized Crombie's history of scientific thinking, also opts for the term *styles of knowing*.
13. Theoretical concepts should be carefully distinguished from uncritical assumptions, which actually hinder research, as Mallnowski makes clear: "Preconceived ideas are pernicious in any scientific work, but foreshadowed problems are the main endowment of a scientific thinker, and these problems are first revealed to the observer by his theoretical studies" (1922: 9).
14. The following quote expresses it beautifully: "Given an emergent event, its relations to antecedent processes become conditions or causes. Such a situation is a present. It marks out and in a sense selects what has made its peculiarity possible. It creates with its uniqueness a past and a future" (Mead 2002 [1932]: 52).

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