Knowear, a New York-based design and fashion firm, explores this same cultural fixation on addiction and its cost to our bodies and spirits in a series of projects that blend design, fashion, and body sculpting. They fixate upon the increasing importance of brands both in our commercial landscape and in our own sense of personal identity. When we shop for new body parts (noses, lips, calves, breasts, hair, eye color, and on and on) with the same casualness that we shop for clothes, how close we will cozy up to the brands that seem to be more and more constituent of our own sense of selves? While we seem to be more skeptical of brandwashing by major corporations, at the same time we seem incapable of resisting their pitch. Knowear's projects Skinthetic Redux and Brand X push two sides of this obsession. Skinthetic Redux prototypes our bodies as sites for fashion's next line, merging flesh with the iconic pillowy texture made recognizable by Chanel. Brand X goes even further, transforming our seemingly harmless obsession into an eruption of skin brands. Channeling the original notion of brand (marks in the skin to signal ownership of cattle), Knowear excavates the contemporary and pushes it to an extreme. Brand icons press against our flesh until they become one with us, metastasizing into an outbreak of uncontrollable lesions.

As compelling as these projects are, it is clear that they will not, in and of themselves, effect large-scale social change. They are more speculative than interventionist. What each of these projects illustrates is a trenchant blend of a critical analysis of the present with a projection into a possible, prototyped future. But unlike more commercial design projects, they express an engagement with overt social and political aims – even though they sometimes suspend us in an uncomfortable place between reality and fiction. They compel us to reconsider how the present is futuring – to use Tony Fry's words – and how we may still have a chance to reconfigure that future potentiality. These projects slow down the future and its defuturing by prefiguring us in those future moments. They bring together the analytical incisiveness of an ethnographer's eye with the materializing vision of a designer. They are *untimely*, in Rabinow's terms, in that they 'make visible what is emerging' by both slowing down the present and speeding us up to that present's future.

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By targeting the needs of groups who are marginalised by conventional design practices, Inclusive Design links to wider social narratives concerning an inclusive society. More importantly it is now recognised by governments as a force of social equality as well as a driver of social innovation for communities, business and industry.

JO-ANNE BICHARD AND RAMA GHEERAWO

The Designer as Ethnographer. Practical Projects from Industry

The ethnography in design

Ethnography has been the primary modus operandi of anthropology (social and cultural opposed to biological) since the 'birth' of the practice with Malinowski's sojourn on the Trobriand Islands. In the classic introductory text on ethnographic practice, Hammersley and Atkinson ask, 'What is ethnography?' and proceed to answer that it is the participation in peoples' daily lives for an extended period of time; watching, listening, asking, and collecting everything that can be constituted as data. Yet Hammersley and Atkinson also knowingly unsettle this definitive list by asserting that there is no 'hard-and-fast distinction between ethnography and other sorts of qualitative enquiry' (1995, 2).

But, whilst many anthropological practitioners agree that there is no singular definition of ethnography, there are indeed hard-and-fast rules of ethnographic data analysis, albeit entrenched in the rules and rituals of the anthropological discipline. Interviews are to be transcribed and analyzed for keywords and related descriptions, images scrutinized, and associated texts referenced in the process of understanding if what people say they do is actually what they do (the ultimate goal of the participation method). Fieldwork, in which participant observation is used, often takes place over a period of many months, sometimes years, generating not only interviews but also detailed diary entries on the observation and engagement with those the anthropologist is participating with. And for those who are engaged, this in itself leads to a more dynamic and 'reflexive' attitude, allowing researchers (and their participants) to change the ways they see their worlds (Davies 1999).

Can such huge data generation be useful to a designer? Pressured by time constraints and client costs, the process of analyzing the data from ethnographic practice – mining hours of interviews with key informants, reading the literature around the 'subject', taking photographs and collecting images, as well as periods of reflection on participation – may well exceed a design project's timeline. Given such considerations, how can designers be ethnographers? Indeed, are they practicing ethnography or merely engaging with a certain ethics when accessing a user's perspective?

Or have designers merely followed their creative brethren, the artists, and caught what Foster has termed 'ethnographer envy'? (1996, 181). For ethnography's greatest asset is its contextual nature; it can be applied anywhere, to any situation, involving anybody. As such, could it be argued that a certain flexibility in the ethnographic practice makes it attractive to designers?

Many designers who have engaged in ethnography have also re-imagined it. The design group IDEO created a set of 51 methods cards for design teams to use in empathic research and human-centered design. The cards are classified into four suits – Ask, Watch, Learn and Try – and design teams can invoke as little or as many of the methods as they wish.

Whilst the suits distinctly resemble classic methods from ethnographic practice (interview, observe, reflect, participate), the cards break down these aspects further so that interviews and observation appear as discrete and separate activities that can be used on their own or together. One card details the creation of affinity diagrams, which appear similar to kinship diagrams from classic ethnography. IDEO's methods cards have captured discrete aspects of the ethnographic method and re-imagined the whole as comprised of separate practices that can inform design teams. IDEO has reported that the cards' appeal has extended beyond designers also gaining popularity with clients in the course of understanding and innovating within their own business.

The key aspect of adopting ethnographic practice in design is to ultimately understand more of the user's perception of the object, environment, system, or service the user is engaged with. In the UK, legislative measures, such as the Disability Discrimination Act (DDA), have cajoled designers into engaging with users who have 'extreme needs but this has also resulted in some unfortunate solutions that do more to continue stigmatizing people rather than integrating them. The central tenant of the DDA is to ensure that providers of services, goods, and facilities make 'reasonable adjustments' to ensure that people with disabilities can access them. Debate still continues as to what exactly constitutes 'reasonable', but it is generally agreed that by making services, goods, and facilities more accessible to people with disabilities, it will also increase access to older people and wider sections of the population.

Coupled with the need to ensure access for disabled people is the need to respond to a growing aging population. It is currently estimated that by 2020 one in two Europeans will be over 50, with around 40 million covered by disability legislation (Myerson 2005). The issue of aging population is not only a European phenomenon. Falling fertility rates around the world have resulted in significant demographic trends towards aging populations in Japan, the United States, China, and India. In addition, advances in healthcare and well-being have resulted not only in an ageing population but also one that is living longer. In 2008, it was reported that Japan has close to 40,000 centenarians, and the United Nations predicts that this number will rise to 1 million by 2050.

With such demographic drivers, it is important to understand the challenges many people may face when accessing goods, services, and facilities. Equally, designers face the challenge of creating products, systems, and environments that can be used with ease by the majority of people. Thus, engaging ethnographic methods to understand user needs may benefit many designers.

One such methodology that incorporates users' needs and social inclusion directly into its core philosophy, and therefore undertakes a number of ethnographic methods, is inclusive design. By targeting the needs of groups marginalized by conventional design practices, inclusive design links to wider social narratives concerning an inclusive society. More importantly, it is now recognized by governments as a means of enabling social equality as well as a driver of social innovation for communities, business, and industry.

Yet such drivers are not purely social. The effects of an aging population also shift the balance of consumer power away from the young towards the older members of society. And this continues with reflections on what older people want. With today's baby boomers retiring and continuing to lead active

lives, these consumers are not interested in specialized products that may stigmatize through advertising the decline of the aging body. ratherInstead, they desire quality and aesthetics as much as functionality and ease of use.

Inclusive design directly engages the users, namely older and disabled people, within the design process. It is more than a simple consultation exercise as novel ethnographic techniques are incorporated to stimulate communication and creativity between users and designers. Such direct engagement with the users of design can also bring a creative edge to designers who seek to understand the influence and impact their design solution has on users.

Given the time constraints on industry-based design projects, many of the ethnographic methods employed by designers have come to be known as 'rapid ethnography' (Norman 1999). This method has enabled designers to gain insights into users' activities in daily life but also keep up with the fast paced needs of commercial business practice. Whilst commercial pressures may mean that less time is spent with participants than a traditional ethnography demands, such participation still enables designers to gain access to people's worlds and helps them to understand their situations. This understanding is then translated into the realm of business with the design of better products, services, and environments that are more tailored to meet people's needs. The strength of the rapid ethnographic approach is that it gives voice to the users who remain at the forefront of the design solutions.

Design ethnography at the Royal College of Art Helen Hamlyn Centre

In 2000, the Helen Hamlyn Centre (HHC) at the Royal College of Art (RCA) began a program that takes new RCA design graduates from a range of design disciplines and partners them with an industry organization over the period of a year. Termed the Research Associates Programme, in the last decade it has completed over 100 inclusive design projects, where design ethnography has been the prime method of user engagement. Over 75 organizations and not-for-profit partners, such as GlaxoSmithKline, Ford, Research in Motion, the UK National Health Service, and the British Heart Foundation, have participated alongside 100 graduates.

The graduate designers involved in this program are referred to as research associates (RA), and they design the research project to fit their specific brief or to probe a particular area of interest or specialization. They employ a diverse range of methods including questionnaires, expert consultation, user diaries, interviews, observation 'in situ', testing with prototypes, and research 'kits' that require a variety of responses, from photographic to emotive. The RAs are encouraged to work with users as this direct 'embedded' contact is viewed as invaluable and integral to the research process (Warburton 2003).

Users are carefully selected to challenge the scope of the project and are involved from the outset as opposed to acting as 'test subjects' that validate the RAs

own thoughts at the end of the process. People are seen individually or in small groups to enable a richer exchange of information and opinion. This also encourages empathic bonding between designer and user, creating a space where they can address the problem at hand. This can help the designer understand lifestyle and aspirational factors that are often overlooked, moving beyond ergonomic problem solving into an area of user-facilitated innovation (Coleman 1997).

Case study 1 – Out of the Box

This project took place between 2008 and 2009 in partnership with the electronics manufacturer Samsung. Two graduates from the RCA Department of Innovation Design Engineering, Clara Gaggero and Adrian Westaway, led the project as RAs.

The aim of the initial brief was to design a better mobile phone for older people, but a program of research with older users helped to reveal alternative issues and redefine the brief. Design anthropology was key in meeting the unanswered needs of older people and guiding the RAs. The new focus was to investigate solutions for the increasing divide between older Europeans and mobile phones, rather than simply designing new hardware. Phones with big buttons, large screens, and easy-to-read fonts all currently exist. The area with real potential for design intervention was redesigning the 'out-of-box' experience, rather than modifying the phone itself.

An initial workshop with a group of 80-year-olds revealed that few would benefit from using a mobile telephone, as they did not lead mobile lifestyles. The primary focus group was therefore defined as 60 to 80-year-olds who are mobile, travel outside their local area, and are curious about technology.

A writer, aged 75 and living alone, and a married couple in their 60s who fit this profile were then visited in their homes and asked about current issues around technology. The intimate home environment allowed the researchers to gather information about peoples' lifestyles and observe the context of their actions. The RAs devised a series of questions and interactive tasks that made the individuals feel less like they were being studied as 'test subjects', rather acting as significant, lead protagonists in the process. Each interview lasted approximately two hours and was filmed.

The tasks focused on three areas: how people communicated with their network of friends and family; how people learned to use products and services; and what technology they owned and used. These user engagements provided much insight, but a single key issue emerged from the study and captured the attention of the researchers: Any 'problem' in appropriation did not lie simply with the user nor was it the fault of the device, rather the process of learning to operate and use the technology was the main barrier to successful appropriation.

Further research

As a result, the project began to refocus, in a reflexive way, on the process a user goes through when buying a phone and setting it up. Task-based observation was set up, where a 60-year-old woman was asked to buy a new mobile telephone and perform a series of simple functions such as sending a text message. Although there was little help from the sales staff in the shop, the real barrier emerged when she read the manual. Written in technical jargon, it confused her, did not guide her in completing the tasks, and turned the joy of her purchase into frustration.

It was apparent that the manual, which is so heavily relied upon, was completely inadequate and needed to be rethought. Two workshops were held in Norway and Italy to get a pan-European perspective on this issue. Six to ten people participated in each workshop.

Users were asked to rank the functions they used on their existing mobile phones then describe what their 'dream phone' might do. To remove the constraints of real products or existing technology, they were given a banana and a kit consisting of scissors, glue, and craft material and then invited to physically create a magical banana phone that could 'do anything'. A large number of the responses generated by the project denoted functions that were already available in the existing telephones, indicating once again that the process by which people 'learn' and decipher phone features was failing.

Finally, each person was given a choice of materials and tools to create their perfect phone manual. They constructed booklets, cards, posters, videos, and even novels, highlighting the inadequacy of the current manual. People aspired for more human, creative communication.

Concepts

Two of the concepts that resulted from the study are described here. The first turns the throwaway manual into a hardcover book that is designed to

FIGURE 1
User being observed by designer whilst performing a set task

FIGURE 2
Creating a 'banana phone' in workshops in Italy

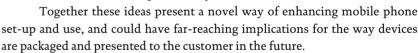FIGURE 3A, B
The phone sits within the book with clear instructions on each page

FIGURE 4
Tapping the card onto the phone activates the function

be kept on a shelf and referred to throughout the life of the phone. Many older people often asked friends or family to talk them through the phone set-up, so the pages of the book mimic this process using a conversational tone that is devoid of technological jargon and acronyms.

Turning the pages reveals step-by-step advice with graphic and text-based instructions, pointing to the actual device and accessories encased within the book, minimizing chances of error. The book then takes the user through other phone functions using the same process.

The second concept involves a pack of cards that digitally interact with the phone to add and use basic functions. You choose a function you want and tap the relevant card onto the phone to access that function. The cards act as shortcuts, enabling users to tangibly explore the contacts and functions inside the phone without getting lost in complex menus. The reverse of each card clearly explains how to access each function using the menu; as the user becomes more comfortable with the phone, they will be able to use it without the cards.

Together these ideas present a novel way of enhancing mobile phone set-up and use, and could have far-reaching implications for the way devices are packaged and presented to the customer in the future.

Case study 2 – TwoTone Phone

The project was partnered with UK telecommunication company BT with a focus on developing creative new ways to connect people aged over 60 to the communication benefits of broadband. Two new graduates from the RCA Department of Industrial Design Engineering, Matthew Harrison and Cian Plumbe, led the project. The resulting designs had to enable non-terminal based access to the Internet and

explore more ambient and pervasive methods of information handling. BT was looking for marketable products that addressed a future five years after the project start date in 2006.

More than 14 million people in the UK can be termed 'digitally excluded', and the majority of these are older people. Some have never had access to a computer, and many are never likely to. Many older people cannot justify the costs of buying a computer or the complications of learning to use one. This means that they cannot access services and communications that are increasingly dependent on the Internet: whether shopping for the best deals, communicating to a dispersed family network, or obtaining impartial healthcare advice. The project aimed to bring the older user into the foreground and push the technology into the background. The focus was on promoting independent living and choice instead of simply providing another hard-wired, telecare solutions.

The research consisted of two phases. In the first, six lead users aged over 60 were selected and interviewed in their homes. This group represented a mix in terms of age, gender, physical proximity to their family, living alone or with a partner, and urban or rural location. The interviews were video-recorded, consisting of an informal but guided discussion within which a holistic impression of the participant's lifestyle and their attitude towards technology could be discovered. The topics discussed briefly covered the complexity and diversity of each user's life and addressed issues such as lifestyle, healthcare, social networks, organization of personal information, and communication. This allowed the RAs to assemble a series of insights that described the points of view of the users.

The second phase addressed the difficulty of talking to older people about broadband, which is generally an unfamiliar subject. Six test design concepts were created that illustrated easier ways to access the Internet. Users could visualize potential benefits and react to new ideas. These concepts ranged from a 'piggy bank' that displays credit or debit card information with a simplified keyboard that groups keys alphabetically and into logical clusters. Visuals depicting these concepts were taken to the interviews with the existing group of six older people and used to provoke reaction. Ideas were assessed by the users and ranked. This determined the most relevant design for them and provided an evidence base for taking it forward.

FIGURE 5
Four of the six people visited in their homes

FIGURE 6
The final design showing the different sides of the phone. Black side for Internet and white for a normal landline

The interviews were run in the early stages of the design process, allowing the designers to respond to early feedback and evolve the concepts between visits. This approach meant that the users directly challenged the designs from the briefing stage, leading the creative process unhindered into spaces that the designers had not previously considered. This research highlighted a number of issues in terms of who the outcome should be aimed at and what technology should be used. In its latter stages, the project focused on the over-70s for whom cost is especially important, as is ergonomics of use, such as the tactility of buttons and easy-to-read displays. This group wanted new devices to build on familiar interfaces and the benefits should be self-evident.

The main design outcome of the study, the TwoTone Phone, addresses these issues. It is effectively two phones in one unit. The white face acts as a normal, cordless house phone, whereas the black face is a Voice Over Internet Protocol (VoIP) phone that utilizes existing VoIP services to allow calls to be made over a broadband connection. Turning over the phone activates its different modes: The VoIP mode does not have a screen ratherbut has six large buttons withon which users can write the names of their contacts. The buttons turn orange if the person is online and flash when that person calls, with the added benefit of indicating who is available to chat.

Whilst designed with older people in mind, the concept is also aimed at the mainstream market. Users can connect the phone to their television in order to make video calls, and the base unit also acts as a wireless router. Although the TwoTone Phone has a large number of functions, these are presented in a way that does not intimidate or confuse. The user can choose the level of functionality and adapt the phone to suit their needs. For digitally excluded older people, it provides a simple way to communicate freely, using previously unattainable broadband services.

Working with people

Although technology projects have been chosen as the primary case studies, the approach can be successfully applied to any design discipline as other projects completed by the HHC demonstrate. The selection of the right type of user is essential. The HHC method is to work with small numbers of 'extreme users', people who make greater demands on design than a typical,

able-bodied, mainstream user would. As small numbers are consulted, the RAs have to make sure that there are large variations in the sample according to factors such as age, gender, ability, or socio-economic background. Research is conducted with specific users, but the final designs are made relevant for the general market.

People have to be briefed as many might be tempted to 'perform for the camera' rather than behaving naturally. If the same users are approached repeatedly, they can move from commenting on themselves to a position as amateur design critic. Many designers rely on relatives or friends, and whilst this can provide some benefits such as trialing a research method, objectivity can be compromised. Designing an appropriate method and then finding suitable, willing participants can be challenging, but when done correctly this can help trigger innovation and challenge design preconceptions.

Design and ethnography

A design anthropology approach enables the RAs involved in Helen Hamlyn Centre projects to identify and investigate issues based on real user need and then produce creative solutions; conducting research with people allows them to reflexively search for points of inspiration rather than seeking social truths.

Although people-centered design borrows much from ethnography and anthropology, the designer cannot benefit by simply co-opting techniques without adapting them to a specific purpose. The longer studies and observational methods of research that ethnography favors can lead to fundamental truths about the way individuals or groups behave, but in a time-pressured project, designers have to deal with shorter time frames and provoke response rather than waiting for interesting behavior to be revealed. The search is for creative insights rather than an expansive understanding of every aspect of a user's life.

It is the very nature of designers to challenge and change things around them, and this is also true for the tools and the techniques commandeered from ethnography. However, reshaping them to fit a design process becomes a challenge, and each RA devotes significant time to designing their research. There can be a tendency to objectify the people that designers choose to work with, seeing them as 'test subjects' rather than human beings. RAs are encouraged to embrace the concept of peer-to-peer exchange, treating a person as a valued contributor to the research process. Whilst authorship of design development and final design remains with the designer, they must relinquish their leadership position when working with users.

Conclusion: The designer as ethnographer

The use of ethnographic techniques in design has inspired RAs and the business organizations that they work with. In many cases, this has not just been about solving problems but finding problems to solve. It has been a low-cost, high return way of innovating and getting closer to consumer aspiration. In some projects, design has formed a natural pathway to take ethnographic research and translate it into marketable ideas. Bringing together design and anthropology can therefore be seen as a natural progression of this relationship.

Working directly with users follows a human-centered approach in design, which specifically relies on direct observation techniques from the discipline of anthropology. Such an approach in design thinking has been argued by Brown to enable the 'capture of unexpected insights and produce innovation that more precisely reflects what consumers want' (2008, 8). In effect, design thinking innovates in ways that move beyond the traditional 'function and form' aspects of design.

In contrast to this relationship where design incorporates the anthropological tradition, design thinking has now become a major pivot in current developments within the discipline of anthropology itself. Rees proposes that the future design of the anthropological project will take its cue from design and the design studio, by allowing anthropological research to resist being dominated by 'well established theories and/or tacit norms of what fieldwork is' (2008, 116) – in effect, for the practice of anthropology to resist its traditional disciplinary 'function and form', where the anthropologist and ethnographer become designers. In turn, if anthropologists and ethnographers appear to be becoming designers as such, then perhaps designers should allow themselves to reflect on their 'field' and 'work' more as anthropologists and ethnographers.

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