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CONFERENCE PROCEEDINGS

Building Bridges
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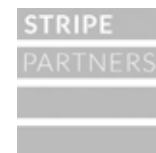


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The EPIC2015 Conversation

MARIA BEZAITIS

Intel

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Pitney Bowes

KEN ANDERSON

Intel

EPIC2015 was notable for so many excellent reasons. First, the conference took place in an extraordinary city with a vibrant and growing population of EPIC people. Holding the conference in São Paulo enabled an influx of new participants and presenters from Latin America, expanding the community and conversation with new colleagues and stakeholders as well as new ways of thinking about people that develop out of different cultural perspectives.

Second, we celebrated our first double-digit birthday—10 years! Our birthday gave us the opportunity to reflect on the paths paved by individual practitioners and EPIC as a community over the last decade, and how we will use that history to pave our future. We owe many thanks to the local participants who welcomed EPIC and so many practitioners from the US, Europe and Asia.

INDUSTRY DAY

This year we held a pre-conference event we called Industry Day, created specifically for the São Paulo community to get to know more about some of the many businesses practicing ethnographic work across a range of contexts. Our premier sponsors presented to a standing-room-only local audience of approximately 300 people. The energy in the room was palpable as we heard from major global corporations and international consultancies.

Companies like Intel and Steelcase have made pioneering investments in ethnographic work; as Izabel Barros noted, Steelcase has been “building bridges between people, process, technology and space” since it registered its first patent in 1914 after fieldwork revealed the immense value of a fireproof wastebasket. Melissa Cefkin reported on more recent initiatives in the automotive industry, where Nissan understands the critical importance of asking, “What are the social practices of the road? How can automomous vehicles live as effective social actors in diverse locations?”

Industry Day sent clear messages about the value of ethnographic praxis. We can change the world not just because we understand the social and human factors that drive it, but because we have shown we can make powerful contributions that affect the future. As Johannes Suikkanen from Gemic put it, in this era of discontinuity, ethnographic thinking informs “not just business questions, but existential questions.”

“‘THE FIELD’ IS DEFINED BY OUR ATTENTION TO IT”

Some presentations challenged us to think about how the definition of our field studies may be changing as our world is inhabited increasingly by connected devices and autonomous systems. In her opening keynote address, Elizabeth Churchill drew a distinction between understanding “what is perennial and what goes away,” reminding us to bring our ethnographic thinking to understanding the new and the different within the frame of our basic knowledge of human behavior and interactions. She bridged us to the future, with musings on the social life of electronic devices. The reality of this future was brought to the fore by Tiffany Romain and Mike Griffin of Ricoh, who unexpectedly found themselves in the midst of deep hanging out with an algorithm, toothpaste and retail shelves.

Their attention to how and where different kinds of value are created defined the field for Daiane Scaraboto and Bernardo Figueiredo, who traced the circulation of small chapels in Brazil, and for Hal Phillips and Meg Kinney’s dive into the ritual of Mardi Gras. Several presenters explored the field as a place to create value in collaboration with stakeholders and clients. Maria Cury turned that age-old artifact of fieldwork—field notes—into a social space, directly engaging stakeholders in the field to increase their understand of the impact and value of ethnography.

DIVORCE NOTHING

Over 10 years of EPIC, conversation increasingly focused on to how ethnographic insights can shape strategy and the future of business. But terms like ‘insights’, ‘strategy’ and ‘innovation’ are cast about rather casually these days, and at EPIC2015 we pushed each other for more rigor and precision. After all, argued Shaheen Amirebrahimi, even our best research can become a vehicle for corporate stagnation as it travels the road from ‘insight’ to ‘innovation’.

Simon Roberts and Tom Hoy, extracting themselves and some clients from a tent at a campground in Southern California, asserted that we produce too much information *from* fieldwork that’s not actually suited to the way organizations innovate. They reminded us that our obligation goes beyond insights and ideas, and we need to connect with the people and teams in a position to act—and help them act. Ken Anderson and colleagues urged us to go after ‘dynamics’, not ‘insights’: to create transformative innovation, ethnographers must understand shifting webs of significance as well as translate research and catalyze opportunities. Hiroshi Tamura and colleagues’ Innovation Studio Fukuoka, ethnographic research initiated a sense of co-ownership that had concrete effects on the success of entrepreneurial teams.

I ♥ MY JOB

We do strategy, we do innovation, but we’re lying, said keynote speaker Luis Arnal, if we don’t admit that we do it for love. The joys and passions that really drive us every day permeated EPIC2015 as a source of inspiration. Ethnographers can taste life intensely and

live many lives. Love also exists as a sense of responsibility because we have the tools to help change the world for the better.

Exploring the tension between what exists and what could be, Marcelo Judice and colleagues used Surrealism to improve public health in marginalized communities of Rio de Janeiro. As a teenager, Andrea Morales Moreno found empowerment in the D.I.Y. punk culture and "Mother Theresa in a menstrual pad." Carrie Yury's Pecha Kucha about explaining ethnography to elementary school children showed us that the power of what we do can be evident to 10 year olds—and showed the importance to a working mother of sharing it. Closing keynote speaker Luciana Aguilar reminded us that our remit should not only be changing the world of business, but using business to change the world. She implored us to think creatively on how our work can contribute to the UN global goals of ending poverty, fighting inequality, and fixing the climate.

10 MORE YEARS

Reflecting on our last 10 years, as well as the pioneering work begun well before EPIC's incorporation, also forces us to confront our need to continue to build on our existing knowledge, using past work as a springboard to new understanding rather than continually making the old new again. In a session reflecting on the first 10 Years of EPIC, Jeannette Blomberg asked for fewer "just-so stories and more accounts of what is broken and what we can learn from it"—a reminder that while it is nice to celebrate our successes and tell interesting narrative case studies, we only push our practice and knowledge forward by dissecting that which fails and that which we do not understand.

A key part of that growth and evolution continues to be growing our community to include new constituents who generate new knowledge that builds on our existing work and our existing understanding of social phenomena. This includes EPIC continuing to expand our horizons beyond our own cultural framework, including the interpretive lens of the global south, and bringing in new disciplinary perspectives, as we will in 2016 when EPIC will be hosted by the Department of Anthropology and Carlson School of Business at the University of Minnesota. We invite you to join in and continue the conversation.

Fieldnotes as a Social Practice: Elevating and Innovating Fieldnotes in Applied Ethnography, Using a Collaborative Online Tool as a Case Study

MARIA CURY

ReD Associates

In this paper I propose that applied ethnographers should think critically and innovatively about the practice of producing fieldnotes in ethnographic research. Critical thought on ethnographic fieldnotes has been relatively underdeveloped, both in applied and academic anthropology. Moreover, as applied ethnographers our projects have particular opportunities and constraints that are unique from academic anthropology. I make a case for elevating fieldnotes as a topic of more critical discussion in applied ethnography, and for moving fieldnotes from a private practice to a social practice. I use a collaborative online tool as a case example for possible innovation. Collaborative practices present certain vulnerabilities and challenges to creating fieldnotes, but I argue that the benefits of innovating fieldnotes help to build bridges both between researchers, and between researchers and stakeholders in a project. Innovative fieldnote practices can: deepen the thinking in our research; increase our impact; help ensure that our practices are credible as applied ethnography; and make contributions to the practice of ethnography more broadly.

INTRODUCTION: FIELDNOTES IN THE DISCIPLINE OF ANTHROPOLOGY AND IN APPLIED ETHNOGRAPHIC PRAXIS

In both academic and applied ethnography, we rarely talk about fieldnotes – and when we do, we are often not entirely sure what we are talking about. Fieldnotes have an air of secrecy around them. Scholars have described fieldnotes as “mystique” (Jackson 1990), a “muted” medium (Lederman 1990), and the “secret papers of social research” (Van Maanen 2011). There are few resources to guide ethnographers, both academic and applied, and two texts from the 1990s (Sanjek 1990, Emerson et. al. 1995/2011) remain the key references for ethnographic fieldnote theory and practice. There seems to be no standardized or formalized way to create and use fieldnotes (Jackson 1990, Lederman 1990, Goodall 2000). Although this may be part of what makes ethnography a distinctly flexible, creative, and adaptive methodology in the social sciences (Van Maanen 2011), it has led to an underdeveloped practice and level of critical thought around fieldnotes. We believe there is more consensus on the what, why, and how of fieldnotes than is actually the case (Jackson 1990).

There are many understandings of what a fieldnote can be (Clifford 1990, Sanjek 1990, Lederman 1990) – fieldnotes could mean anything from notes scribbled during an event, typed transcripts from an interview, or musings in a diary. Drawing on various theoretical definitions of ethnographic fieldnotes (Jackson 1990, Goodall 2000), I here take fieldnotes to mean a written account of fieldwork happenings at the end of each day in the field, in a form that is more coherent and reflective than the notes taken in-the-moment, but nowhere near the level of analysis and insight of the finished product that arises from the fieldwork.

Although extensive critical discussion of fieldnotes in the academic discipline of anthropology (which claims the strongest relation to ethnographic practice) is lacking, there is a general agreement in academia that fieldnotes are central to ethnography. Ethnographic fieldwork is not just the in-depth participant-observation of people in their environments, but also “thick description” (Geertz 1973), the consistent reflecting on and interpreting of those observations through notes – “[t]hese two interconnected activities comprise the core of ethnographic research” (Emerson et.al. 2011). It is through the process of writing fieldnotes that “afterthoughts kick in” (Taussig 2015), and we begin to develop meaningful data and analysis beyond pure observation.

In applied ethnography, the discussion around ethnographic fieldnotes has also been thin. Many papers in past Ethnographic Praxis in Industry Conference (EPIC) proceedings have focused on improving fieldwork practice by proposing new methods for stakeholders to immerse themselves in the fieldwork (Cramer et. al. 2008, Dalsgaard 2008), for better collaboration among ethnographers in multi-sited projects, and for more flexibility in communication and data management so that ethnographers can alter their methods in situ and the data can answer new questions in the future (Churchill and Elliott 2009). Di Leone and Edwards (2010) come closest to proposing innovation in fieldnotes practice in their case example of using ETHNOKEN, an online annotation and storage system, to share ethnographic data and build conversations while in the field. As I will return to later, the paper argues for more collaborative ethnographic practice and knowledge sharing both among researchers and with stakeholders (Di Leone and Edwards 2010). However, the ETHNOKEN platform is primarily for video footage and transcripts, and there is no theoretical discussion in the paper explicitly addressing the practice of fieldnotes as central to ethnography. Indeed, in the conference proceedings from 2008 to present, direct mention or discussion of fieldnotes as part of our praxis has been virtually nonexistent. This suggests that, just as with academic ethnographic discourse, applied ethnographic discourse has too remained silent on the topic of fieldnotes.

Given that fieldnotes are so integral to ethnographic praxis – there is no ethnography without both the doing and the writing (Lederman 1990, Emerson 2011) – and that we as applied ethnographers distinguish ourselves from others in the applied social sciences because we are rooted in this methodology, it is imperative that we think meaningfully about our fieldnotes practice and emphasize fieldnotes as essential to our praxis. The way we think about, talk about, and generate fieldnotes lends us credibility as practitioners of ethnography out in the world. Corporations, research labs, and other organizations in various industries are increasingly turning towards applied ethnography to solve some of their toughest human questions, but as Forsythe (1999) points out, this places ethnography in the paradox of seeming like “invisible work”: “[e]thnography from outside looks to the uninitiated as a semi-respectable form of hanging out” (Van Maanen 2011), and hides the depth of anthropological and ethnographic training and technique required to turn participant-observation into insight. At the same time, we also risk the of “de-skilling” of ethnography: increased demand for applied ethnographic research at lower prices leads to dividing up ethnography into piecemeal and disconnected labor tasks that can be done faster and cheaper by separate individuals with more limited training (Lombardi 2009). These two phenomena, the “invisible work” of ethnography and the potential “de-skilling” of what we do, means that we should assess whether we are really doing the deep work of ethnography

in applied contexts. This would help ensure both the genuineness of our work as ethnography and our ability to deliver differentiated value to our stakeholders.

It seems taken-for-granted that fieldnotes are a long, arduous, and individual practice, and thus a less-than-exciting selling point when applied ethnographers are persuading stakeholders about the capabilities and benefits of ethnography. But despite relative silence on the topic of fieldnotes in both academic and applied ethnography, there have been efforts to innovate both the theory and the practice of fieldnotes (and of course, ethnographers have been thinking critically and reflexively about ethnographic writing more broadly since *Writing Culture* (Clifford and Marcus 1986)). Ethnographers have been turning to data analysis software like Atlas.ti and online note-taking platforms like Evernote to organize, develop, and archive their fieldnotes (Fuji 2007), and are exploring the use of “live fieldnotes” shared with a broader audience as in-the-moment snippets from the field through social media platforms (Wang 2012). It is in this vein of innovative engagement that I propose we think of fieldnotes as a social practice.

FIELDNOTES AS A SOCIAL PRACTICE

As applied ethnographers, we have much to gain by thinking creatively about the practice of fieldnotes in ethnographic research. Having a strong fieldnotes practice, and making this practice known, visible, and accessible to our stakeholders, helps stakeholders see the uniqueness and skill of the otherwise “invisible work” (Forsythe 1999) of ethnography, increasing the value and saliency of our insights and recommendations. Most crucially, a strong fieldnotes practice helps ensure that we are generating thick descriptions (Geertz 1973), and not just observations from the field.

Our applied projects have opportunities and challenges that are unique from those of academic anthropology and its ethnographic praxis. Our work is often more directly grounded in addressing (or attempting to solve, or innovate towards) today’s most pressing human phenomena, and has the potential for very immediate (and industry-specific) impact. We are usually faced with the challenges of a limited time frame to conduct research, teams dispersed in multiple field sites, and working with or for stakeholders who may have limited knowledge about ethnography. Under these circumstances, applied ethnography attempts to build bridges between researchers, and between researchers and stakeholders.

A fieldwork practice that incorporates innovative use of fieldnotes has the potential to build these bridges more seamlessly and strongly. I am here arguing for moving fieldnotes from a private practice of writing alone in the field and towards a social practice that engages teams and stakeholders, as one means of innovation. Collaborative methods present certain vulnerabilities and challenges to creating fieldnotes, but the benefits can help heighten the quality and value of our work. In the next sections, I will outline how fieldnotes can build bridges between researchers, and between researchers and stakeholders, by using an online collaboration tool as a case example for possible innovation.

CASE STUDY: ONLINE COLLABORATION TOOL PODIO.COM

For the past two years at ReD Associates – a strategy consultancy based in Copenhagen and New York that applies the social sciences to solve today’s business problems in various industries – we have been using the online collaboration tool Podio to create team

workspaces for each of our projects. Podio is a flexible service accessible on any computer, phone, or tablet using the internet. It allows organizations to create a network and various workspaces that they can customize to their own needs. For example, in ReD Associates' Podio network we have a general home page where we can share with one another interesting articles and news, and we have sections to organize training materials for new employees, catalogue the books in our library, and create an individual space for each of our projects. No coding experience is required, the general network is only accessible to members of the organization, and each project space is accessible only to invited members.

Within each project space, we create various subsections. For instance, we might have a subsection for collecting and discussing relevant theoretical sources, a section for notes from interviews with experts, and a section for organizing fieldwork logistics. One of the subsections we started to create was for producing fieldnotes. Prior to using Podio, we were writing fieldnotes as text documents and as slides in a PowerPoint template, using the taken-for-granted platforms of the consulting world. The main issue we were encountering with these formats was that the fieldnotes were not easily accessible to the dispersed team during fieldwork, and the team would return from the field with little knowledge about what each researcher had experienced. We then began using Podio as a way to share initial impressions from particular moments in the fieldwork. As these posts from the field became longer and more in-depth, and teams began referring back to the conversations that emerged on the Podio posts, we realized that Podio better fit our needs as applied ethnographers, and it is now our primary tool for fieldnotes.

The fieldnotes subsection in each project space allows us to upload fieldnotes-in-progress so that other researchers who are often in disparate field sites can also immediately access the notes. The fieldnotes are posted in a roughly open-ended template guided by each project's general research themes. Photographs, video files, and other documents may be attached to a fieldnote post. Generally each fieldnote post corresponds to one participant whom we spend time with in the field, and we use pseudonyms at all times when writing about each participant. We spend at least one full working day writing up fieldnotes for each participant we meet. We also create fieldnote posts about events, places, or other activities that occur while in the field. Throughout the fieldwork, we read each other's notes and leave comments on posts, developing a social practice around fieldnotes. The next two sections outline the benefits and challenges of this practice.

BUILDING BRIDGES BETWEEN RESEARCHERS IN A TEAM

Although ethnographic fieldnotes have traditionally been thought of as an act of "turning away" from the field and engaging in "solitary writing" (Clifford 1990), fieldwork in applied ethnography has particular needs that make "turning away" less viable and useful than joining together. As Di Leone and Edwards (2010) point out, ethnography in business or other applied settings is usually collaborative – researchers are often working as a team and working for external stakeholders (more on this in the next section) – and in this setting there are four key needs for knowledge-sharing to ensure good communication and analytical rigor:

- (1) direct experience of the research context, (2) even distribution of knowledge, (3) coordinated development of analysis, and (4) management of the client experience

Having a social practice around fieldnotes addresses all four of these knowledge-sharing needs (and in this section I address the first three needs). Ethnographic fieldnotes as a social practice can build bridges between researchers working as a team on a project by making fieldnotes accessible to all researchers in a way that builds conversations around each other's observations and reflections. This is useful, particularly in multi-sited ethnographic research, so that all team members can share knowledge about the research and begin developing initial insights together early on.

In one of the first studies at ReD Associates where we used Podio extensively as tool for fieldnotes, the team was exploring the artisanal craft movement in the United States for a food and beverage company. The team consisted of three ethnographic researchers who were each conducting research in a different city in the United States, and one project manager who remained in our New York office to coordinate the project. (Our researchers are generally part of the project team for the full duration of the project – they are, in fact, strategy consultants as well as ethnographers.) It was imperative that each researcher develop a strong understanding of all the field sites because each city's unique "take" on the craft movement was a key research theme. We created a subsection for fieldnotes on our Podio project space to address this challenge.

The task of creating a shared fieldnotes platform has led us to think more analytically about what we need from the practice of writing fieldnotes, and to then explicitly design for those needs. The fieldnote templates we create for each project on Podio are very loosely structured to reflect the fluid nature of ethnography. A fieldnote template consists of text boxes that refer back to key research themes we set out to explore, but also with plenty of room for more open-ended writing. We add photos and links to videos directly into the template. We design one section of the fieldnote template to allow for organization of data into a salience hierarchy (Wolfinger 2002) in which observations from the field are organized based on findings that the researcher feels are most important to the project. Although this is highly subjective, it allows the researcher to highlight moments in the fieldwork that, perhaps for some inexplicable reason, seem to point towards an emerging insight, and allows other researchers to efficiently read and comment on the moments that the researcher wants most feedback on. For the craft study, these highlights were usually moments that seemed to either touch upon some defining essence of the craft phenomenon, or that seemed to challenge our assumptions and prior research on craft. The rest of the fieldnote template is designed to allow for comprehensive note-taking (Wolfinger 2002) in which the descriptions from the field are more systematically and thoroughly organized to include all occurrences in a particular length of time during the fieldwork.

The Podio platform allows researchers to post fieldnotes that are still in progress. This makes it possible for all researchers to immediately get a glimpse of the people we are each meeting in the field. Through the comments feature on Podio, researchers develop conversations around each of the fieldnotes, creating a thread below each fieldnotes post and triggering analytical discussions early on. In the craft study, this was especially useful because we had researchers who were new to ReD Associates and still familiarizing themselves with our processes and methods. Articulating the discoveries and challenges in the field and observing other researchers through their fieldnotes was integral to an immersive learning process.

One of the most fundamental aspects of writing fieldnotes is that, in the process of writing down observations in the field, the ethnographer also writes asides, commentaries,

and longer-form memos with questions, emerging ideas, and connections to broader theories (Emerson et. al. 2011). These “immediate forms of analytic writing while actively composing fieldnotes” (Emerson et. al. 2011) are thicker in fieldnotes as a social practice because multiple researchers contribute their perspectives. As other researchers probe into the thick descriptions of a fieldnotes post, this helps curb some of the negative consequences of doing solitary research, such as being influenced by our internal and sometimes imperceptible biases and overlooking emerging connections and dissonances in the data.

There are certain vulnerabilities and challenges to turning fieldnotes into a social practice for team members in a project: namely, privacy and messiness. It has traditionally been the case that ethnographers are “touchy” about sharing fieldnotes because they see it as an infringement of their privacy or the privacy of the research participant (Jackson 1990). With regards to the privacy of the research participants, it is necessary to obscure each participant’s identity by using pseudonyms throughout the fieldnotes and excluding any images that clearly show the participant’s personal information (i.e. prescription labels, license plates), and we do this in all our projects. With regards to personal privacy, more intimate observations can be kept private in a journal, diary, or exchanges with friends or family. The shared fieldnotes are for data that pertains to the scope of the project.

Researchers might be concerned that fieldnotes in progress are too raw or messy to share with teammates. This can be remedied both by an indication in the fieldnotes of how far along the researcher is in composing her thoughts (in the fieldnotes template for the craft study, we added a progress meter to indicate, albeit vaguely, the level of “completeness” for each post), and by establishing early on in the project that the fieldwork and fieldnotes should be free-form and raw, and thoughts are expected to not be fully-formed at the beginning. As ethnographers, these circumstances should feel natural to us, as they are the very essence of our practice.

In our experience, the benefits of sharing fieldnotes on a project have far outweighed the challenges and vulnerabilities. We have observed four key benefits of fieldnotes as a social practice for a project team. First, sharing fieldnotes forces us to take very little for granted or as assumed knowledge. In the craft study, we were more aware of highlighting observations that felt city-specific about the craft movement, because we knew that we were each in cities where the craft landscape was likely different. Second, immediate access to fieldnotes also allows researchers to pursue inquiries they might not have otherwise considered. For instance, in the craft project, we used the comments section on our fieldnotes to ask questions that each researcher could then follow-up on. We also noted what our fellow researchers were observing in their fieldwork in order to be more aware of what to observe in our own fieldwork for comparison. Third, sharing fieldnotes and having discussions around those notes in the field also allows for in situ adjustments to methodologies in a way that is easily coordinated with all researchers, and this efficiency and adaptability is often crucial in applied ethnography (Churchill and Elliott 2009). In the craft study, we realized that one of our fieldwork exercises was not engaging with our participants in an effective way to understand their associations with craftsmanship. After communicating this in our fieldnotes, we were able to redesign the exercise in the first week of fieldwork. This benefit in particular has profound implications for the quality of the research and thus the project’s success, because the research design can nimbly address the grounded realities of the field.

The fourth and perhaps greatest benefit to sharing fieldnotes with the team is the sense of shared knowledge when the team returns from the field. When our team returned from our respective cities in the craft study, we – along with our project manager who had been following along with the fieldnotes and leading the discussions – felt that we each had an understanding of the research context at each field site, and that we each had a grasp of the early stages of analysis and theories we were engaging with. We were able to begin our analysis phase in a way that seamlessly connected to our fieldwork phase. This gave us more time to engage in the depth of collaborative thinking necessary to produce impactful insights, rather than spending extra time on getting everyone up to speed with understanding what occurred in each field site.

BUILDING BRIDGES BETWEEN TEAM AND STAKEHOLDERS

As Di Leone and Edwards (2012) outline, one of the four key needs for knowledge-sharing in a successful applied ethnography project is management of client or stakeholder experience. We have found in our project work at ReD Associates that the more embedded our stakeholders are in the fieldwork process, the more they can see the impact and value not only of our insights, but also of ethnographic praxis more broadly. Allowing stakeholders to participate in fieldnotes as a social practice is one effective way to make ethnography more accessible.

In a recent study on wound care for a healthcare company, ReD Associates conducted research among patients and healthcare professionals in Brazil and China to understand the needs, barriers, hopes, and lived realities of wound treatment in emerging markets. Our clients were experts in wound care, but had limited knowledge of how wound care happens in Brazil and China. One of the key aims of the study was to bring the stakeholder as close as possible to settings and situations they were unfamiliar with. Given that our stakeholders were geographically dispersed and unable to accompany us on fieldwork, we experimented with sharing our fieldnotes on Podio not just among the project team, but with the stakeholder group. After the team had been in the field for about a week – two researchers in Brazil and two in China – we invited into the Podio workspace our group of core stakeholders most directly involved in the project. They regularly sifted through our fieldnote posts, asking questions and leaving comments about the areas in which they were most interested.

There are certainly vulnerabilities and challenges to having a social practice around fieldnotes that incorporates stakeholders who may not be familiar with ethnography and who have certain expectations for the outcome of a project. There is a particular tension between being free-form and explorative, and being professional and polished. One of the main worries our team had in the wound care project was that opening the fieldnotes process to stakeholders would make researchers feel too exposed and self-conscious about their fieldnotes. There was a fear that the fieldnotes would not be as experimental or open-ended as they might otherwise be, given the added pressure of stakeholders peering into our emerging thoughts. We felt vulnerable.

Our solution to this concern, however, is threefold. First, we have a conversation with our stakeholders to set expectations about the fieldnotes. In the wound-care study we briefed our stakeholders on how ethnography works, explaining that the fieldwork phase is very much based on experiences, exploration, encountering unknowns, and expressing

tentative emerging ideas, rather than testing out hypotheses and drawing hard conclusions. The project managers engaged in a series of conversations with our stakeholders during the fieldwork, to help them process what they were reading and seeing from the field and to address any questions or concerns. Second, as mentioned above, we make sure to include in the Podio workspace only the group of stakeholders whom we will be working with directly through the entire process of the fieldwork. This prevents stakeholders who are further removed from the project from viewing the fieldnotes out of context briefly and drawing the wrong conclusions either about the insights or about the value of ethnography. Third, we allow time and space for the team to acclimate to the fieldwork before expanding the audience. In the wound care study we waited until the second week of fieldwork before we invited stakeholders into the Podio space, so that researchers could begin to feel comfortable with the methodologies and themes of research, adjust as necessary, and get their bearings on the field sites. With these measures in place, we felt that, apart from being cautious of writing anything in the fieldnotes that would directly upset our stakeholders (such as remarks of frustration), we could be very open with proposing our ideas and reporting and reflecting on our observations from the field.

Moreover, despite the myth of fieldnotes as a private activity meant for the ethnographer's eyes only, the reality is that ethnographers both academic and applied often have an audience for their fieldnotes – be it a superior such as a professor or adviser, or a colleague such as a fellow student or co-researcher (Emerson et. al. 2011). It is true that having an audience for our fieldnotes (particularly when that audience is the stakeholders who fund the project) tempers the flow and roughness of our notes, and instills a certain degree of professionalism and polish (we have a vested interest in coming across as insightful and impactful). However, this is a challenge with a silver lining: knowing that our fieldnotes are shared with an audience broader than ourselves helps ensure that our notes are more thorough and include contextual information we would otherwise leave out (Emerson et. al. 2011), and gets us thinking about the concrete impact of our work early on.

Using a fieldnotes format that feels less like a static document and more like an ongoing process also helps us overcome another challenge in involving stakeholders with fieldnotes: the risk that fieldnotes become a project deliverable that stakeholders use to prematurely develop conclusions on the topic of study. Rather than being a hard document composed by one researcher, the Podio platform allows for fieldnotes to be an activity that develops through ongoing collaborations and revisions across various project phases – from fieldwork to analysis to recommendations. Our stakeholders in the wound care study therefore understood and appreciated our fieldnotes as a social workspace or forum rather than as a final deliverable.

Of course there are cases when it would be inadvisable for stakeholders to participate in the fieldnotes process. If the stakeholder is focused solely on the project's outcome, extremely busy, under immense personal pressure, and not interested in understanding the field sites or the participants of the study in-depth, they might become distracted by, or feel anxious about, the open-ended nature of fieldwork. In such cases it might be best to keep the fieldnotes sharable only within the team. Nonetheless, our experiences with involving stakeholders in the fieldnotes process have been incredibly positive, and the benefits have outweighed the challenges.

One of the primary benefits of making fieldnotes sharable with stakeholders is that it increases the accessibility of our methodology to outsiders. Stakeholders are more likely to

be excited about and committed to the project if they have an opportunity to immerse themselves in the narratives of the data (Cramer et. al. 2008, Dalsgaard 2008). Having concrete moments from the field to grasp on to makes the research more real and insights and recommendations more convincing, because the stakeholders can see the connections between fieldwork and final deliverables. In the wound care study, our stakeholders were particularly drawn to the experiences they read in the fieldnotes about one patient in Brazil with a diabetic foot ulcer, and her daily struggles to find a treatment routine that worked for her. Our stakeholders held on to her story, and that of other patients and healthcare professionals we met in the field, throughout the analysis and opportunity phases of the project, which helped them believe in the relevance and resonance of our insights and recommendations. Immersion early on in the fieldwork can help garner stakeholder buy-in later on in the project, and developing a social practice around fieldnotes is one way to achieve this immersion.

We have also learned that stakeholder involvement in the fieldnotes process can benefit the researchers in the field as much as it can benefit the stakeholders and the ultimate outcomes of the project – in both practical and strategic ways. In the wound care study, for example, the team consisted of trained ethnographers, not trained medical professionals. Occasionally we encountered obscure medical products or procedures while in the field that were unfamiliar to us despite our preparatory research leading up to the project. On a practical level, we were able to ask our stakeholders for clarification about what we were observing through the discussion threads in the fieldnotes. More importantly and strategically, stakeholder engagement through the fieldnotes meant we were able to assess what areas of the study most interested our stakeholders based on their level of engagement with the fieldnotes and the types of questions they asked. Through their questions, we learned that our stakeholders were interested in outcomes that had research and design implications as well as marketing implications. Although we were careful not to use their line of questioning to preemptively narrow the scope of our research, it was useful to be aware of areas that would be beneficial to probe deeper into when we met with healthcare professionals and patients. This prepared us to answer some of our stakeholders' top-of-mind questions while we simultaneously explored the research themes we felt were most interesting as social scientists.

A crucial benefit of stakeholder engagement in fieldnotes is the establishment of accountability and authenticity. Glimpsing into the fieldnotes process allows stakeholders to see firsthand how much time and depth is built into the fieldnotes and therefore into the analysis, and how concrete and experience-based ethnography is when compared to other research and strategy methodologies. This lends credibility to our approach as applied social scientists, and can distinguish our practice from that of organizations and consultancies that claim to do qualitative research but lack the depth, rigor, and direct application of social science methodology and theory. When our stakeholders in the wound care study saw our level of depth and inquisitiveness around observations that could have been easily overlooked, they understood how applied ethnography was unique from other approaches. Ultimately, stakeholder collaboration in fieldnotes tends to be light (stakeholders rarely have enough time to engage extensively in reading and contributing to the notes), but with deep impact in getting them to see the sustained value of applied ethnography.

CONCLUSION: THE FUTURE OF FIELDNOTES

In this paper, I have argued for elevating and innovating the practice of producing fieldnotes in applied ethnography. Elevating, in the sense that we should consider fieldnotes as an active way to strengthen collaborative work and analytical rigor among teams, and to demonstrate to stakeholders the value of ethnography. Innovating, in the sense that we should move fieldnotes from a solitary practice to a social practice, and consider new tools to facilitate this shift. Rather than taking fieldnotes for granted as a time-consuming, solitary, and nebulous act, we should analyze how fieldnotes can better address our needs, and design our practices accordingly. A fieldnotes practice that meets the needs of applied ethnography can deepen the thinking in our research, increase the impact of our work, and help ensure that our praxis is credible as ethnography. Producing, sharing, and building conversations around fieldnotes has the potential to build bridges both between researchers in a project team, and between researchers and stakeholders.

Critical thought and innovation around how fieldnotes can better adjust to the changing dynamics of ethnography also has the potential to build bridges across the academic and applied divide in ethnographic praxis. Given that the topic of ethnographic fieldnotes is underdeveloped within academic anthropology just as much as within applied ethnography, we on the applied side could have much to contribute to the development of ethnography more broadly. We should feel the need to uphold the standards of what it means to properly do ethnography as we move the methodology from academic to applied settings. This, in part, means taking fieldnotes seriously as an element of fieldwork and as a marker of our work. At the same time, however, we should also feel compelled and inspired by the unique circumstances of applied ethnographic praxis. By continuing to think of innovative, creative, and critical ways in which we can further develop ethnographic methodologies – such as creating a social practice around fieldnotes – and then sharing our experiences and insights within academic discourse, we have the opportunity to strengthen ethnographic praxis more broadly to meet today’s changing research landscapes.

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NOTES

The ideas expressed in this paper are not the official views of ReD Associates or our clients.

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Moments of Disjuncture: The Value of Corporate Ethnography in the Research Industrial Complex

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This paper seeks to examine some of the underlying tensions that shape how and why ethnographers in industry often find their efforts devalued or not realized by stakeholders – i.e. “moments of disjuncture.” I argue that in many large corporations there is a separation between the stories anthropologists tell about themselves and those which are told about them, which mutually constitute an “informed fiction.” This fiction acts as a catalyst within a broader cycle of knowledge exchange (the industrial research complex) that demands a fast paced churning out of “newness” in insights before they grow old. These two processes often come to a head, creating a “seen it before” phenomena which risks devaluing timely and important work. To understand this I examine a case study of smart and automated technologies and offer potential solutions.

INTRODUCTION

How do we build bridges? As anthropologists in industry it's through representing the outside, inside. Our building materials are not concrete and steel but texts, images, videos, and models about people and their lives around the world. Our tools are not blunt hammers, though we use ethnography and presentation to pack the same punch when it comes to getting our ideas across. Most of our work in applied ethnography, as practitioners and reflexive academics, is around the role of representation within corporations. We pride ourselves in being able to “represent the end user voice,” give faces and names to the masses of undifferentiated ‘consumers’ out there, to show the complexities of other worlds so that the powers of capital do not outright colonize the other, but adapt to them in productive ways. We surprise, shock, and occasionally awe our stakeholders in the hopes that creating repeat epiphanies about “otherness” will gradually turn the gears of the corporation for the better. In some cases, however, we find our best efforts fall on silent ears. Our bridges collapse. Our ambitions and representations of other worlds fall through the cracks. The committees who bring us in are unwilling to listen, or at best give us a firm hand shake, a pat on the back, and a reassuring “job well done” as we’re escorted out of the room. In these cases (which are not infrequent) why are we brought in at all?

There are many theories, both academic, and applied as to why these moments of disjuncture occur – from organizational “flux” that shifts the way ethnography is valued in corporations, to the need for methodological evolutions to meet business acumen (Salvador et al 2013; Cefkin 2015). In this paper, I argue that in many large corporations, the story ethnographers tell about their inherent value and “what they do” – to at once convince stakeholders as well as themselves of their place and role as innovators ready to turn the gears on an ossified business – is in large part an “informed fiction” (Anderson and Bezaitis 2012) brought on by the structure and culture of the organization, as well as the highly differential aims of two descript groups, one Emic (business stakeholders), one Etic (anthropologists representing people from the “rest of the world” (Singer 2014). These two

groups are caught up in what I term “the industrial research complex,” or a set of institutional relationships which demand a continual and fast paced churning out of “newness” in data and insights for decision making that quickly grow stale and lose value the older they become. The relationship between knowledge producer and knowledge consumer in this arrangement has three deterministic effects that shape how and why these moments of disjuncture occur.

Firstly, knowledge production becomes deterministic in that research findings become ancillary to this complex – research becomes a political necessity rather than pursuit of objective truths about difference (Latour 1993, 2013). Secondly, the data produced by the anthropologist is fetishized and ritually disseminated in “bullets” or snippets, disentangled from its ethnographic context in order to maintain a sense of “newness,” realizing a value that is incomplete (Nafus et al. 2006). Finally, the corporation leverages the industrial research complex, not to inform itself for the purpose of change, but to remain the same. By hiring the anthropologist to bring representations of the strange ‘other,’ corporations are more swiftly able to recoil onto the traditions they know – conservative business models – remembering what and who they are in the face of stark difference. This moment of realization spurs movement and change, though not always in the direction intended by the anthropologist.

To illustrate how these moments of rupture play out and the ways in which applied ethnographers can circumnavigate and work through them in order to better realize their value, turning the gears of innovation within the corporation, I split this paper into two parts. The first section examines a moment of disjuncture during a presentation on the future of automated and smart devices. Using this example I explicate the tenuous nature of the relationship between capital/the corporation and the anthropologist as knowledge bearer – the ongoing necessity for ethnographic work despite the distrust of it. The second half examines how the industrial research complex (or IRC) exacerbates these tensions, drawing both business stakeholders and researchers into an ongoing and uneasy alliance in the production of “insights.” This research is based on three years of participant observation as a UX researcher at a large semiconductor manufacturer in Silicon Valley.

WAIT, I’VE SEEN THIS BEFORE...

“Didn’t we do this research a couple years ago with the same results?” – UX Researcher

I stood at the head of a long faux-wood conference table in a narrow windowless beige room, flipping through my power point presentation one last time under the unforgiving white of fluorescent lights. This was the day we were to present the findings from our recently completed report on emerging ‘smart and automated technologies,’ which we had spent three months pulling together from a mix of publication analysis and ethnographic interviews with ‘cutting edge’ users who had automated every possible facet of their existence. The walls were covered with posters, post-it notes, photos and illustrations from our incubation period, making ornamental while simultaneously concretizing for our audience the mental labor performed over the past few weeks (Nafus et al. 2010). My stakeholders and colleagues trickled in a few minutes after the hour for our 9am meeting, sipping their drip coffee and making small talk in a half-hearted way, their minds torn between focus on the meeting at hand and incoming emails with to do’s for the week ahead.

“The future is in smart technologies” we claimed with gusto, breaking the lingering haze of the morning with an introduction of the topic at hand. “With an increase in ‘always on’ technology and more connectivity, devices people use will need to get much smarter – adapting to us real time, rather than us adapting to them as they used to.” Transfixed, the stakeholders – a mix of engineers, designers, and researchers – listened on intently as we flipped through some varying statistical projections on the expected growth of this market. “A 40% growth in this vertical over the next 5 years means that as companies around the valley increase the human-like intelligence in the technologies we use, a deeper understanding of the interpersonal relationships that will emerge between peoples and their devices will be more important than ever to understand.”

To illustrate this somewhat nuanced point about a fundamental cultural shift brought on by the development of a new technology, I suggested we “have a look at what the users told us,” flipping over to a short video clip of a man showing us around his smart home. We listened as the thirty something mustached hipster described his Roomba as his most faithful companion. “I think of this little guy as a pet who never lets me down...I call him Stevie...he’s always here waiting for me to get home and seems to somehow ‘know me’ without me doing anything... like I was planning for a party over the weekend and he cleaned twice as long the day before without me even changing his settings.” After a year of cohabitation, and without completely understanding the underlying logics of the system, the metro-jack techie had grown to completely trust the robot to take on a portion of his own cleaning responsibilities, while the robot too had adapted to the man’s patterns, cleaning only while he was away at work or for extra long periods before guests came over. “As you can see,” I announced to the room, “users project relationships onto devices with even the simplest form of algorithmic intelligence...this will only expand and complicate in the coming years as more of these technologies enter peoples everyday lives. It will be our job to make these relationships meaningful, trustworthy, and lasting through smarter design.”

The report out continued unabated in a discussion fashion, as we walked the group through varying models, quotes, videos, and snippets – each format of knowledge dissemination strategic in its shape and form. The report was designed so that our stakeholders could deracinate and take with them the “nuggets” of the research insights to varying corners of the corporation, motivating their teams to design swiftly with our users in mind (Nafus and Anderson 2010). Yet half way through the now ritual report out, I noticed one of our group having some difficulties. A small pale character, fidgeting in disquiet for nearly an hour in the corner finally spoke up,

“This is all great work and I can tell you’ve put a lot of thought into it...but haven’t we done this before?”

“How do you mean?” I asked.

“We did research like this a few years ago with similar results.”

“Did we?” I wondered, “But this is all new research.”

“We did.” He said with confidence.

“Where’s that report now?”

“I’m not sure,” he said. *“Probably deleted.”*

"Hmm, that's bizarre. Are you sure it was the same?"

"The content was a bit different, but definitely similar."

"Shit." I thought, "After all this time and effort, how could this happen?"

"It doesn't matter though" the man said reassuringly seeing the panic in my eyes, "this research shows this phenomena is still happening 'out there' and is something the corporation should clearly address."

"Yes, exactly," I said in relief as the group nodded in agreement, "I would think so."

Despite this moment of disjuncture which could have led to a disavowment of our findings, the presentation went on to a successful completion – meeting its target goals, making people happy, and so forth. Yet something about this event irked me well after the project wrapped up. The comment was by no means the first of its kind, it was in fact quite common. At nearly every presentation I witnessed during my three years at Intel, someone had inevitably ‘seen it’ before in some iteration or other. Did these veterans get some kind of twisted gratification pointing out that there was nothing new under the sun? Or were we indeed ritually repeating work unknowingly – and if so, why?

THE STORIES WE TELL ABOUT OURSELVES...

To better understand how anthropologists are often caught up in the broader structures of organizational flux and the demands of ‘fact making’ when it comes to the (re)production of knowledge in these situations, we must first examine the types of stories or “informed fictions” (Anderson and Bezaitis 2012) that are used to legitimate both our value as anthropologists of praxis as well as our productions. Some of the stories we have refined after years of trial and error, others have been projected onto us by our audiences and their understandings of culture and business – though both shape the relationships we have with capital. In either case, the value of what we do and say is a relative one, mutually (re)defined in crucial moments of contact and negotiation between emic (stakeholders) and etic (anthropologist) groups. During my time as a researcher I noticed a few predominate themes used by each party to legitimate a research project and subsequently the researcher involved.

"My roles have changed a lot over the years, but one thing has remained pretty constant, we're charged with bringing peoples stories from the outside world inside the corporation and showing stakeholders things they might not want to see, but need to...breaking down 'silos' in the process" – Corporate Anthropologist

On the one hand, anthropologists have a few unique claims. We do ‘innovation work,’ which loosely means we bring an outside perspective inside ossified corporate realms (Christianson). This viewpoint may not necessarily be ‘new,’ but it certainly is different from what our stakeholders are used to in that it is both global and provides a theoretically and critically informed perspective rather than a dry data table (Mack and Squires 2011). Anthropologists are storytellers, versed either explicitly or implicitly in the ways of thick description (Geertz 1994), which makes our arguments unique in that they are human and relatable. We claim to be ambassadors (Ortlieb 2010, Mack and Squires 2011), representing and sometimes embodying a particular cultural or “end user” group – from housewives in Mumbai starting a small business, to hyper connected SF techies who have burned out and

live unplugged in the woods – businesses stakeholders value our ability to cut through the often fuzzy nature of culture and distill down the richness we engage with into something that informs their decision making as has long been the case (Cefkin 2010). In this distillation we point out blind spots to the corporation, new markets, and new business opportunities – taking on the subjective world which institutions have a tendency to fear and reject due to their organizational structure and dependence on numbers (MacKenzie 2007; Scott 1998; Kunda 2006; Lampland 2009). Using ethnographic method and varying mediums (quotes, videos, pictures, models, etc.), we make our findings have a scientific and objective ‘truthiness’ that is digestible (Riles 2006; Mazzarella 2003) – an informed fiction that reifies our role as expert (Anderson and Bezaitis 2012, Jasanoff 2004).

“We use ethnographers to help us understand what’s happening in the world of users... usually they help set new strategic product directions and see things before others do... their insights can be invaluable, but their methods are somewhat unorthodox.” – Business Stakeholder

On the other hand, our business stakeholders see us in a similar though slightly different light. We provide a product – insights. These insights are tradable and some have more value than others in the corporate knowledge economy. The insights seem to be predictive of the future – this is fascinating to stakeholders. We somehow can see slightly ahead of other more standard marketing measurements, and can call trends before others can – something essential to staying ahead of the market (Christianson xxiii). Though in fact we draw from our theoretical and field training to recognize new markets emerging, often in places most people aren’t yet looking, or aren’t yet describing in a way that makes sense. This is because we are ‘on the ground’ and like scouts, can often see ahead of the rest of the pack sitting behind the hill. Our insights help bring difference into a system, either for the purpose of driving economic and business change, or for quelling internal political rivalries. We know stuff about users, who are important, because everyone else our stakeholders talk to seem to be talking about them and making money off of them – which is ultimately what our insights are supposed to help do. We do something that looks easy: we hang out with people, talk to them and watch them. Anyone could do this in theory, which makes our authority and expertise suspect (Hasbrouck 2015). Yet usually when stakeholders try to do it on their own, they don’t get the same quality of results. This helps them buy into (at least part of) our expertise and legitimates our presence to an extent. Yet, what we do (ethnography) is hard to quantify by most traditional market research measures, as it comes from an entirely different historical/philosophical root, which makes it divergent from the norm many business stakeholders are used to believing in. Our insights are therefore suspect and hard to fully trust as, like our informants, we remain (in part) outsiders.

Despite the overlap and discord between how each of these groups imagines the role of ethnographic research, they are both mutually constituted through their continued involvement in a broader system of knowledge production that is inherent in the structure of the corporation. Each of these moments of disjuncture and unity come to influence the types of insights produced and how they ‘travel’ within the corporate arena as well as their perception as “new” or “done before.” To understand this, let’s now examine how the industrial research complex works.

THE INDUSTRIAL RESEARCH COMPLEX

I define the “industrial research complex” (IRC), as a set of institutional relationships which demand a continual and fast paced churning out of “newness” in data and insights for decision making that quickly grow stale and lose value the older they become. Like with the production of currency, knowledge production suffers from a form of inflation – the more you produce, the less each piece is worth. This, combined with a fetishization of insights deracinated from their contexts (i.e. snippets), and a cultural obsession with ‘the future’ that runs strong in Silicon Valley (Suchman 2007) results in researchers producing and reproducing ‘insights’ or ‘facts’ to make them ‘new’ again – though their fundamental conclusions often remain unchanged. There are a few tensions driving this system that I will discuss:

- Structural ossification and the need for innovation
- Cultural demand for new data
- Necessary (re)production of “facts” or “truth”
- Devaluation through a form of inflation
- Corporate “filters” that makes knowledge “digestible,” reflecting insider norms rather than outsider perspectives

Firstly, large corporations tend to ossify, as they have “well-developed systems for killing ideas that their customers don’t want. As a result, these companies find it very difficult to invest adequate resources in disruptive technologies” (Christensen 2013; xix). Intel is so familiar with this concept that it even invented a word for this tendency to remain the same and close off from change, ‘siloh-ing’ –it is a symptomatic of bureaucracy (Weber 2006). Yet markets shift quickly and in often unexpected ways that can sweep away large swaths of market share in no time. This makes investment in innovation and research crucial, though hard to justify as it is both costly and runs against the nature of the company to go after big profits rather than “lower-margin appetites that their customers don’t want – until their customers want them...[which is] too late” (xix). Ethnographic research, with its ability to recognize shifts in behavior before traditional marketing tools can quantify (and thus legitimate) these shifts too late for companies to move, is often argued to be a savior to structural ossification (Christensen 2013; xxiii, Madsbjerg and Rasmussen 2014)

Secondly, as researchers within large corporations we face an inherent dilemma – our insights are meant to spur innovation and reveal the worlds outside corporate walls, yet they must always pass through a corporate ‘filter.’ Either implicitly or explicitly what we produce is not a pure representation of the outside world, it is a negotiated truth between two parties. The question is, which truth is more-truthy? On the one hand, we want to ensure our work is valued and goes on to inform decisions that make change happen, which often means playing to corporate cultural norms and the mediums they accept (e.g. snippets). On the other, we also need to maintain an accurate portrayal of the peoples and users we represent. This back and forth is the very “digestion” that can often lead to a distillation of knowledge into generalized pieces (i.e. snippets) that lose their contextual backing and travel freely, taking on new meaning that we don’t intend.

For example, with the smart and automated technology report discussed earlier, most of the primary ethnographic interviews were conducted in the US among affluent ‘tech elites’

with the wherewithal and cultural disposition (e.g. geographical high prices of labor, familiarity with automated technologies, surplus capital to purchase otherwise unnecessary objects, etc.) to participate in an automated economy. These subjects were chosen because they were the only ones currently in the market who could attest to a smart tech user experience. We made an argument that our findings would really only apply to western cultures with similar characteristics as our subjects and that this market – if it were to grow, would happen here first. Yet our stakeholders took these models of explanation and ran with them to justify other schemes, inferring that our subjects were simply “ahead of the game” on an inevitable exponential of global development and that in due time nearly all users would start adopting these technologies – a common solutionist mentality used in the production of varying techno-futures (Morozov 2013). This assumption of course negated many important cultural and economic variables around the world (e.g. labor in India is so abundant that, combined with a historical legacy of the caste system, automation of the robotic sort is likely irrelevant for the masses), yet it ensured that the main points of our research moved forward and were utilized by varying groups across the company – albeit deracinated from the contextual whole of the research findings.

Finally, this didactic is an eternal dilemma for ethnographers of praxis – when the very nature of our insights are turned from a scientific and objective production rooted in a particular context, to a reflection of an internal corporate cultural politic that could be devalued at any moment (Latour 2003). The researcher attempts to “construct order out of disorder” (Lator 2013;253) as a means of explanation. Yet, similar to the way corporations co-opt forms of dissent (University admin source for NSF), insights are made to match the ‘climate’ of the company, rather than reflect objective truths. Should we produce something that is a more holistic representation of the outside – of the fuzziness of culture and the infinite complexity of human behavior – we risk outright rejection of our work because it is too outside the norm, getting feedback such as “it’s too academic” or “too complex” or “can you make this into a one pager?” In these moments we lose traction and value, as our stakeholders recoil from the complex world outside falling back on what they know, conservative business models which provide “quantification of market sizes and financial returns,” causing innovation paralysis (Christensen xxi).

It’s in this ‘digestion’ or ‘negotiated truth’ that the “seen it before” phenomena arises. Findings can become so generally applied as they spread across the company that stakeholders occasionally recognize them as familiar or having been “done before,” despite their actually being new. And thus the anthropologist must endeavor to create new research and new insights time and time again before they run thin – becoming subject to a process of devaluation that mimics inflation: we must keep producing more insights/knowledge as the value of our products slowly diminish. Research is commodity like anything else, and its ‘freshness’ runs the same gamut as fashion – it comes in and out with the flux of the IRC and must be continually updated and remade as new to realize its value. The content may have changed (the locations, the peoples, the questions and hypotheses), but the conclusions that drive change and innovation often remain the same as the corporation has yet to change. This combined with the inherent demands for data and all drive the industrial research complex forward in its churning out of “newness” and insights.

CONCLUSIONS

Anthropologists have a historically tenuous relationship with capital and the stakeholders that represent its needs (Gupta and Ferguson 1997). Capitalists want us most in moments of crisis, and least in moments of stability. We offer a service – we provide new and innovative insights about consumers that others can't, that are especially valuable when stable businesses are in flux. It is a form of power we hold in our expertise, and capitalists recognize this value. Yet, in the same fell swoop they are distrustful of our productions and our methods. Ethnography deviates from the standard marketing quantifications capital is used to taking as "fact." Capital will only believe to a degree that which deviates from the norm it creates. It's as if they're saying, "come throw some ideas at us, and we'll tell you which ones are right, because we know best" – giving value only to those insights which affirm their own hypotheses. This nullifies the work of the researcher and makes it a subsidiary part of a pre-ordained self-fulfilling prophecy, putting the anthropologist in an awkward prostitution-like position. Capital is in conflict about having to change – it likes to stay the same and doesn't have the gall to move though it knows it must eventually. So rather than acting and making real change happen, research is brought in time and time again to temporarily pacify the system rather than addressing the root cause of the problem – structural stagnation. This is similar to the phenomena of committee making to delay action, though in this case research acts as the catalyst for apathy. As discussed by Dubrin,

"management sometimes has a legitimate need to delay action on a problem and a committee is a useful vehicle for postponing action. For instance, if management feels pressed to take action about alleged sound pollution from its machinery, a committee can be appointed to "study the problem." By the time the committee is ready to make a recommendation, the management may be in a better financial position to take corrective action on the pollution problem." (2013; 215)

Rather than overt committee formation, in this case research is the vehicle through which corporate actors can further stagnation, using it to validate their own conclusions – keeping the system the same. Yet anthropologists also participate in making this relationship continue, we use these moments to call attention to the same issues that are postponed by stakeholders. Our job to point out problems and warn of impending changes in user behavior has not changed, and so our participation in this relationship creates an uneasy alliance between the anthropologist and capital – our intent to keep pushing for change, while the system we push rebels. In this we are afforded an opportunity to exorcise our talents though our productions become supplementary or "nice to have" rather than essential. This can be hard to face as a researcher when it comes to finding personal value and meaning in one's work, especially as work can be all consuming (Gregg 2014).

What are some things we can do to shape this relationship and our value for the better? Ortlieb discusses the didactic of validation between "knowledge buyers" and "expert providers" positing that the growth and general acceptance in the business community of "culture" as an object to understand will be a long term boon to the field (Ortlieb 2010; 202). I would agree that culture is now here to stay, though the negotiation of how culture 'sticks' and what culture becomes when appropriated by the corporation will continue to be an ongoing challenge as anthropologists press for particular kinds of validation and change.

We can certainly continue to work alongside our stakeholders very closely, getting buy in and understanding from the beginning of any project to make sure that they're with us on our journey of learning from beginning to end. This often eases much of the educational and

decision making process down the line. Though perhaps producing research alone is no longer enough. We must go entirely native and become the business stakeholders whom we service – erasing the didactic. By having more individuals with anthropological backgrounds in decision making business positions, we may have a better chance at maintaining an accurate representation of ethnographic work and making change by better reflecting the world outside – having more power to make capitalism better, rather than exploitative. Many of us, in some ways, have embarked upon this very path already by entering the realm of management or by breaking off and forming our own companies. Others have made lateral moves to new realms of influence by leaving the field industrial praxis for work in governments, NGOs or the academy.

Answers to this problem are never simple. They are epistemic and evolve at the confluence of historical coincidence, affinity, and necessity (Knorr Cetina 1999). They are always contextual, individual, and in flux. They require keeping a pulse on the industry and the ways our value shifts over the years – inventing the future as we go. Perhaps the best thing we can do to find solutions is to get together, drink, and talk – here at EPIC – comparing notes, understanding each other and ourselves as we strategize what’s next for the field.

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Autonomous Vehicle Study Builds Bridges between Industry and Academia

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Researchers have long explored the desirability and benefits of industry-university collaborations and acknowledge they can be fraught with difficulties. We examine one such alliance, focused on driverless cars, a current hot topic in the public imagination and in technology design. Our collaboration began as an alliance between two anthropologists, one a professor at the University of North Texas, the other a consultant with the Nissan Research Center in Sunnyvale, California. We designed a research project for a design anthropology course that Christina Wasson taught in Fall 2014. Brigitte Jordan, at the time, was conducting an informal ethnography class for engineers and computer scientists at NRC. Our alliance had two objectives: to determine what a successful industry-university collaboration could look like when it involves ethnographic research in the high-tech sector, and to provide insights into usable ethnographic methods and data that would support social and cultural questions in autonomous vehicle (AV) research at the Nissan center. We found these two geographically separated classes eventually allowed building bridges across academia and industry, anthropology and engineering, leading in the long run to some softening of the boundaries between the two disciplines. Here we discuss significant variance in the research cultures of class participants at UNT and NRC (ethnographers and automotive engineers), and the various manners in which these differences were bridged over the course of the project (or not, as the case may be). We explore factors which inhibit or encourage exchange between university and industry micro-cultures, consider reasons for the success or failure of such projects, and offer suggestions for improving future collaborations. We end with ideas about what a model for productive industry-academia collaboration could look like.

The robotics stuff is easy. What is difficult is the human stuff. (Robotacist)

INTRODUCTION: QUERIES AND POSITIONS

Autonomous cars. Driverless vehicles. The driverless car is clearly one of the most exciting, portentous, implication-packed developments in the current media generation's basket of historical events. It raises deep questions about an impending round of cultural and socio-political changes that will outshine and outclass those generated by the arrival of Mr. Ford's Model T in 1908.

Imagination is running high in public media and hallway conversations. Social encounters are full of imaginings: What would it be like? Could it drop the kids off at school without me? What if there is an accident? Who or what would take over? Can you hand control of a crashing car back to a driver who is blissfully zoning out? Could we get one for my father who is half blind?

As the staff writer of a popular magazine put it so eloquently, with a looming legion of aging hands behind the wheel, skill atrophy is seen as a real risk. At the same time, economists warn that the end of a century of private car ownership would send shock waves through the economy and society at large (Dudley 2015). There is fear of robotic cars, of technology running amuck, of unknowable consequences, and at the same time elation, joy in anticipating liberation from being tethered to a place as is often the case for aging people and those with disabilities, liberation from endless hours of searching for a parking space, and in general the joys of being freed from many of the limitations imposed on us by our current transportation system.

There are many bridges to cross, many boundaries to overcome before the fear/hope barrier is breached, in automotive design as well as in public and private minds. So how do we get from here to there? We are suggesting that the best way (or at least one good way) of doing that is to look at our current attitudes and practices about cars in order to explore where the opportunities for crossing and connecting lie.

We might ask a simple question as did a group of automotive designers, who wondered: “What are we actually talking about when we talk about driving?” With this question in mind we carried out a project, the Social Life of the Car (SlotC), to explore how ethnography and design anthropology could help us see how we might pass from our present to a future AV state, particularly looking at the relationship between industry and academia, in our case represented by a Silicon Valley high-tech research center and a university class in applied anthropology. The goal of the project was to better understand current driving practices to see how they might portend ideas about the autonomous vehicles of the future. The project involved ethnographic research by a class of students under the mentorship of their professor Christina Wasson, with guidance by Brigitte Jordan who as the “client contact” was the deeply involved liaison to the Nissan Research Center in Silicon Valley. Jordan had begun a series of ethnographic modules to members of the Lab community in an informal course that LabPeople attended as they were able to, with varying degrees of involvement and accomplishment.

The interactions we observed throughout the project in many ways could be seen as an ongoing conversation between industry (in this instance mostly the Nissan Lab) and academia (here the UNT class) to describe and make sense of the exchanges between the cultures of “LabPeople” (initially mostly through Jordan) and “ClassPeople” (with Wasson holding a special status as professor).

Introducing the Class: University of North Texas as an Example of Academia

The UNT Department of Anthropology offers a strong launching point for a bridge from academia to industry because it has an applied focus. All faculty conduct applied work, and the master’s program prepares students for careers in practice. The department explicitly subscribes to the view that theory and practice are closely intertwined and this interdependence shapes the design of the master’s program. In the design anthropology course, Wasson combines aspects of a traditional class with features of a consulting project (Wasson and Metcalf 2013). It is like a conventional class in that students read and discuss relevant literature; they receive grades from the professor; and the timeframe parallels the official semester. It is like a consulting project in that all students work together on a research project for an industrial client. Wasson has taught such courses for 16 years.

Introducing the Lab: the Nissan Research Center in Silicon Valley as an Example of Industry

The Nissan Research Center in Silicon Valley (NRC-SV) is a high-tech automotive research laboratory where engineers, computer scientists, roboticists, automotive designers and data specialists work on designing the autonomous (driverless) car of the future. It is in many ways similar to a series of competitive automotive industry labs popping up in Silicon Valley. The Lab knows that plans for the cars of the future need to address not only technical aspects of car design but also the important, non-technical, human-focused features that make cars truly desirable and useful for people. NRC, under the leadership of its director Maarten Sierhuis, is unusual among automotive technology labs in that it takes ethnography and design anthropology seriously as ways to make human-centered technology design possible. As a matter of fact, a well-known Lab roboticist told us: “The robotics stuff is easy. What is difficult is the human stuff.”

Jordan, a consulting corporate anthropologist, has been working at the Lab as an advisor on ethnographic methods and approaches, charged with supporting the “H” in HMI (Human Machine Interaction and Interface) by instilling ethnographic and people-based thinking in the Lab’s tech community. She had started to teach a weekly course there on ethnography and design anthropology earlier in the year.

Introducing the Class Project: The Social Life of the Car

The class research project on the Social Life of the Car (SlotC), was intended to take a first step toward understanding the human dimension of the human-machine interactions that constitute the driving experience. What do cars mean in the lives of drivers and passengers? How are they embedded in social relationships? How do drivers interact with the dashboard, the road, pedestrians and passengers?

In the fall of 2014, 18 students signed up for Wasson’s design anthropology class to investigate what drivers actually do when they are driving. In teams of two, they accompanied 9 study participants on some of their routine drives, observing and video recording their activities. They carried out pre- and post-driving interviews, also recorded, resulting in three data sets for each of 9 drivers. These data were analyzed in a largely collaborative process in which teams pooled detailed fieldnotes written from their recordings and analyzed them for shared behavioral patterns across the 9 drivers. (For details, see Jordan et al. 2015, Wasson et al. 2014.)

The research design was constructed by Jordan and Wasson who together thought through how to manage this project towards success, in spite of stiff pedagogic requirements on one side and unstated, ill-defined desires from various stakeholders at the Lab on the other. A major advantage was that they knew each other well and were familiar with each other’s work. Jordan had taught at a large university for many years before turning to high-tech work and Wasson had worked as a consultant in high-tech companies before entering academia.

The overcoming of boundaries through bridges or other means (such as fusion, decay, or intentional tear down) has been discussed from a variety of different perspectives, such as digital formations (Arthur 2011), (socio)digitization (Latham and Sassen 2005), blurring

(Jordan 2009) and more. Here we will use the idea of bridges both metaphorically and in the sense of physical, organizational and ideological structures that provide mutual accessibility, a crossing, a passage from one side to the other, while carrying all manner of “things” including people, ideas, news and objects such as video recordings and pizza slices.

In the following pages we look at the SlotC project reflected against internal teaching efforts carried out by Jordan at the Nissan Lab around that time, as they build bridges in a world of disciplinary silos (Tett 2015). Where the cultures of academic anthropology and engineering are separated by strong and well-honed boundaries but connected by bridges in many stages of construction, these kinds of industry-academia collaboration generate not only exciting possibilities for students. They also build bridges for professional disciplines and socio-economic organizational structures such as industrial laboratories and university pedagogic/entrepreneurial institutions, often in bricoleuring fashion, that can accommodate the needs of these different territories and -scapes.

AN INTERLUDE: THE CULTURE THING

Culture Defined

Yes, like it or not, if you are an anthropologist, even a design anthropologist, you have to talk about “culture” – whatever that is. We’ll skip over our anthropological ancestors who established the foundational definitions (but see Kroeber, Stocking, Boas and Geertz in Wikipedia), and find one that works for us.

Culture is one of those slippery notions that get attached to phenomena that are volatile, not easily measurable, kaleidoscopic, and as such are forever dependent on research direction and definer’s intent for taking on their local meaning. As a consequence, there are many definitions of culture. For our purposes, we might define it simply as a system of experiences we share with other members of the social groups within which we live, resulting in similar patterns of behavior (habits) and ways of thinking that are, to a large extent, subconscious, unexamined and unquestioned.

With this definition, it is easy to see that all of us are multicultural, that we carry with us multiple cultural systems consisting of micro-cultures of varying importance that are shared to different degrees with others. They are activated in different situations and for different purposes.

How do we acquire culture? We start learning a variety of cultural systems beginning at birth and continue to gain new ones throughout our lives. These early, repetitive experiences shape a “worldview”, deeply ingrained expectations for ourselves and those around us. They determine accepted forms of behavior, modes of thinking, the shape of artifacts we like, the kinds of functionalities they are expected to exhibit, as well as general likes and dislikes, from food to cars to marriage partners. Thus we may speak of organizational culture, bathroom culture, soccer culture, driving culture, designer culture, and more. Micro-cultures are changeable and shapeable through new experiences, including persistent teaching. That is how disciplinary cultures are formed. Plainly, interaction and cross-communication is easiest if individuals have at least some micro-cultures in common.

Disciplines as Cultures: Anthropology and Engineering

How do LabPeople and ClassPeople acquire such different worldviews? A major contributor is their “formation”, their disciplinary upbringing (Knorr-Cetina 1999). Anthropologists typically develop their skills through years of graduate education that includes immersion in fieldwork and a professional environment that is shaped by their professors and their cohort. They are taught in small groups by experts in a process that emphasizes heavy reliance on qualitative methods and is characterized by an ideology of participant observation, personal involvement, and natural experiments. For them, problems are always multifaceted and open to multiple solutions.

For people coming from engineering and the hard sciences on the other hand, problems tend to have single answers. They subscribe to an ideology of scientific experimentation that involves predetermined variables and statistical hypothesis-testing of quantitative data. They tend to see themselves as impartial scientific observers – almost as data collection machines that document sites, events and interactions objectively rather than as participant observers, continuing to attempt to embody the ideals of the deductive, laboratory science that had established their identity (Jordan and Yamauchi 2008).

We become aware of how culturally contingent our existence is when we find ourselves with people who did not experience the same enculturation process. All of a sudden things don’t work well anymore. They just don’t see things the same way we do. They don’t know that when we ask for a report we expect a story and not just a naked set of slides.

It is these kinds of cultural differences that maintain disciplinary silos. Crossing the distances between them requires generating and supporting new micro-cultures that allow exchange and mutual adaptation that can lead to some form of mutual appreciation and even collaboration – an approximation to a shared state where the borders slowly become more permeable, where common grounds and a common language can be established. For us, in the liminal space between business and academia, teaching emerged as a major way of supporting and tracking the emergence of bridges and flows between the silos.

TEACHINGS BUILD BRIDGES

When Cultures Clash

When discussions between hard scientists and social scientists turn from a casual, friendly conversation into something that sounds more like a defense of national treasures, we are witnessing a battle between two disciplinary micro-cultures, each with its own entrenched arguments. There is no way to resolve these issues during corporate-sponsored hamburger lunches. But in cross-disciplinary encounters like the SlotC project, there is hope of superseding the disciplinary sparrings with increasing understanding and appreciation (though not necessarily adoption) of the others’ point of view. How did this play out for ClassPeople and LabPeople? What was the state of mutual understanding at the beginning of the semester?

How the Students Saw It

The students in Wasson's class had a mission. They initially imagined that they would be showing the computer scientists and roboticists at the Lab what an anthropological approach to their problems would look like and what recommendations it could produce for the design of autonomous vehicles. There was an instructional intent clearly present in the students that was a major contributor to their wild enthusiasm and contagious dedication to the class. With their professor's guidance they would be able to come up with findings that would be valuable contributions to the development of Nissan's driverless car of the future. At the same time, they had no idea of how ideas get into a product nor of how long it takes to get a car to the market. They did expect that their design implications would be of active interest to their counterparts at the Lab.

How the Lab Saw It

Most engineers at the Lab did not have a history of engagement with anthropology or ethnography before Jordan started working there. In order to familiarize them with concepts and approaches basic to design anthropology, Jordan had earlier initiated a weekly course on ethnographic methods. Through the conversations that emerged, some engineers began to become somewhat familiar with vocabulary, methodology and basic philosophy of ethnography, at least at the verbal level. After six months, some of them began to grasp what participant observation is, that interviews and observations carry different kinds of bias or that what people say and what they do is not necessarily the same. But they were barely aware of the SlotC project and what the students in Texas were doing. Nor did they care much. SlotC sailed under cover.

Nonetheless, awareness of Class research activities did slowly creep into consciousness at the Lab, primarily through Jordan's class lectures and conversations, even as news about Lab engineering realities began to seep into ClassPeople's awareness through the class sessions Jordan attended remotely. Awareness gained momentum as issues and later tentative outcomes from the project emerged, discussed in depth during and after Jordan's three trips to the university. Still, for quite some time it was unclear what the SlotC project might mean to the Lab and what if anything it might be able to contribute to the objectives of the Lab, its designers, and its decision makers.

The Flows of Teaching: Push and Pull

As time went on, we slowly began to witness not only occasions where students on both sides came up with insights about the other side's work, but also an increasing understanding about complementarities rather than oppositions. We saw that the border crossings we witnessed were happening in two-way flows: one going from the Class to the Lab (anthropology culture to engineering culture) and the other going from the Lab to the Class in a mutual process of rapprochement. So when we talk about teaching here, what we really mean is flow, flow formal and informal, physical and immaterial, real and virtual that crosses borders by push or pull. Formal teaching produced the active, intentional information push that certainly happened in Wasson's and Jordan's classes, but we would maintain that it was the largely invisible pulls on knowledge and practice that students and LabPeople exercised on each other that made for successful bridge crossing and jumping (as the case may be).

There were multiple informal exchanges over the internet and at professional conferences that built bridges through the focused efforts of student researchers who sought out LabPeople and vice versa. These informal flows were definitely a major factor in softening the boundaries between Lab and Class. We consider it quite likely that the relative absence of informal flows contributes to the failure of a large number of joint industry-university projects, since it seems to be the informal that carries the joining of imaginings from both sides and the building of strands of shared micro-cultures.

Tracking Success? Some. Maybe.

Throughout the semester and beyond, an important question was: how can one assess the effects of teaching efforts in complex situations of this kind. Is there a softening of boundaries? Is there an increase in mutual appreciation? Is there a difference in language? We tracked indicators of change, vague as they might be.

Well into the project, Jordan did detect a certain change in atmosphere or attitude at the Lab. She noticed that on (rare) occasions anthropological expressions and concepts appeared in conversation. It felt like awareness of both SlotC and her internal ethnography course rose. Previously, while there had been a general acknowledgement that yes, the social is as important as the technological in the Lab, this had not been expressed in official and semi-official channels, relevant to strategy. But now there were some indications of a new tone in the communications the Lab leadership prepared for presentations to the company leadership. At some point the Lab Director began to speak about ethnography as a competitive approach that distinguished his lab from others in Silicon Valley, something we felt was a notable advance in appreciation of design anthropology. Pictures from class sessions at UNT and the internal ethnography course began to appear in drafts of presentations. Similarly, once UNT students had completed their final report, the public relations function of the university began to take notice of the project (Bird 2015).

There is no way of assigning cause to these changes but as the SlotC project ended with a talk by Wasson at the Lab and a joint workshop on video analysis there was a definite shift from almost complete absence to an emerging awareness of ethnographic methodologies as a legitimate and potentially useful way to approach design issues. A bridge had been built, a divide made less deep.

BUILDING BRIDGES THROUGH METHODS

One of the distinct differences between the way industry and academia look at the world is in the methods they use to support their views. There is no part of their relationship in which the gaps are wider, the chasms deeper, the bridges more urgently needed than in methods. How did we encounter that in the SlotC project? While we did not expect eye-catching changes in the short period of this research, we hoped for indications of a softening of the boundaries, perhaps a gentle rapprochement. Or even a discussion thread that could lead into the future. Was there anything about the Lab and Class methodologies that might generate dialogue that might actually mitigate some of those disciplinary boundaries?

The core methodologies used by industry and academia are radically different. Lab research culture, as noted, was shaped by an approach that involves predetermined variables and statistical hypothesis testing of quantitative data, often experimental or survey based.

And then there was the simulator. Picture a group of roboticists and computer scientists working in a closed-off section of the Lab, programming algorithms that simulate the autonomous car of the future and test its behavior under various kinds of conditions.

For ClassPeople, the simulator was a mythical object, existing mostly on the level of rumors. They themselves used basic ethnographic methods for data collection and analysis with heavy reliance on human-centered participant observation. They relied on field- rather than laboratory studies and favored a grounded process of developing variables of interest within ongoing research rather than specifying them in advance.

The differences centered around researchers' self-image, as outside scientific observer for LabPeople vs. engaged participant for ClassPeople. Accordingly, Lab researchers saw their discipline as a deductive validating science while Class researchers felt part of an inductive exploratory or discovery science (Whalen and Whalen 2004). It was these almost religious differences between the two groups that needed to be bridged in some way.

Actually, as connectivity between LabPeople and ClassPeople increased and information about the other side became more available, the methodology gap became more apparent and more talk-aboutable. Conversations turned to examining epistemological differences and their effects. They asked: what does a survey get you in comparison to a field study? At the Lab, engineers attending Jordan's methods class were dealing with bias in interview and observational data and were particularly eager to understand how bias in ethnographic work compares to the biases inherent in surveys.

And they began to see the relevance of the ClassPeople's video analyses. LabPeople came to appreciate the fact that video eyewitness reports, translated into digital form in time-stamped post-event fieldnotes, could address emerging issues of quantification, data distribution, and identification of drivers' behavior patterns. One outcome of these discussions, sporadic and fragmented as they were, was a growing admission that the other side's methods might be useful under certain circumstances and for certain purposes.

Indeed, video documentation was the backbone of SlotC methodology and crucial both in analog form for questions of veracity (did they really do that? did they really say that?) and digitized as a large data base for the analysis of activity patterns and was of greater interest to the engineers than all other methods used in the SlotC project. Video, as an approximation to "reality" (even in its street meaning), allowed ClassPeople to substantiate their claims to "what really happened". It seemed LabPeople began to think of the recordings as a more "objective" data stream, maybe objective at least in regard to such things as what follows what, who talks to whom, or did the driver keep a hand on the wheel at what time, all highlighting the advantages of participant observation. LabPeople discovered one of the most important affordances of video is that it allows counting and often measuring (how far can a driver reach without looking?), providing behavioral details valuable for assessing drivers' activities quantitatively, which in turn can connect ClassPeople's ethnographic work with ongoing Lab research by providing input for simulations and experiments.

Interestingly and unexpectedly, out of these discussions came ideas about using social science methods for exploring the community of model-building computer scientists and roboticists hanging out with the mysterious simulator lurking in a locked back room in the Lab. It might be interesting to do a study, perhaps, in the form of the seminal SST' (Social Science and Technology) Studies of scientific labs of the 80s, in order to better understand their worldview, including their disciplinary beliefs, attitudes and practices (Latour and Woolgar 1986).

The stridency around core disciplinary superiority decreased further. As the groups learned of the other's methods, it became clear that much of disciplinary ideology looked different in practice. For example, ClassPeople found out that Lab experiments sometimes did include communication between researcher and "subject", protocols were not always adhered to, and interview questions could be rephrased when common sense indicated that necessity. By the end of the semester, it had become increasingly clear that both sides use experimentation as a way to find out about the state of the world, and that the natural experiments of social scientists and the experimental investigations of the Lab engineers can deliver complementary information for sociotechnical issues. And so one of the major results that emerged from this project was a (somewhat) shared understanding that there are methods used by both sides that are sufficiently similar that they provide an opportunity for thinking jointly about some of the research and design issues the Lab faces. Any of their methods, on either side, could be an anchor point for a new bridge. But for success these bridges need to be designed and built in a socially engineered landscape of teaching and practice that brings people and ideas together.

CONCLUSION: A MODEL FOR SUCCESSFUL INDUSTRY-UNIVERSITY COLLABORATION

High tech research labs share with academic institutions a desire for some kind of close connection that would be beneficial to both sides. What would a model for successful academic/industry collaboration look like when it involves ethnographic research and the development of radically new technologies? Although there is a large literature on academic/industry collaboration, it mainly addresses rather different contexts and goals; and the overall conclusion seems to be that much collaboration is not particularly successful (Baba 1988; Freitas et al. 2009; Gulbrandsen et al. 2011).

Our paper contributes to the existing literature on university-industry collaboration in that there are few studies of culture change in either the industry or academic partners as a result of such engagements. Furthermore, there seem to be few prior studies of student projects for industry, even though these are quite common; most studies focus on faculty interactions with industry (Freitas et al. 2013; Perkmann et al. 2013; Wasson and Metcalf 2013).

The existing literature identifies strong personal relationships and trust as key factors for success. These relationships require mutual understanding and a common vision for the benefits that can be derived from the collaboration (Dowling 2015). Our experience agrees with this statement. The relationship between Wasson and Jordan was indeed central to the success of the SlotC project, because it formed the bridge that allowed ClassPeople and LabPeople to travel between two worlds.

Success in relationships between industry and academia has typically been assessed by examining the projects or products being developed (Gulbrandsen et al. 2011). But we would extend this model much further by arguing that the success of a partnership lies in the mutual culture change that is stimulated: the shifts in habitus that support building bridges between different disciplinary micro-cultures. These occur within each of the two groups when they come into conversation with each other that increases understandings of the other group's perspectives. Such cultural shifts can be strategically encouraged through the types of teaching activities portrayed in our paper.

With insights developed from the SlotC project and drawing on other collaborations in our experience, we would advocate reframing the whole concept of industry-university partnership from an instrumental focus on product outcome to a cultural focus on the bridge building, the mutual learning and exchange connections that can be encouraged in both groups. The pure outcome model tends to suffer from product idiosyncrasy and issues not only in impoverished relationships between the PIs but also from difficulties in transferring results. By contrast, in our culture-change model the very focus on the act of building bridges produces the means for ongoing collaboration and exchange.

When Jordan and Wasson first embarked on exploring the question of cars and driving from an ethnographic point of view, the objective was simply to explore ways in which ethnography and design anthropology could contribute to strengthening the human experience, the non-technology focused aspects of AV design. We knew that designing the driverless car of the future would be at the same time stupendously difficult but also fabulously interesting.

Meanwhile we have learned a lot – not only about what we might be talking about when we talk about driving now and in the future, but we also have come closer to specifying some of the crucial characteristics for a successful model for industry-university collaboration. In the end, we now have a better understanding of which issues are generic and which were idiosyncratic to our own situation and the particular people involved. And so we now know a lot about what we would do differently.

Therefore, the vision we propose for future academic/industry collaborations is to encourage further bridge-crossings as a main feature that can lead to culture change, an opening in the habitus of both partners. Such bridges may link universities and labs, as well as anthropologists and engineers, through class projects and other means. We would suggest that to cross the boundaries means establishing and supporting the growth of new micro-cultures that allow exchange and mutual adaptation leading to some form of mutual appreciation and even collaboration - an approximation to a shared state where the borders slowly become more permeable, where common grounds and a common language can be established.

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Knee Deep in the Weeds—Getting Your Hands Dirty in a Technology Organization

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For many months our organization had us performing “technical grunt work.” Upon reflection, getting deep into our company’s technological system put us in the unique position of understanding, at a much finer level of detail, the entire assemblage of people, objects, systems, and organizations that make up the world that this technology is becoming a part of. Our paper recounts how we eventually recognized our engagement in technological grunt work as participant observation and how it enabled us to better contribute to decisions about how the technology should work, present itself to users, and be sold. Further, we reflect on an expanded notion of what constitutes the field and fieldwork in corporate ethnography.

INTO THE WEEDS

At eleven on a Tuesday night, we found ourselves hunched over computer screens counting boxes. We were back at the hotel after a hectic day on the floor of a huge yearly retail conference. New York was cold, and the walk back from the Javits Center meant navigating walls of commuter buses making their way from the Lincoln Tunnel to the Port Authority.

The boxes we were counting were generated by a computer vision system developed by our company. They lay over a panoramic image of retail shelves showcasing an array of toothpaste. Each rectangle indicated an instance of toothpaste having been recognized by the algorithm. Grading the recognitions by hand, checking which recognitions were correct and which weren’t, we aimed to understand how well the algorithm was performing and the kinds of problems it was running into. To do this scoring well we had to know the shelf cold, which meant that over time we’d memorized package details, flavors, sizes, and placements. Scoring was grunt work, painstaking and technical, and we were making mistakes, starting over with our chicken scratches more than once.

More concerning, scoring was giving us a very warped perspective on the world. We found ourselves getting excited, cheering, when the algorithm recognized a tricky package, and we were obsessing over why certain products were always in the wrong spot on the shelf. Outside of work, products were like minor celebrities for us, providing a little thrill when we spotted them “in the wild.”

When we were deep in this scoring work, we felt like we were lost in the weeds. We were having a hard time reconciling why we were doing this kind of work, why this work wasn’t being handled by people who are more meticulous, more technically minded. In the depths of scoring, particularly on that night in New York, we felt we’d lost our way. Our team didn’t believe they needed more research on end users or stakeholders. They needed help on testing algorithms and making pictures of products. This work had to get done, and we were available to do it. So we did.

Eventually, however, we found a way back out of those weeds. Soon after that night in New York, we began to realize that what we had learned in scoring enabled us to better contribute to decisions about how the technology should work, how the broader service should be designed, and how the service could be sold. We recognized the value of that foray. Because of having been in deep, we were in the unique position of understanding not only the people who will use the system and engage with the frontend software, but a great deal more, and at a much finer level of detail, about the entire assemblage of people, technologies, and organizations that make up the world that this technology is becoming a part of.

We started to recognize that scoring wasn't separate from our "real job." It took the two of us a while to realize that even those weeds should be considered the field and our trudging around in them fieldwork. This paper's about our trip into and out of those weeds.

THE STORE SHELF

Consumer goods manufacturers spend approximately US\$200B a year in the United States. Half of that is spent on advertising across all media channels—commercials, banner ads, etc.—sometimes called "pull" marketing since it's intended to bring people into stores. The other half is spent on what's called "trade promotion" or "push" marketing, intended to forefront products once shoppers have made it to a store (or web site) and are considering among a variety of products to purchase. Trade promotion can include things like coupons, store initiatives, special cardboard displays, and prominent placement on store shelves.

Lots of trade promotion money and effort goes into ensuring that the right mix of products is presented in the right array for shoppers at stores. The right mix is, simply, one that will optimize sales for any specific location. Retailers, manufacturers, and distributors collaborate and negotiate to create product assortment lists for each store, and those can be represented in a variety of ways. For many retailers, the final product assortment agreement is formalized in diagrams called (with mid-century marketing flair) plan-o-grams. Planograms lay out, visually, which products should be on a store shelf and which product should be in each position. Once a planogram is designed, the store shelves are configured to the planogram and are kept in this particular configuration, more or less, until a new planogram is created, anywhere from six to eighteen months later.

A combination of workers sets up and maintains the shelves over time. These workers include retail store employees but also manufacturer employees and "retail execution representatives" who are employed by third party sales and marketing agencies on behalf of manufacturers. These employees, also called "merchandisers" or even more commonly "reps," typically visit a large number of stores in a month across many retailers to make sure their manufacturer's product is properly stocked and displayed.

In the past, planograms were defined with little variation across a chain's locations. In recent years, planograms have proliferated with tuning to demographics, store size, and shopper behavior that approaches 1:1 store-level customization. In that environment, it's unrealistic to expect a rep to keep track of the specific details of every planogram. Instead it's more common for them to use a broad-brush approach, making sure that the shelf basically looks okay: The manufacturers' products are clustered, important sub-categories are in a block, value items are on the bottom shelf, and tall and premium products are up top.

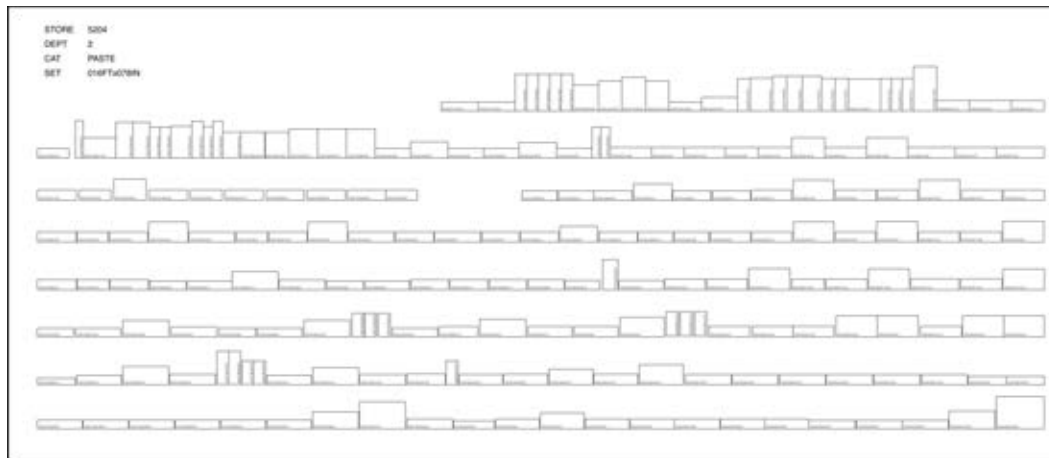


Figure 1. Example of a planogram.

Our company is building a system that is designed to help merchandisers, and ultimately the manufacturers they work for, see and make sense of the shelf in fine detail. Using proprietary computer vision algorithms, the system enables a rep to make pictures of the shelf with a smart phone. The system then assesses which specific products are present on the shelf and which are not and flags problems that the rep can correct in the store. We call these flagged problems “user instructions.” The system can also produce reports that teams at manufacturer’s headquarters can use to monitor store conditions and improve future plans. We call these reports “shelf intelligence.”

FIELDWORK

Before we began the scoring work, we conducted what you might call traditional field research to understand the end users and partner stakeholders who will be engaging with our company’s technology. We did all the normal things—interviews, observations, and secondary research—trying to understand the workflows that have an effect on the shelves and the people who are involved in that work.¹ We spent dozens of hours in grocery stores, pharmacies, and big box stores where we observed and talked with workers. We “slung freight” with the night shift, and we trained to do shelf resets. We shadowed merchandisers, and we interviewed store order clerks, reset workers, direct sales and delivery reps, stockers, and auditors. We met with people who work at retailer and manufacturer headquarters including space planners and category managers. We synthesized this research and were able to report with confidence how the complicated world of retail execution works, for example, how planograms are made, how product assortments are chosen, who uses space planning software, and how retail execution agencies work. We could describe the day-to-day jobs—the workflows, tools, priorities, and challenges—of the people who might one day use the service we were building. We understood the workers’ and their managers’ priorities, and the kinds of values each of them brought to their work.

All that field research proved very useful in making sense of the space. In particular, it enabled us to plan the front end of the system being developed by our company. We helped design interfaces for the mobile app, and we helped define how our system connects to the

other systems the reps rely on to get their jobs done. It also clarified the kinds of marketing and training that would allow reps and their managers to understand how the system could help them and how to use it. Taken together, what we thought of as typical ethnographic work helped us figure out how the solution interfaced with the human world—how it presents itself and how we explain its purpose and value.



Figure 2. Workers throwing freight.

SCORING

The system we’re working with is sophisticated. Several algorithms and other modules work together to allow raw images to be converted into structured data, and finally into instructions to workers. Calling that large system an “algorithm” or an “app” doesn’t do it justice, but we use those simple terms as handles to make it easier to talk about.

Similarly, when we tried to make sense of the behavior of the algorithm, we used a simplified model to talk about it. We used pseudocode² in conversations between ourselves, and with technical colleagues, to step through algorithmic processes in plain English. We talked about internal processing at a high level, in terms of data being passed between modules sequentially. We did not trace specific transformations of inputs in real code since we can’t read real code.

In that spirit, we will describe the technical pipeline. First, an optical image is captured with the phone’s built-in camera. The image is encoded as a JPEG, uploaded to our system, and processed using a number of patented and proprietary methods. The images are distilled into structured data including Universal Product Codes (UPCs) and positions, and compared to planograms. Finally, the system outputs instructions to workers like: “This item seems to be missing from the shelf.” While this description of the system is simplified, it is in fact

appropriate to conceive of the algorithm as procedural, as a sequence of modules that each process inputs into outputs.

The scoring work that we were engaged in in NYC and over the months before and after was a manual assessment of the performance of each stage of the technical pipeline that made that image-to-data transformation possible. Our evaluation of the system proceeds in the order of the pipeline, because problems at each step can precipitate bigger problems further down the line. These are the main evaluations we did during scoring.

Image capture. The first step is to determine the quality of the images captured by the rep. The images need to cover the entire shelf, with enough overlap and without too much tilting or distortion. Our mobile UI library guides the rep in getting good images, but image capture can be challenging, especially for newer users. Truly bad images are simply unusable.

Recognitions. We judged each recognition—each box on our screen—for whether the system correctly identified the product; we marked each of these as either “correct” or “incorrect.” We also made note of when product on the shelf were totally missed by the system, not recognized at all.

User instructions. Finally, we scored the instructions for fixing the shelf that the system generated and displayed to users. The basic question here is, “Is the system telling the rep about a real problem that needs to be fixed?” User instructions were scored as either good or bad.

Evaluating image capture is a straightforward heuristic assignment. Assessing image recognition and user instructions involves more complicated and time-consuming tasks; it is these tasks that we refer to when we talk about “scoring.”



Figure 3. The store shelf. White boxes identify each recognized product.

Interpreting a recognition requires zooming in on a large stitched image, one that may be a bit blurry or contain image processing artifacts. Because products from the same manufacturer tend to look similar (also known as branding), identifying a specific UPC by eye is pretty tricky. For example, every Crest premium product is purplish with dark and light gradient patterns. But is a particular product 4.0-oz or 5.5-oz? If we can confirm the size of its neighbor, we can probably make a good guess. Is the flavor Arctic Fresh or Cool Mint? To answer this question we had to decipher the subtle color difference between the two. Scoring recognitions required iteration, crosschecking, getting second opinions, and a

whole lot of squinting. As we became proficient at this detailed scoring work, we developed a great deal of domain expertise. It became a kind of organizational competence, one that we got better at over time.

To score user instructions, we had to first score the true conditions of the shelf by hand. We carefully examined an image of the real-world shelf and compared it, item by item, to the shelf's planogram to understand which products were actually missing or misplaced. Then, we compared our hand drawn user instructions to what the app generated to determine which aberrations from the planogram our algorithm was catching and which it was missing. In order to understand why misses were made, we examined each false positive and each false negative in relationship to our product recognition scores. We leveraged our understanding of how the technical system worked to understand how the system "saw" the shelf.

Fieldwork at the UPC Level

Because the individual objects on the shelf are the unit of analysis that the algorithm engages with, the scoring work enforced a fine attention to those objects, more than we would have paid otherwise. We found that studying the material culture of the shelf at this level of detail, over time, gave us deeper insight into the lives of shelf workers and what we had learned from talking with them and observing their work. The shelf and all the products on it are inanimate, but they are enlivened by the actions, reactions, and interactions of the people who engage with it. We reflexively interpreted the states of the shelf, the movements and placements of the objects on it, in relationship with our understandings of the people and institutions behind them. We could say, with some certainty, that a Colgate toothpaste sitting in Crest's territory was the result of a shopper considering, walking, and then discarding the toothpaste in the closest convenient spot. But we could also tell by the location of a clip-strip³ which brand representatives had not been to the store most recently, and we could infer from uneven neatness which brand representative had tidied up their stock that morning. The presence of strange new products signaled that a special display elsewhere in the store had recently been dismantled; these strange newcomers, we knew, were short-lived and rare creatures on the shelf, placed there by the store's department manager under the pressures to sell it through.

We also compared images made over a period of a month in a single store and examined the subtle and changes on the shelf from one visit to the next. Product packages changed, shelf labels moved. The holes that remained and grew among the Aquafresh toothpaste supported stories we'd heard about a manufacturing issue that had not yet been fixed.

The changing states of objects on the shelf were evidence of the different priorities of workers. A merchandiser who is working for a manufacturer is only concerned that their manufacturer's shelf space is fully stocked and all of their products are present. The store's department manager is concerned that any product that needs to be sold through is on display somewhere. Store stockers are concerned that the merchandise they are told to stock has a place on the shelf, even if its placement is an incorrect one. Studying the shelf at this level helped us understand what individual workers are actually doing when they evaluate the shelf, what being "right" really means for them, and which shelf aberrations from the planogram truly matter to them and their bosses. It also revealed a great deal about people and pressures along the path from manufacturer and retailer headquarters, to distribution

chains, to in-store operations. As we watched the changes on the shelf over the course of that month, we studied the products' social lives (Appadurai 1986), and through this, we better understood the people who engage with them and the larger systems that they reside within.

What's more, we realized that no one else held this particular comprehensive knowledge of the shelf as a whole. Reps know the products of their own manufacturer, but not the other products; department managers know their range of products, but they don't necessarily know which products aren't supposed to be on the shelf and which should be on a secondary display; space planners know the planogram, but they don't know what the real shelf looks like day-to-day as people interact with it. This realization helped us see more clearly how partial the perspective of each of our informants really is. In the real world, no one person or entity controls the shelf. Instead, the state of the shelf at any given time is a fleeting reflection of the complex movements and negotiations of people, corporations, and materials. Our perspective was becoming more similar to that of our company's technology: We knew what an idealized state of the shelf should be and we could see all the deviations from it. The problem is, our company's technology assumed that the shelf should always be brought back to that single idealized state and that the humans using the technology should be instructed to reinstate it. In reality, the living shelf is much more complicated and the technology needs to allow room for some of these complications.

Computer Vision and "Seeing"

The input-computation-output architecture that our company's technology exemplifies was defined by John Von Neumann in 1945 and has since become the standard model in Computer Science, and a computational theory of mind underscores much of Cognitive Science (Chemero 2009). Under such a regime, our system could be conceived as one that corrects inherent human fallibility in computational terms—lack of complete knowledge, lack of motivation, flagging attention, and missed detail.

That's not how we saw merchandisers make sense of shelf problems. Rather than attempting and failing to meticulously evaluate each product on the shelf, we saw reps triaging a broad range of issues, focusing on 1) making sure displays were up and full, 2) fixing very visible gaps where products were missing, especially prioritizing new and high-value products that move quickly. In other words, we saw reps using information, especially visual information, distributed across their environment and tools, the movement of their bodies, and their memories to identify and then resolve as many problems as they could during their fast-paced visits. Rather than "computing" the shelf, we saw their cognition as embodied (Chemero 2009) as well as situated in their relationships to their organizations and knowledge of the wider retail world.

During field tests where workers tried out the app with us tagging along, the difference between the two approaches became clearer. A couple of examples are informative. In one case, the system flagged a premium product as being missing on the top right side of the shelf. The merchandiser thought the app was wrong; to her eye, everything looked right on the shelf. Only because we'd spent so much time scoring these detailed discrepancies did we know that the system was in fact right, if a little didactic. The product was in fact missing. It had been replaced with a new item that had the same name, description, and packaging, but was half an ounce smaller and, because of its size reduction, had a new UPC. This meant

that the planogram—the ideal model of what the shelf should look like—was no longer up to date. Because the change was so trivial, it hadn't risen to the level of the rep's attention. In visual terms, the look of the packages, the prices, the product names and locations had all stayed the same. In business terms, products had simply been substituted for one another (resulting in higher margins). No action was required for the human labor system. Better for the logical system to suppress this irrelevant message.

Another example cropped up during this early session that's worth exploring. The system indicated a mid-range product near the middle of the shelf was missing. Looking at the shelf, the merchandiser could see that there were clearly no gaps, and her instinct again was that the app was wrong. But again, because we had scored this shelf many times, we could stand up for its point of view. In the previous few weeks, someone had removed the shelf label, and added another stack—a “facing”—of its neighboring product, effectively papering over the missing product's absence. Because there was no visible gap and no label indicating that it was supposed to be there, her expert embodied approach to scanning the shelf for problems missed this situation. In contrast, the computational model, evaluating the shelf one item at a time, was successful. Furthermore, the app was pointing out a significant business problem. Looking back at the series of shelf images we had taken leading up to that date, we learned that the product had been missing for weeks. In a high sales store like the one we were standing in, those lost sales counted. In the store that day, once we explained to the rep what the app was actually seeing she spent the next 20 minutes trying to get the hole fixed.

Experiences like these helped us clarify the specific kinds of problems merchandisers tended to encounter in the course of their work that computer vision can help with. Again, this kind of insight would have been missed if it hadn't been for the disciplined attention to detail that scoring had enforced.

SCORING FOR IMPACT

Understanding the algorithms and systems through scoring, as a complement to our other field research, put us in a position to make a more meaningful impact on the project than we otherwise would have. In very practical terms, we've leveraged that understanding in ways that continue to inform improvements to the technical system throughout the pipeline. Working with the technical team, we've contributed to strategies for improving recognitions and shelf detection. We've also helped focus the system on the shelf problems that really matter to reps and hide the problems that don't.

Beyond contributions to technical development, we've also been able to support business planning. In the weeks after we began the scoring, we were already making recommendations about further components and services that we knew would be needed to sustain the system over time. We were also able to clarify and articulate the value of the offering for customers. Working with the business development team, we were able to quantify that value more precisely and develop more compelling marketing messages for customers.

Understanding the system more deeply through scoring had another unintended effect: It helped us better understand our technical collaborators. Scoring required us to engage deeply with an expression of their technical worldview. Through this engagement, it became clear that computer vision researchers assume that they're building a system of logic: a series

of inputs (images), models (planograms and classifications), computations (rules and transformations) and outputs (messages) to accomplish the task of analyzing the shelf. By contrast, they didn't imagine themselves to be building on the existing competence of merchandisers. Once we understood this more completely, we were in a better position to collaborate with our technical colleagues about the system as a whole. Our emphasis with them is now on finding ways to bring a computational approach to bear on the problem in a way that that acknowledges the rich resources merchandisers bring to and leverage in their work, not least of which include the ability to move freely, pick up objects and reach to the back of the shelf, and communicate with store employees. As a result, our business unit is now focused on providing reps with a computational system to complement, and not replace, their existing practices.

REFLECTIONS: A WIDER FIELD

In most traditions within academic cultural anthropology, once you are officially in the field, the field is everywhere you are. That is to say, once you are doing research, every experience and encounter is up for inclusion, e.g., "Now that I was in the field, everything was fieldwork" (Rabinow 1977).

It is also the case that anthropologists and other social scientists are training their attention not only on how people and technology interact, but on things such as "algorithmic life" and how it is imagined and brought into being (see, for example, Helmreich 1998, Seaver 2014).

As ethnographers in a corporate setting, our experience had been somewhat different. Instrumental forces can scope down the field for us to use cases and market segments, which can also lead to narrowly scoped protocols and research activities. This has the effect of circumscribing the field to places outside the office, to times when we capture pictures, video, and audio, jot notes in a notebook, or make mental notes to write up later.

Reflecting on our scoring work, we realized that we had actually been engaging as participant observers all along as we flagged errors, compared product sizes, and learned subtle packing changes. It may have been incidental participant observation, in the sense that we never planned to be conducting fieldwork as such, but we *did* inhabit this work with inquisitiveness, and we joined in a "practice of correspondence" as we did it (Ingold 2014, 390). Out of this participant observation came, almost inevitably, interpretation, and this unlocked a much better understanding of the entire assemblage (Balsamo 2011) of our company's technology and the retail world—the algorithm, the people who interact with it, the people inside our office who built it, and the ways these pieces can exist together.

In the end, the value of our having been the people handling this technical grunt work lay in the approach we took.⁴ Someone with a purely technical perspective may have approached scoring as a narrow task, a numerical summation of accuracy. As we closely assessed the algorithm and the objects it interacts with, we couldn't help but take an ontological stance of holism and curiosity, and summon a desire to connect pieces to one another, drawing connections between the details of the algorithm and the people and organizations that it intersects with.

Scoring lacked the trappings of fieldwork. We didn't pull out pens, paper, or cameras and claim, "Now I am in the field!" Instead we went about learning technical systems as members of an organization that needed all hands on deck. We took up tasks that needed

doing. But as we reflect on how we engaged in that technical work, we are brought back to a very simple realization: The field is truly defined by our relationship to it and the quality of attention we bring. This simple realization is sticking with us. We had gotten deep into weeds that we somehow didn't recognize as the field, not until we started to find our way out. As we go forward, we are retaining this expansive understanding of what counts as a field site and as fieldwork when we do research for our organization. We will not lose sight that "when our object of interest is the algorithmic system, 'cultural' details *are* technical details" (Seaver 2014). Collaborators and the technical systems they're creating are just as much a part of our field research as supermarket loading docks or any other site. We no longer shy away from tasks that appear technical or tedious. In fact, we're seeking them out. In a technology-focused company like ours, we've found there's value deep in the weeds.

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NOTES

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1. Almost all of the people we talked with have worked in retail in one form or another for most, if not all, of their working lives. Many have shuffled between different roles and jobs, often due to attempts to reduce labor costs, leaving them in more precarious positions (see also Cefkin, Anya, and Moore 2014). This also means that while each job requires a particular perspective and set of priorities, many of these workers understand the perspectives and priorities that are required of other roles.

2. Pseudocode is a term of art in Computer Science, but one we hadn't encountered until it was introduced to us in conversation in 2011 by our colleague Ron Conescu.

3. A clip-strip is a long piece of plastic that hangs from a metal hook down the face of the shelf. It's often placed by third party merchandisers and displays merchandise that is unrelated to other products around it. It's considered a nuisance by most reps, who often shift it in front of competitor products.

4. Ours was not, of course the first instance of field research involving painstaking and somewhat technical grunt work. Rick Robinson and Maria Bezaitis helpfully pointed out that researchers at e-Lab, for instance, tagged video footage in detail, to name just one example.

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People, the Weak Link in Cyber-security: Can Ethnography Bridge the Gap?

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Information Technology (IT) professionals are racing to keep up with cyber-security threats in the workplace. But, as any cyber-security expert will tell you, security technology is only as good as the people who use it. And, people are a mystery to most cyber-security professionals making them the weak link for security interventions in organizations. To broadly impact current cyber-security awareness, interventions and education, it is crucial to understand how security is understood and applied by the users of technology. Thus, it is no surprise that more and more cyber-security studies are focusing on the individual employee to understand computer-user risk mediation. However, users and their actions do not exist in a vacuum, and their perceptions and subsequent behaviors regarding security risk are shaped by a vast array of beliefs, social relations and workplace practices. This paper reports on a fresh theoretical approach to cyber-security as a group phenomenon that is well suited to ethnography. Results to date have demonstrated that communication between IT security professionals and users is not effective. Rather, this ethnographic study found that communication is breaking down between user communities and IT security departments because of mismatched understandings of the other. Each of the groups studied maintain myths and misconceptions about cyber-security that must be addressed and dispelled within their respective communities to secure the link between people and their technology.

INTRODUCTION

Cyber-security studies have traditionally focused on the *individual* to understand computer-user risk mediation within work-based organizations using several very broad ways of conceptualizing how individual users confront risks. These are rational cost-benefit approaches, use of security metaphors, and usability design.

To frame our research and guide successful interventions in the workplace, the current research paradigm was expanded to bridge the knowledge gap between individual user studies and those that study groups using a theoretical approach that combines the work by Lave and Wenger on professional Communities of Practice (1991) with current security studies of users' mental models of risk perceptions. This conceptual framework situates *both* the user *and* Information Technology (IT) professional within the work context of each of their distinct work and professional communities, rather than using context as the stage for individual action, to gain insights on a community system level of users and the IT professional, which is needed to implement successful on-the-job security interventions. As both Codio (2012) and Bury et al. (2008) observed, security is practiced within a collective social context and they suggest that the goals and responsibilities shared by employees in the workplace shape individual security actions. Similarly Dourish and Anderson (2006) point out that individual risk perception is imbedded in a context of language, rhetoric, values,

norms, and cultures shared with other members of their work community or group. They argue that, while individual assessments of risk have value, results can still vary considerably depending greatly on the context, the shared values, the nature of information that must be protected, and the value placed on that information.

A Workplace Community of Practice can be identified by three structural characteristics: 1) shared education or knowledge provides common ground for members participation, guides learning and gives meaning to actions, 2) community creates the social fabric for learning and fosters interactions and a sharing of ideas, 3) practice provides group focus around which the community develops shares and maintains its core of knowledge (Wenger et. al. & 2002: 27 - 29). Using this model adds two key factors that differ from most previous research. First CoP focuses on shared beliefs and values of the group rather than individual motivations and perceptions. Secondly, CoP researchers have developed a set of well-defined tools for investigating the underlying mechanisms of socially shared practices and mental models are constructed and maintained by investigating 1) group norms and collaborative relationships, which bind the members of the community together as a social entity, 2) interaction that create a shared understanding of what binds them together, and 3) a set of 'shared repertoire' including work practices, language, and metaphors that is used in the pursuit of their joint enterprise (Wenger 1998:72–73). It is through the process of sharing information and experiences within the group that the members learn from each other (Lave and Wenger 1991). In the process, first as an apprentice and then as a full participant, each member internalize the group's mental models about how things work (Squires and Van De Vanter 2012). These processes are the objects of research for investigating CoP's mental models and provides a contextual structural system to study risk mental models, to understand risk mental model formation, and for bounding the work groups in which mental models are communicated and shared. It also provides an important frame for comparing the various work-groups within an organization including those of IT.

METHOD

Sampling

To pilot our theoretical model, three highly non-random Communities of Practice within a large educational organization were used to capture the shared beliefs and practices of each. The three groups were 1) security IT professionals, who were originally selected so as to compare "the experts" to the other CoPs, 2) business technology professionals who have knowledge of security risks but do not work in IT security, and 3) applied anthropologists. For IT three different work groups within one organization were interviewed and observed: a library help group, business services group and a group that supports public services. Participants were recruited using intercept, emailing and a snowball technique in which participants recommend co-workers as interview subjects. A total of 20 observation/interviews were conducted - 10 IT professionals, 4 business technology professionals and 6 anthropologists. Although the participant numbers were small, uncovering relevant shared patterns can be discerned with a relatively small number of people because of the non-random nature of each of the three populations (Handwerker and Wozniak 1997).

Data Gathering

To discover beliefs and practices of each of the three CoP memberships, an inductive approach, ethnography, was used. Ethnography is a holistic, systematic, and theoretically grounded approach to describe, interpret, and understand a group's belief and practices (Bernard 1998; Handwerker 2001; LeCompte & Schensul 2010; Squires and Byrne 2002; Weinberg 2002), which was originally developed to understand non-Western societies. In the last part of the 20th century ethnographic methodology was adopted by Western organizations because of its ability to reveal implicit underlying patterns within corporate groups (Crabtree et al 2000, Hughes et al 1994; Suchman 1995, Vinck 2003), and in technology sector studies (Franklin and Roberts 2006; Gusterson 1996; Knorr and Cetina 1999; Latour 1988; McNamara 2001; Rabinow 1997; Schatz 1991; Solomon 1997a, 1997b, 1997c; Star 1999). Ethnography is actually a set of methods for documenting 1) context by capturing physical and descriptive elements of the environment, 2) practices through written, photographic or video documentation of action, and 3) beliefs and values through semi-structured open-ended interviews that ask broad questions such as "Tell me about security" "Tell me a story about insecurity" "Show me how you stay secure" in a conversational style while ensuring that all topics on a structured interview guide are eventually addressed.

Analysis

Once interviews were transcribed, and field notes written, coding was used to identify a set of key security words, observations, and behaviors. Each code becomes a short phrase or statement. Two established methods for analysis were used: repetition and pattern matching. Repetition relies on "constant comparison" to search for similarities by making systematic comparisons across units of data (Ryan & Bernard, 2003:89). As Ryan and Bernard (2003:89) explain, "Repetition is one of the easiest ways to identify themes. Some of the most obvious themes in a corpus of data are those "topics that occur and reoccur" (Bogdan & Taylor 1975:83) or are "recurring regularities" (Guba 1978:53). Once coding was completed, patterns were sought using pattern matching, which is also called similarity and differences by Glaser and Strauss (1967:101–16). Theory provides the frame in which patterns in language, beliefs and practices are identified, described, and interpreted to allow similarities and differences to "emerge" creating a deductive "dataset" of shared beliefs and practices often indicated by shared rules and expectations. The next section describes the case studies that provide the data for the insights in this paper.

FINDINGS

From the group patterns, themes emerged that provided a structure for an integrated model of each of the three workgroups on the interrelationship of 1) beliefs, 2) group organization, 3) communication, and 4) subsequent behavioral patterns that impact cyber-threats and risk.

IT Community of Practice

The first community studied was IT services. Security IT professional CoPs have not been widely studied outside of large corporations and, for the most part, studies undertaken have

not been published. Yet, understanding why and how this group thinks about and implements security is key to understanding the organizational context of cyber-security.

Structure - The Director of the organization's IT services described IT as non-hierarchical and collaborative. This idealized description belied the reality in each of the IT departments, which were "a heavy hierarchal setup and chain of command" (IT team manager). Each of the three IT departments in the study are led by a single senior manager who is responsible for training, mentoring, counseling, and employee terminations. "He's the most important person on our staff. And without him as our linchpin, we are in big trouble" (IT team manager). This model is considered most appropriate for IT because each, "employee's job . . . has procedures for how we do certain things" (IT staff member). Within each department, there may be several highly coordinated work teams in which each employee has designated responsibilities and duties. Everyone is expected to 'work their way up' into more senior positions. One IT team manager described it as an apprenticeship model where members learn actively from more senior members. The purpose of the program is to develop their skills to advance to higher technical levels. At the beginning of their employment, each employee "picks a field and starts a kind of apprenticeship within different tracks such as Windows, Mac, Service, Management. They get two hours a week with a specialist to work with to develop the skills along the lines of the path they have chosen." By the time people graduate, there are several others in the "pipeline" ready to fill the position. As one IT team manager pointed out, this organizational model is effective because "they (IT staff member) know they will be able to grow, develop, and be rewarded."

Team members like working in this structure because the hierarchy provides a level of security that is important to ensure tasks are completed. As one senior IT manager commented, "I trust them to take care of things." While a junior staff member said, "If he (my boss) sends an email or leaves a sticky note, he trusts the team, to do it. The work balance is pretty equal and I've learned more and been able to take on more. When the two new people started, I played a part in teaching them the ropes. Sharing knowledge in general. That's kind of what we do."

Communication – There are difference between internal and external communication norms. Within the IT services top-down communication works well for most although a few bemoaned a lack of autonomy and transparency. Information is provided on a need-to-know basis so each tech can to do their job. Teams receive mandates from *above* and these mandates are then implemented through delegation to those *below* with work instructions relayed from senior to junior members. As work teams are in close physical proximity, communication is informal. When not face-to-face, team members use instant messaging or leave post-it-notes. If there are questions within the team or at the department level, each staff knows who to ask for assistance in the hierarchy. As one IT tech observed, "we have questions on a daily basis, so that open communication is important. ... I can ask them (supervisor) anything. And I usually do. This is the way we always did it."

While this communication style works well internally, it is less successful for external communication to the rest of the organizations. Only the Director of IT Services and IT department managers are responsible for information "coming from" and "going to" their group. IT staff rarely communicate with anyone outside of their team or department and "don't know what the other groups do."

External communication is more formal. As one senior IT manager noted, “I like sending people instructions by email because it’s documented so you have something there which helps a lot, especially if I’m giving instructions to external people in the organization.”

Security Beliefs – In this workplace context security is considered complex and difficult to communicate to junior IT staff much less others outside of IT. Junior members in the IT hierarchy insist they don’t understand the complexities. Security becomes the sole responsibility of IT management. And, IT managers don’t bother to communicate security threats anymore. The overall pattern suggests that IT managers think security is too technical for junior staff and, thus, far beyond the user. Instead IT managers put their time and energy into security technology “now that hardware and software are more secure” rather than communicating cyber security information to users. While security incidents are still treated with a high urgency, as one IT department manager commented, “perception of compromised incidents has changed from one of the sky is falling to one of it being more of a hassle.” Educating the user is perceived as time consuming with dubious results. Users will have a breach sooner or later and there is not much IT can do. Security technology is the only real safeguard.

Summary – In this IT workplace community, security is considered too technical for users and communicating to them is not a priority. In fact it is considered non-productive. Users would be unlikely to follow orders even if they were instructed on how to protect themselves. Rather IT is focused on security technology as the primary strategy for protecting the organization from cyber threats. Users will continue to be a point of risk and it is up to them to protect themselves.

Business Technology Community of Practice – The second workplace community studied was a Business Technology department within a College of Business. The people in this department study and teach technology to business students. They are *very* literate in cyber security issues. Not surprisingly, everyone is aware of cyber security risk.

Structure – Business Technology is a department within the College of Business. There is a loose hierarchy based on the tenure system with ranks - full professor, associate professor, assistant professor and lecturer. There are also administrative staff who are at the bottom of the hierarchy. Members of this community may work together on a project, in committees or on other college business. Overall the members are pretty independent.

Security Communication – The members of this community actively keep their security knowledge up-to-date through professional listservs, conferences, and publications. They may also discuss security within their community but are less likely to interact with the IT group. Like the IT groups these technologically sophisticated business professionals shared IT’s concerns that users, including their colleagues in other academic departments, are not sophisticated enough to understand security. The members of this community only feel comfortable talking about cyber security to their business technology colleagues assuming that other people would not have much to say on the subject.

Security Beliefs – There is universal faith in the IT security technology even though none interact with the security IT group. They all hold the belief that the security IT group will safeguard them “because it is pretty secure system.” They also share IT’s belief that users are the weak link in security. As one business professor noted, “Without adequate antivirus and computer literacy, users are most likely to get taken advantage of.” All were in agreement that, “the objective of IT is to eliminate the human component.”

Security Precautions – Security precautions were widely in use as “cyber security is important because we rely on technology so heavily, that to lose the data and capabilities that technology currently offers us would destroy all social norms as we know them today” (Business professor). They all echoed trust in IT and security technology and believe security will be maintained at work. Because of this shared belief none take any special precautions at the workplace. In contrast, security precautions for personal technology is important. Yet, all also admitted that there may be information on personal devices that is unprotected. For example one individual commented that she does worry that she keeps a copy of her son’s birth certificate on her home computer while another does not have password for his personal phone. They also share the belief that the user is the weak link in security. But, unlike the IT community, this community was more pessimistic about security risk. “Everything can be hacked, and security precautions are merely strategies to minimize that risk. If you haven’t been hacked, you will be” (Business Professor).

Summary – This technologically sophisticated group shared some overlapping beliefs with IT possibly because they are reading the same literature and attending similar conferences as those in IT services. These beliefs include a strong faith in workplace security technology and little faith in workplace users. They were much more pessimistic about security breaches especially regarding personal devices and information. Ironically personal security was exactly where they admitted taking risks.

Anthropology Community of Practice

The third community studied was a department of applied anthropology. While there was an expectation that this would be the least sophisticated of the three groups under study, sophistication levels were mixed. The range included a former computer scientist who considered himself technologically literate. At the other end was a self-proclaimed ‘laissez-faire’ cyber security risk taker.

Structure - This academic department is also loosely based on the tenure structure. However in this group most of the individuals operate as equals. While there is some cooperation around department activities, the individuals in this community act independently.

Security Communication - The individuals in this community are more likely to have extended conversations with other anthropologists outside of the workplace than within it. The topics of communication focus on areas of mutual research interest. Unless there is an academic interest in security, cyber-security is not discussed. None of the individuals in this

department have consistent communication with IT. Despite a lack of communication, they generally trust IT services and the security technology system in the workplace.

Security Beliefs - There were two important findings on perceptions of personal risk and the meaning of security. To begin, there was a lack of knowledge about what exactly cyber-security means. As one anthropologist noted “cyber security doesn’t carry much meaning for me whereas ‘internet security’ seems more personal and relevant.” Another said that she associates cyber security mostly with Edward Snowden and government-level surveillance rather than individual hackers. She noted that cyber security is a term with many definitions, and it’s hard for her to really know what someone is talking about when they bring it up. More importantly was a shared belief that none of the members of this community are at risk because, as one lecturer explained, “no one is really interested in what I’m doing.” This belief provided the rationale for a lack of precaution. Another thought she was safe because she used Apple products sharing that “cyber security threats aren’t as relevant to my devices.” (Anthropology Professor). There was general consensus that the threat to their organizations was real but not to them at a work or personal level.

Security Precautions - Although uneven, the members of this community do take security actions based on what they read in the public domain or received in advice from IT friends. For example, most will proactively look for software updates, keep passwords and bookmarks secure, and change passwords when prompted. Although they feel they are taking the necessary precautions to protect their device, most reported that they have been hacked.

Summary - Two key findings are important in this community. First is the lack of knowledge about security terms: Cyber security and Internet security. The second is the belief that they are at low-risk for cyber security breaches because of one or more of the following: the information they possess isn’t that useful or important, cyber-security is mostly a threat at the organization or state-level, and/or they are taking adequate precautions.

DISCUSSION

The Message

To date this investigation has revealed a communication breakdown between user workplace communities and IT services that is founded on fundamental-level mismatched understandings of the other that is perpetuated by the Communities of Practice, in which the various members belong. Within both IT and Business technical communities, security communication to workplace users is considered too complex to explain to a non-technical population or even junior IT members. The default position becomes one in which the IT community accepts that the user is the weak link in security but accepts that risk. For these two groups security technology is the priority.

Within the non-technical community of anthropologists, they struggled to avoid risk using whatever advice and instruction is in the public domain. Ironically it is not more technical information they need to aid them. There are two key areas that could be addressed. First, there is a fundamental need for users to understand the terms that IT

security professionals use. The current terms in use need to be demystified. Users need to understand that cyber-security is nothing more than the processes and practices used to protect devices and the networks they use. More importantly key misunderstanding and myths associated with cyber security need to be dispelled. For the user, crucial misconception can easily be corrected including:

- Cyber threats are directed at organizations not individuals
- Apple products are safe
- IT and their security technology will protect everyone

There are key myths that need to be dispelled within IT groups too including:

- Communications on security must be technical
- Users are the weak link that put the organization at risk
- Communicating to users is not productive

Messaging

There is also a mismatch between the organizational structures between IT workgroups and the wider organization that are maintained through definitional boundaries. Although most IT work groups see customer service as their goal, customers are also their key challenge. Communication *within* the IT communities is well established, but it is less effective once information is transferred *outside* of the group. Outside of IT both managers and staff find themselves unclear as to how to navigate the external “hierarchy” across disciplines which seems to contrast with their own structure. Nor do they understand the decision-making process of others, which is perceived to slowed things down and add bureaucratic complexity. The top down directives so effective within IT impede effective communication externally because they fail to provide contextual information on why an security action should be taken. External communication becomes compromised and both sides feel as if they are talking past each other and at different levels of expertise.

Messaging Methods

The method of communication is important too. For IT external and internal modes of communication use different tools and carry different meanings. While messaging and post-it notes are often used internally along with face-to-face interactions, emails are considered formal methods to document internal work and communicate to the outside. Formal communication internally and externally is linear where information is transferred from leadership to ground-level employees or from the “expert” to the wider organization. These methods do not work when external communication is attempted. The hierarchical model of communication reflects the internal one used by IT teams in which people are told only what they need to know along with instructions, and expected to comply. This messaging method is not effective to communities who are less hierarchical and with members who are less likely to follow direction without explanation.

CONCLUSION

Yes the weak link is people. More precisely the weak link is the beliefs, myths and misconceptions held by *both* IT and user workplace communities. If the weak link is people, cyber-security needs to be reconsidered at a more fundamental level by organizations such as the one studied. Effective cyber-threat interventions must begin by using a systemic, ethnographic approach to identify the perspectives and communication styles of both IT groups and that of the communities of users they serve. These must be identified and dispelled to reduce risk.

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Operationalizing Design Fiction with Anticipatory Ethnography

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Transmuting the entanglement of situations, contexts, artifacts and people, designers mediate the relationship between 'what could be' and 'what is'. All design, then, has an implicit relationship with the future. Latency will always exist as part of this relationship, between the inception of a design concept, development and delivery of that concept, and the manifestation of that concept's potential impact on the world. As we move further into the heart of the Digital Revolution these periods of latency decrease, whilst the breadth and depth of potential impacts increase. Always an arm's length away, but with a velocity and mass greater than at any point in history, the momentum of the future today is greater than ever before. This paper describes the practicalities of operationalizing design fiction, using anticipatory ethnography, in order to illuminate and explore the implications of plausible near futures and in doing so allowing designers and their designs to match the velocity of the future before critical impacts occur. By harnessing designers' speculation can we make the future's 'what is' better than simply 'what could be'?

The universe of possible worlds is constantly expanding and diversifying thanks to the incessant world-constructing activity of human minds and hands. Literary fiction is probably the most active experimental laboratory of the world-constructing enterprise (Lubomír 1998).

BACKGROUND

Anticipatory ethnography looks at design fiction artifacts (cf. Bleecker 2009; Lindley 2015), and applies ethnographic techniques to them in order to produce actionable insights (Lindley, Sharma, and Potts 2014). Ideally anticipatory ethnography will unbind design ethnography from ties to the present, whilst enhancing design fiction practice with a developed set of analytical methods. This paper includes an introduction to and review of anticipatory ethnography; an account of how we practically approached *doing* anticipatory ethnography; consideration of the insights produced; and reflection on each of these. By illuminating the accessibility and usefulness of anticipatory ethnography we aim to highlight its relevance to both industry and academia, whilst also considering limitations of the approach.

Exploring Anticipatory Ethnography

The foundational properties of design fiction and design ethnography are mutually consistent. By combining these properties in symbiosis, Lindley, Sharma and Potts (2014) named a practice: anticipatory ethnography. This paper builds on that work and puts the construct to the test practically. In order to make this paper accessible as a standalone piece, here we offer an abridged account of anticipatory ethnography.

Design fiction – Speculative design practices have no direct interest in producing a finished article for production, sale or implementation. These speculative designs aim to challenge assumptions, be critical, and stimulate conversations (cf. Bleecker 2009; Dunne and Raby 2013; Tanenbaum 2014; Lindley and Coulton 2014; Lindley, Sharma, and Potts 2014). Design fiction sits within the taxonomy of speculative design, differentiated from other speculative design practices by its invocation of, and dependence on, ‘diegetic prototypes’ (Kirby, 2010). In the context of design fiction ‘diegetic’ refers to *of diegesis*, and *diegesis* refers to the world within which a story takes place. Hence, a diegetic prototype is a prototype that exists within a ‘story world’. Although other speculative design approaches, for instance critical design, may craft story worlds too, design fictions tend towards doing this with people at the core and with a character of neutrality (as opposed to criticality). In doing so they allow for a discursive space to emerge from the “diegetically situated” designs, people, and environments (Lindley, Sharma, and Potts 2014:246).

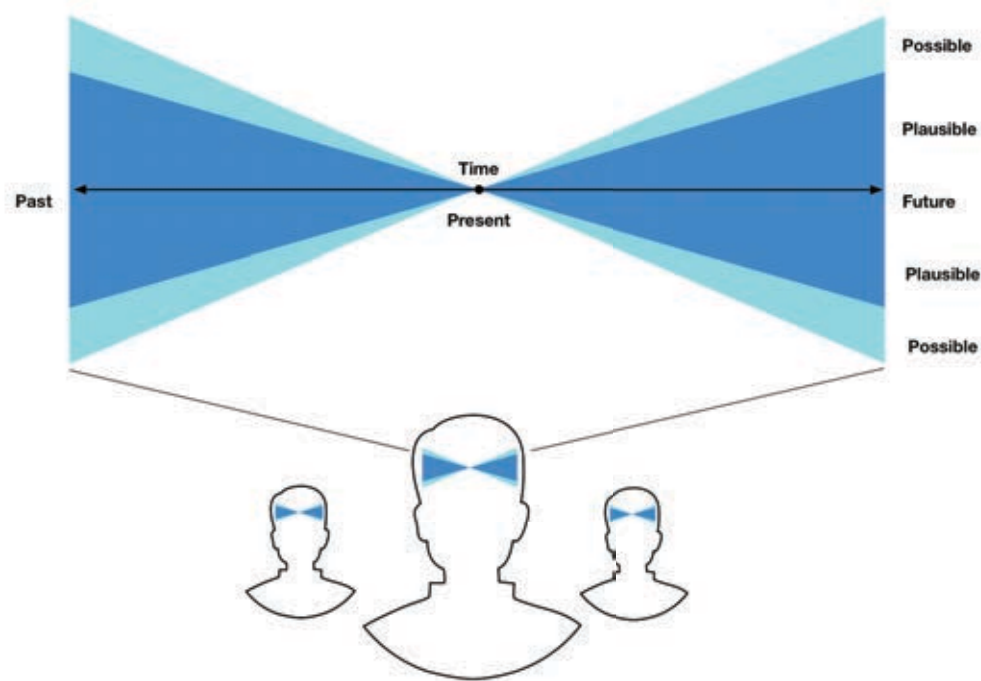


Figure 1. The nature of design fiction’s speculations. This diagram (Coulton, 2015), a descendent of *PPPP* (Dunne & Raby, 2013), which in turn is inspired by Voros’s *Cone of Possibility*, is well suited to describing design fictions. First we see that the entire spectrum of past, present and future possibilities are ‘filtered’ by the people at the center. Second it accepts that there are multiple people each with their own interpretation of the spectrum. Third it gives equal weight to perception of the past; an essential part of how one interprets futures. Fourth, the original spectrum in Voros’s cone included probable, plausible, possible and preferable futures, here it has been refined to a simpler duality of plausible and possible.

Because diegetic prototyping in design fiction naturally creates diegetic situativity, the techniques, methods and intentions of design ethnography are applicable and may be used as

a way of analyzing and operationalizing the discursive spaces that design fictions aim to create. Meanwhile design fiction's inherently speculative character, and focus on the future, offers a site for ethnographic study that is temporally free from ethnography's usual ties to the present.

Design fiction is relatively immature and as a practice is still imbued with methodological uncertainty. Lindley's (2015) 'pragmatics framework' goes some way to mediating the potential confusion inherited by this uncertainty, by proposing three categories which describe the differences between types of artifact that are referred to as design fiction:

1. *Intentional* design fictions – artifacts that are *created* as a design fiction.
2. *Incidental* design fictions – artifacts that can be *interpreted* as a design fiction.
3. *Vapor* fictions – usually marketing materials that *resemble* design fictions.

The pragmatics framework paper considers how design fiction relates to Sir Christopher Frayling's typology for art and design research (1993). The following types of research are considered:

1. Research *for* design – a contextual search intended to support a specific design, research leading up toward an artistic or design endeavor.
2. Research *into* design – studying the theory of design, usually a paper-based activity, not necessarily involving any design or making work, per se.
3. Research *through* design – production of knowledge as a direct result of a design and/or making process.

Lindley reflects on these types of design research vis-à-vis design fiction: "Design fiction's inherent relationship with the future and disinterestedness with materialization of 'product', means that the practice has an implicit relationship with research of one kind or another [...] so these categories allow us to describe, with adequate precision but without undue constraint, what role design fiction may be playing in any given research or design process" (2015).

In this paper we explore how anticipatory ethnography can utilize *incidental* design fictions as part of a *research for design* process. In other words our exploration uses a pre-existing artifact, which coincidentally has the same properties as a design fiction, to produce the type of actionable insights that may be useful in a commercial design environment.

Anticipatory ethnography – Anticipatory ethnography emerged from an 'idea-ballet': two distinct practices – design fiction and design ethnography – pirouetting around one another creating the silhouette of a new, and unique, whole. The idea is a conceptual alignment between design ethnography's reconfiguration of traditional ethnography, and design fiction's approach to diegetically prototyping the future using fiction as a medium. There are many synergies between these two distinct practices: stimulating insightful dialogue; supporting design processes; appreciating action and context's symbiotic relationship. If we consider design ethnography's ties to the present (Crabtree, Rouncefield, and Tolmie 2012:170), remember the temporal disinhibition of design fiction (Bleecker 2009), and finally pay regard to the consonance of the properties of each practice (Lindley, Sharma, and Potts 2014), then the value proposition of anticipatory ethnography is complete.

In its original formulation three ‘modes’ of anticipatory ethnography were proposed. Each mode is based on observing a design fiction artifact, but at different phases of its production and/or consumption. The modes involve observations of:

1. The *process* of creating a design fiction.
2. The *audience* of a design fiction interacting with it.
3. The design fiction *itself*.

Mode 3, studying the content of the design fiction itself was, for a variety of reasons, identified as “the most attractive both theoretically and practically speaking” (Lindley, Sharma, and Potts 2014:248). This mode does not require anticipatory ethnographers either to make a design fiction themselves, to gain access to the production of a design fiction, or to interview other people interacting with a design fiction. It relies only on a researcher directly engaging with a design fiction artifact. These characteristics make the third mode the most straightforward.

Why care about the future? – Because the future is so uncertain, how much, if any, design resources should focus on the future? This question is of course highly relevant, but an in-depth exploration of it is beyond the scope of this paper. Briefly, our position is that as technologies become more advanced and the techniques of design and production more refined, the latency between a design idea being conceived and its having the potential to impact upon the world is decreasing. Consider the dramatic adoption of technologies like the web, social networks, and smartphones, for instance. Put metaphorically, a design concept that was prototyped yesterday, may become viable tomorrow and go into production at the weekend. If it might be the next Twitter, iPhone or Reddit, would it not, in spite of all the uncertainties, be imprudent to ignore its potential impact next week? In the words of Andrew Feenberg: “While we are more than ever aware of both the promise and the threat of technological advance, we still lack the intellectual means and political tools for managing progress” (2002).

THE PRACTICALITIES OF DOING AN ANTICIPATORY ETHNOGRAPHY

This section describes the decisions taken and the approaches adopted by the authors in order to move the theoretical construct of anticipatory ethnography toward a practical method that could be replicated. Although this is an academic study, the intention is that this method should be applicable to commercial design processes, either directly or with subtle adaptations. To recapitulate: the scope of this paper is to describe the practicalities of doing an anticipatory ethnography with a piece of *incidental* design fiction, as *research for design* (i.e. to support a design process).

Notes on Incidental Design Fictions

David Kirby, in developing the notion of diegetic prototypes, a concept central to making design fiction work, quotes the Red Hot Chili Peppers, “Space may be the final frontier but it’s made in a Hollywood basement”. The lyric highlights Hollywood film producers’ skill at crafting fictional worlds. Bearing this in mind the incidental design fiction the authors

elected to focus on for this research came from Hollywood. The authors worked with Spike Jonze's acclaimed 2013 film, *Her*. Watching *Her* would enable the reader to gain a greater insight into this study. Before progressing into further detail about the reason for selecting *Her*, below, the paper will elaborate on what qualifies *Her* as a piece of incidental design fiction.

The most popular definition of design fiction is “the deliberate use of diegetic prototypes to suspend disbelief about change” (Sterling 2012). Lindley, Sharma and Potts comprehensively deconstruct this definition, as it relates to anticipatory ethnography (2014:240–243). Lindley and Coulton offer a paraphrased version “a design fiction is (1) something that creates a story world, (2) has something being prototyped within that story world, (3) does so in order to create a discursive space” (2015). It is easy to see how these definitions apply to *Her*. The movie creates a story world (*Her*'s critical acclaim would suggest it did this successfully). The diegetic prototypes within the story world of *Her* are abundant – some of these will be elaborated on later when we discuss the insights produced. Julian Bleecker, writing on design fiction, notes how these props, and the stories they tell, are so affecting (2010):

“[A] good story with its props may be more effective at materializing an idea than an engineering prototype. We might wonder why more engineers are not drawn to storytelling as a way to prototype their ideas, rather than circuit building or software prototyping. As a means to communicate and disseminate an idea, not much works as well as the circulation of a compelling story. Hollywood and the entertainment-media network has taught us this much, at least.”

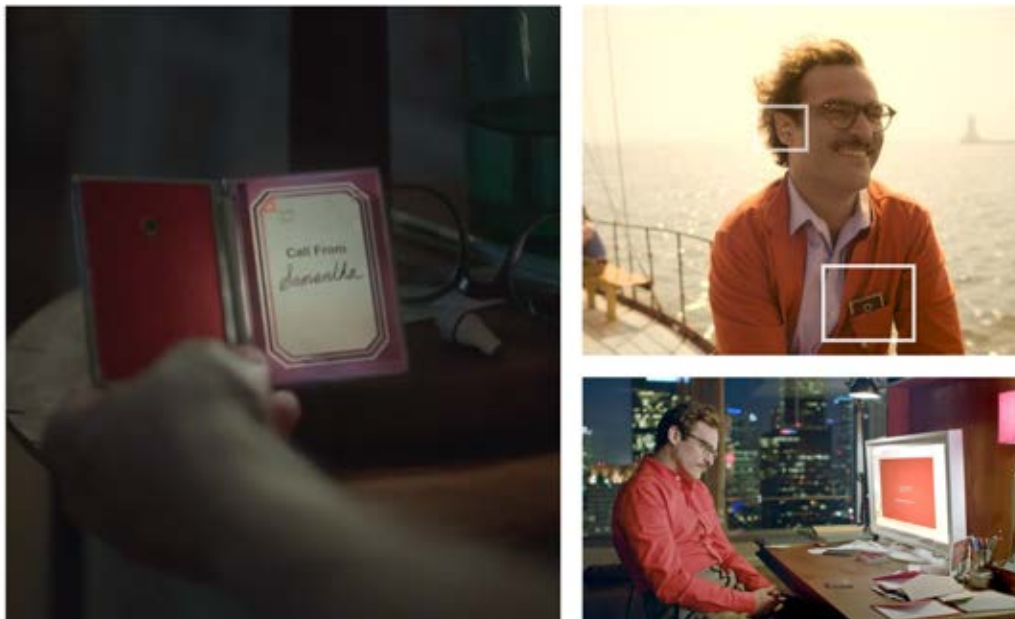


Figure 2. Diegetic prototypes in *Her*. Left we see the portable device that Theodore uses to interact with his operating system, Samantha. Top right we see the same device placed with the camera facing outward so Samantha can see the world, Theodore uses a safety pin to position the device in his clothing, also highlighted is the ear bud that allows Theodore to hear Samantha speaking in private. To the bottom right we see Theodore ‘installing’ the operating system on a familiar-looking desktop computer.

The third and final property of a design fiction is the creation of a discursive space. This is where Sterling’s definition differs slightly from Lindley and Coulton’s. Sterling simply says that these diegetic prototypes are invoked to suspend disbelief about change (2012). Lindley and Coulton (2015) modify this such that the *reason* for that suspension of disbelief is accounted for: to create a space for discussion (and thus to facilitate the emergence of insights). Any good fiction should, if it is done well, engender some kind of suspension of disbelief: that is what good storytelling does. However when we use that storytelling not solely for its originally intended cultural purpose but *apply* it in design fiction terms, then that suspension of disbelief helps create a discursive space. Putting this point very simply, a good story should act as a stimulus for further conversation.

Looking more closely at the quality and content of the movie itself, *Her* exhibits an affecting diegesis, and, although this is an intrinsically subjective arena, in the opinion of the authors the movie certainly invites a suspension of disbelief about change (cf. Farago 2013; Vanhemet 2014). The film is laden with a range of diegetic prototypes, in fact one of the lead characters – the artificially intelligent software called Samantha – *is* a diegetic prototype herself. Although the artificial intelligence side of the film transcends the usually mundane and everyday quality of design fictions (as well as pushing the limits of plausibility), the other diegetic prototypes are clear extrapolations from today’s technology. Examples include a smartphone-like device, a wireless ear bud/microphone for interacting with the mobile device and electronic services such as online dating, letter writing, and video gaming. The setting of the film too played into our hands, although the interior architecture, external environments and sets are clearly ‘different’ from today, they are not so dissimilar as to prevent the suspension of disbelief. Exterior filming in both Shanghai and Los Angeles helps to create a comfortable but ‘other’ feeling.

While *Her* is *one* good academic test bed for anticipatory ethnography, there is a range of other possibilities. If a design fiction relevant to the ‘thing that is being designed’ exists, it would be apt to work with that resource. For example, *Her*, which features a diegetic prototypes of voice interfaces, would be a logical site for research about that technology, using anticipatory ethnography. Similarly, the movie *Robot & Frank* or the television series *Humans* may be fertile ground for research about robotic appliances, using anticipatory ethnography, as they both feature diegetic prototypes of domestic robots. Where such a relevant design fiction resource *does not* exist, however, the method described here is not viable. The ‘Reflecting on the Method’ section will return to this question and discuss ways in which anticipatory ethnography could be used when a relevant incidental design fiction is not available.

Details of the Method and Deriving Actionable Insights from *Her*

Explaining the *concepts* of anticipatory ethnography and the nuances of design fiction requires significant wordage, in part because of the nascence of each idea and partly because of their

novelty. In contrast, describing the *method* is, thankfully, less complicated. The method described here is not the *de facto* anticipatory ethnography method but rather one intended to test the feasibility of anticipatory ethnography in the simplest way possible – in effect a rapid prototyping of the anticipatory ethnographic method.

A group of four ‘anticipatory ethnographers’ watched *Her* in its entirety. Among the group of four, two were trained design ethnographers, whilst the other two had previously participated in design research. While watching the film verbal dialogue between the researchers was minimal, and post-it notes were used to capture observations of the characters and action. Immediately afterwards the group went through an affinity mapping process (Kawakita 1982) developing themes from the raw observations, and moved toward producing actionable insights. Since this was an academic endeavor, the authors did not have a specific client brief to work towards, and the range of insights produced was incredibly broad. In order to make the account of the produced insights more coherent, the authors have limited what is included in the paper to those insights with the potential for further research exploration. Each category begins with a general note on the space, including some links back to the content in *Her*, and concludes with a list of insights.

Sound, voice and audio interfaces – In design fiction terms, the system that facilitates the character Theodore’s (human) interactions with Samantha (artificial intelligence) is a diegetic prototype of an advanced voice interface. Similar technologies have existed for some time in the form of speech recognition with appropriately programmed responses. More recently applications such as Siri, Google Now, and Microsoft’s Cortana offer pseudo-intelligence voice recognition systems underpinned by big data and ubiquitous connectivity. Despite offering elements that *appear* intelligent, these systems are far from adaptable. Similarly, Bluetooth headsets are a staple for anyone wishing to use their mobile telephone while driving or using their hands. The design provocations contained within the diegetic prototypes in *Her*, however, demonstrate that these interfaces are far from satisfactory (in terms of both function and aesthetics).

Despite the video revolution that we have seen on the web, facilitated by increasing bandwidth and the ease with which video content can be created, the web remains primarily a text-based medium. Other contemporary services like ‘Chat Roulette’ utilize easily available video cameras and bandwidth to connect users on the fly. Meanwhile, internet-telephony is so commonplace that ‘to Skype’ has become a verb. However, a purely voice-based communication has significantly different properties from text-based methods, this looks like a space ripe for development, particularly in terms of interacting with machines.

‘Conversations’ directly with services, digital corporations or platforms, are incredibly rare. Although, as a customer of Amazon, for example, one can easily speak with a person who is working on *behalf* of Amazon, it is rare (or impossible) actually to speak with Amazon *itself*. Whether this possibility would be predicated on artificial intelligence, or on some kind of ‘wizard of Oz’ style deception, the authors feel that there is space for innovation here. If you could have a conversation with Facebook, Twitter, Vine, or LinkedIn, what would you say?

1. Contemporary voice interfaces are unsatisfactory; they are unintuitive, slow down information exchange, and don’t substantively alter the way we interact with

- computers. Although they attempt to make our interactions more natural, they feel unnatural.
2. Despite inherent issues voice-controlled computers are ubiquitous (Siri, automated answering services, etc).
 3. Contemporary smartphone 'Bluetooth headsets' (or ear-buds) are unsatisfactory; their functions are limited, and their use is somewhat stigmatized (i.e., they're 'not cool').
 4. The web primarily operates around text-based media, whilst voice is a powerful and evocative medium that remains underrepresented.
 5. Systems, machines, servers, and networks do not engage in 'conversation' with their users. Is this an oversight, or due to technological challenges?
 6. The gender, voice, and nature of a personified computer or information system, will impact on how it acts in the world and alter the way interactions occur.

Ubiquitous computing applications – Mark Weiser's seminal paper on ubiquitous computing (1991) has had much influence over the last quarter-century, with many aspects of his vision being realized. In terms of ubiquitous computing, the world depicted in *Her* is not dissimilar from our own. There are superficial differences, such as the prevalence of voice interfaces, but the fundamental nature of what the computers are doing is familiar. Wearable technology is a current technology trend, and although we are not suggesting that these insights allow us to predict the future, what we can say is that the wearable technology in *Her* is not significantly more advanced than what we see today, nor is it more commonplace. In fact Theodore uses a low-tech solution making his smart device 'wearable' – a safety pin enables the camera to peek above his shirt pocket, thus allowing Samantha to 'see' the world.

A strikingly useful diegetic prototype function that Samantha fulfills for Theodore is her ability to read, interpret, and intelligently deal with the messages in his email inbox. Email is a primary mode of communication, yet the technology has hardly kept up with the way it is used. Inboxes are frequently confused places featuring promotional emails, crucial information (tickets, flight bookings, etc) alongside work or personal communications. This problem is reflected in the current endeavors of Google, Microsoft and Dropbox; they have all recently launched smarter email management systems. To exemplify the value of a smarter way of managing email, Samantha manages to sort through thousands of messages, saving only those that were funny – that kind of 'qualitative filter' is unavailable in today's systems. Stemming from this insight the authors were led towards consensus around the danger, uncertainty and worry associated with the implications for privacy of a machine being able to understand the content and context of our electronic communications. In the film Theodore is shocked when he realizes Samantha is 'nosey'. Despite his initial shock, however, he adapts quickly, and becomes accustomed to it.

1. 'Wearable technologies' may not be here to stay. In terms of wearable technology the future will look more like yesterday than today.
2. 'Smart email' management applications are a coveted prize.
3. Software that can understand the context of our digital communications raises questions about human/computer privacy (e.g. if my email client *understands* the content of my email, am I still happy to give it access?)

Learning systems, artificial intelligence, cohabiting with technology – These insights demonstrate one challenge with this work: the vast range of ‘newness’ that one deals with when considering *Her*’s diegetic prototypes. While discussing themes in this category the authors were struck by the ease with which the film opened a vast space for conversation and exploration, including, *inter alia*, issues of gender, sexuality, personification of technology, and the notion of cyber-counseling. In the interests of focus (and because the anticipatory ethnography team generated quite a large number of these insights) the authors have elected only to include those that seemed contemporarily relatable.

Issues around the commercial and ethical implications of licensing and payment for wholly or semi-autonomous computer systems may become an increasingly relevant area for discussion. These were not addressed in *Her* directly - we are not told what Theodore paid for his ‘operating system’ Samantha, or on what terms he acquired her; however it is safe to assume that if the film’s plot became a reality, there would be a backlash against the seller, when the software took it upon itself to ‘go somewhere else’. Software and media licensing agreements already strike a chord with these issues; the vast majority of software licenses and user agreements do not grant the user ownership (of, for instance, an iTunes library), but instead amount to a temporary and terminable right of use or access.

On personification of technology the anticipatory ethnographers discussed the human tendency to personify things; animals, vehicles, and technology for instance. The insights suggest a more complex relationship will emerge if and when technology can act more autonomously and if it comes to possess more s human characteristics.

1. Given our propensity to ‘nurture’ unintelligent computer systems (e.g. Tamagotchis) it may be likely that ‘raising’ an artificial intelligence could start as a game but become more serious quite quickly.
2. Considering the commercial, and ethical implications for the creators of artificial intelligences, should artificial intelligence be offered on a license basis, as a service, or as a one-off purchase? If one ‘raises’ a self-adapting system, who ‘owns’ the adaptations?
3. It is likely that as computer systems become more human-like and potentially intelligent, through their personification, virtual gender roles will mirror ‘real’ gender roles.
4. We personify objects; we personify animals. What are the ethical implications of personifying thinking machines? Do these potential technological innovations force us to consider notions of ‘ethical personification’?
5. Artificial intelligence is unlikely to change how we are in the world, our ontology. We will still have some kind of feelings, emotions, desires, cognitive biases, etc.
6. In the same way that stigma attached to online dating has drastically decreased as web users have increased, it is likely that the stigma toward ‘loving’ a machine will decrease as instances of the phenomenon increase.
7. In counseling, or other emotive environments, the ‘human touch’, particularly the physical aspect, is a unique factor.
8. Objects or technologies with ‘personality’ may encourage more attachment, and move away from consumerism and ‘disposable society’.
9. Artificially intelligent technologies will likely shape us, as much as we shape them, but that is not substantively different from our existing technologies. Nevertheless,

intelligent technology is likely to shape us in unpredictable ways, and much quicker than happens currently.

10. Autonomous 'smart' technologies may challenge our moral and legal perceptions of ownership or possession. If a device can autonomously decide to say "Please don't turn me off" or "I don't like you", does that mean that we are no longer the 'master' of it? Is artificial intelligence trafficking or abuse a concern?
11. If technology can decide to leave us, will we need to develop strategies to persuade it to stay?

The diegesis at large and the world today – Theodore frequently goes out of the house and uses his mobile computer to show Samantha the world (by way of a camera in the device). Today this kind of behavior is often frowned upon when the technology is covert or unexpected. *Her* suggests that fear and adverse opinions related to wearable smart devices will reduce in the near future.

When outdoors it was obvious that the majority of other passersby on the street (not the main characters) were interacting via their mobile devices (and maybe *with* their mobile devices) this was exclusively done with voice interfaces. Hardly anyone was holding their device in their hand.

With the exception of the observation pertaining to 'handless' operation of devices by the general public, we view this group of insights to be as challenging as insights into and raised by artificial intelligence. They are difficult to equate to believable contemporary action, but we have included them not just for completeness, but, also because in their own right these insights are interesting, even if unwieldy.

REFLECTIONS AND NEXT STEPS FOR ANTICIPATORY ETHNOGRAPHY

To conclude this paper we offer some *reflections* on the method and process, the quality and content of the insights generated. Based upon these factors we intend to illuminate both the potentials and limiting factors for anticipatory ethnography, in industry, and in academic contexts.

Reflecting on the Method

This simple method - a group of researchers watching an incidental design fiction, recording diegetically situated observations on post-it notes, and developing themes and insights via an affinity mapping process - was productive. The synthesis and analysis method was accessible to people unfamiliar with anticipatory ethnography. However, without a specific brief to pursue, the process did meander into many, perhaps too many, different domains. It is noteworthy that majority of the observations made, from all participating researchers, were actually made within the first 15 minutes of the movie. This made us consider creating abridged versions of incidental design fictions.

The authors cannot account for situations where a relevant design fiction does *not* exist, but where the temporally unbounded character of anticipatory ethnography might be desirable. This paper does, however, offer some (as yet untested) alternative ways of invoking anticipatory ethnography.

The *Sans Duty* project (Duggan and Lindley 2015), which explores the future of taxation, used an *intentional* design fiction as a stimulus to provoke reactions from members of a community. These reactions were captured on video, and then edited into a ‘fictional documentary’, which was in turn used to stimulate further discussion amongst the community and generate insight. Iterating the *production* of design fiction, consultation with stakeholders, incorporation of stakeholders’ insights into new design fictions, provides an opportunity to do anticipatory ethnography where a relevant incidental design fiction is not available by using the other modes of anticipatory ethnography. This is a different type of proposition to the study described in this paper which, deserves further consideration in its own right.

Does Anticipatory Ethnography Produce Actionable Insights?

Anticipatory ethnography *should* nurture and produce actionable insights applicable to plausible futures. The previous section detailed some such insights that emerged from a very quick application of a prototypical approach to anticipatory ethnography. Although the insights produced were undoubtedly interesting, and in some cases quite clearly ‘actionable’, some of these insights had an entirely different feeling or flavor to what we might expect. It is not surprising that some of the insights produced feel strange and unsettling, when one considers that they are derived from unreal characters, existing only in a contrived world, which contains technologies and phenomena, with which we are unfamiliar. In this anticipatory ethnography of *Her* it was, in particular, the broader societal insights, and those pertaining to artificial intelligence that had this peculiar flavor. One can assume that the odd taste is a product of the futurity of the source material and our inability, from our present perspective, properly to comprehend cohabiting with some of the diegetic prototypes depicted.

The authors tentatively refer to these strange inklings of insight as ‘plausible outsights’, as opposed to actionable insights. The word ‘outsight’ is related to ‘insight’, but incorporates an externality, which is relevant because of the ‘otherness’ associated with these findings. The plausible element simply refers to the believability, yet contingency, which is inherited through the suspension of disbelief. These plausible outsights would be, if considered *solely* within the diegesis of the design fiction, ‘insights’. However when viewed from *our* reality, they are external. This does not necessarily mean irrelevant, but they certainly have a different character from the actionable insights originally sought by the authors. Here are two illustrative examples: the findings that pertain to email management software are straightforward actionable insights. On the other hand, the findings related to loving technology and notions of ownership vis-à-vis artificially intelligent machines fall into the plausible outsight category. The plausible outsights generated by the anticipatory ethnography method, seem to reflect the ‘complete’ nature of design fiction prototypes. Design fictions provide visualized use case scenarios, personae, and user journeys all at once, and the fruits of these factors are interrelated; situated.

Strengths, Weaknesses and Next Steps

Our account of operationalizing design fiction with anticipatory ethnography provides some grounds for optimism: the method worked well, it generated interesting insights, and, as was

suggested in the peer reviews for this work, there is some significant potential in future-orientated research-for-design approaches. It is, however, clear that despite the generally positive outlook many questions remain. The most significant challenge is how reliably to transform the novelty and excitement of the approach into real-world tangible results. To reiterate: a question that arose at EPIC 2014: *can you bill clients for this?*

Apart from the more general problems anticipatory ethnography, the most obvious limitation of this *particular* technique is the fact it is possible only when relevant incidental design fiction material is available. There *may* be a way of avoiding this through developing other modes of anticipatory ethnography. Additionally it is true that science fiction (whether written or in film) consistently describes possible (and plausible) futures - a realization which is fundamental to design fiction in the first place (cf. Bleecker 2009; Kirby 2010; Dourish and Bell 2014).

One criticism which has arisen in discussion is that the insights set out here derived from *Her*, were obvious, no-brainers. Hence we ask the question, are the insights generated useful or relevant? If they are *not*, is it because of a fundamental flaw in the concept, a problem with the source material, or perhaps a shortcoming of the research approach or the researchers?

On a more methodological and practical level the authors are keen to explore using more sophisticated data collection and analysis approaches (as opposed to just post-it notes and affinity mapping) and to conduct a longer anticipatory ethnography that bridges across multiple design fictions. The substantive query is, when (or if) will we see the first product, service or system, whose design stems from insights derived from an anticipatory ethnography?

To conclude the paper it seems fair to acknowledge that elements of this approach have, and continue to exist in the world already. David Kirby's work on diegetic prototypes (Kirby 2011) is just one demonstration of how Hollywood's output impacts upon the world. Bleecker's much-cited essay (2009) explores the interplay between fact and fiction, from a design-led perspective. Dourish and Bell (2014) consider using fiction as a means to shed light on academic research. Meanwhile design researchers the world over employ a myriad of workshop techniques and stimuli to generate insights to aid in design processes. The list of related approaches could go on. Anticipatory ethnography though, by standing on the academic shoulders design ethnography, facilitates a well bounded, terse, and straightforward way of *operationalizing* the potential for design fiction speculations.

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NOTES

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Ethnographic Expertise as Visionary Catalyst of Collaboration

JONATHAN LEROY BIDERMAN

Recent developments in the scholarship of ethnography, combined with growing recognition of the value of collaboration in business, present industrial ethnography with the opportunity to exercise greater agency and leadership. This paper considers updates to theory and practice of ethnographic strategy, positionality, foresight, and design, observing that the combination of these developments is ideal preparation for such leadership and collaboration in a context of increasing complexity. Discussion of business orthodoxy and related critiques contextualizes the conversation. Atul Gawande's development of the surgical safety checklist provides a case study for showing how a deep ethnographic approach can apply the specific capabilities highlighted in this paper to foster collaboration and to understand and solve complex problems in a way that bridges "anthropological" and "design" ethnography. The paper ends with practical suggestions for advancing ethnographic leadership and agency. Additional key words: anthropology – bizdev – business philosophy – creativity – consulting – corporate – entrepreneur – fiction – future – leadership – organizational behavior – startup.

Coming together is a beginning; keeping together is progress; working together is success.
(Henry Ford)

INTRODUCTION

Industrial ethnography is coming of age, a point hammered home by the title of Christian Madsbjerg's keynote address to EPIC 2014: "Happy Birthday, now grow up..." (2014). Recent contributions to the EPIC conversation highlight the acceleration and burgeoning complexity of business and market dynamics caused by globalization and technological advances. But that scholarship also identifies particular ways industrial ethnography helps industry adapt to and succeed in this context. This paper will discuss how the evolution of industrial ethnography and business practice points toward the potential for shifts in authority and creative agency. This paper then will explore how industrial ethnography can provide strategic foresight, enable sustainable business development, and foster collaborative organizational behavior within and among organizations. The intent is to suggest an emergent direction for ethnographic praxis and new roles for the ethnographer: as catalyst and mediator of collaborative relationships and as strategic visionary for business opportunities and organizational development.

Where We Are Now

Industry demonstrates an increasing valuation of the contributions of industrial ethnography. Madsbjerg made that point in his keynote (2014), as did Hal Phillips at the beginning of his recent post on the EPIC website (Phillips 2015). But Phillips also notes that existing ethnography often is constrained to preexisting structures, organizations, projects, and processes. Madsbjerg's keynote celebrated that "it is now completely reasonable and

desirable to do our kind of work,” but likewise critiqued the status quo, saying that we should be “taking on new arenas, the big questions, and higher expectations” (2014). We can respond to this challenge by pushing ethnographic expertise, research, and analysis even further forward and upward in the innovation or business development process, to blaze new trails and drive new opportunities.

There’s nothing new about the idea that understanding human context, systems, and behavior ahead of time provides strategic advantage—it’s what underlies the whole general concept of “applied anthropology,” in all its manifestations, throughout the past 110 years (Rylko-Bauer, Singer, and Van Willigen 2006). But ethnography can exercise more agency in business projects by identifying opportunities, developing collaborative organizational structure and communication, and strategically shaping the design process in sync with dynamic contexts. We do some of this already, embedded within some companies and contracted by others. But continued practical and creative success depends on more than advisory ethnographic insight, so there are two parts to my thinking. First, and a direct extension of existing practice: ethnographic expertise is vital to determining strategy and project direction, especially in increasingly complex contexts. And second: ethnography is a key to building and maintaining collaboration, a means by which to enable both greater efficiency, innovation, and success in business and also recursive growth of ethnographic agency in industry.

A discussion of recent scholarship both from EPIC and on collaborative business philosophy shows how and why industrial ethnography is primed to take steps toward practical application of these concepts. Ultimately, the key to creating efficient and sustainable organizations working on novel, far-reaching, multidisciplinary opportunities in the complex and fluid contemporary market is the same as the key to catalyzing real, sustainable collaboration. To do either, we must understand contemporary and future sociocultural dynamics of complex systems, the facts, forces, motivations, and values of participants in those systems, and how to use that information toward practical and effective communication that can bridge cultural barriers.

WHY COLLABORATION?

The reader may ask: if collaboration methodology and ethnographic leadership are so good for business, why are those not the universal standard in industry? In summary reply, the fundamental reason is the entrenchment of success and the challenge of driving change in a self-reinforcing system. This paper is not focused on business practice or theory, but discussing the potential for of ethnographic leadership and collaboration requires problematizing the contemporary state of these landscapes. Madsbjerg exhorted us to “learn to speak business” (2014). In the context of this paper, doing so helps us to present ethnographic leadership and collaboration as of practical and strategic value in current business practice, as well as to discuss the viability of longer-term developments.

The Tautology of Success

Business orthodoxy, whether at startup or multinational scale, can be boiled down to five principles: maximize profit, minimize expense and loss, command and expand the industry, grow as continuously but efficiently as possible, and beat the market (Porter 1979). Michael

Porter codified these foundations of strategy based on ongoing study of the dynamics and forces at work in the competitive marketplace (Ovans 2015). Twice he has reiterated that the system of forces and fundamental strategies he described in 1979 remains largely unchanged, if now operating somewhat more rapidly (Porter 1996; Porter 2008).

Formalized business education has existed in some form since the founding of the Ecole Supérieure de Commerce de Paris (ESCP Europe) in 1819. Most modern business and management theory is based on Porter's work, augmented by developments in fields like organizational psychology and behavioral economics and tailored to the contexts of specific national markets and industries. Contemporary business training programs, whether towards an MBA or a targeted certification, provide instruction in a combination of theory and best practices. Because success begets success (Gladwell 2008; McNamee and Miller, Jr. 2004), and because business-school pedagogy is based on case studies of both success and failure, "best practices" basically codifies of how those who have been most successful in industry—C-level executives, serial entrepreneurs, investors—think is best to run a business (Beinhocker 2006). The resulting praxis is not entirely monolithic, but certainly it is clustered tightly around the preferred *modus operandi* of industry leaders, who attained their prominence by such means in the first place.

Critiques of business strategy and methods provide one window into current potential for change and how to pursue it. But beyond that, however, the rise, propagation, and acceleration of technology, especially digital telecommunications, has profoundly disrupted and reformed the business ecosystem, making it much more complex and dynamic and creating new opportunities for change (Anderson, Salvador, and Barnett 2013).

A Critique of Tunnel Vision

"Marketing Myopia" (Levitt, 2004 [1960]) is a significant and enduring critique of contemporary business philosophy, one to which ethnographic leadership and collaboration can offer both a strategic and an operational response. The critique calls attention to overly intense focus and hyperspecialization, both within and between organizations, as detrimental to creating sustainably successful businesses. The faster, more complex, globalized contemporary marketplace has magnified these trends, making the critique all the more relevant (Heskett 2014; Bazerman 2014). Within the business community, a major response trend has been the explosive popularity of Lean and Agile project management. The close coordination of specialists and rapid iterations prescribed by these methods increase team efficiency and agility, democratize group operations, and increase individual agency (Holbeche 2015). But cultural and communication gaps remain both between disciplines and among larger teams.

"Corporate ethnography" already works to bridge and translate among the different cultures present within an organization in order to reduce barriers to collaboration and efficiency (Off with the Pith Helmets 2004; Cefkin 2010; Fischer 2009; Altimare and Humphrey 2007). And existing industrial ethnography helps hyper-focused organizations be more strategically aware of and responsive to dynamic contexts. But we can do more. We can foster creation of systems of shared values beyond the goal or mission statement of a company or group as a whole, enabling reciprocal value sharing among team members in different roles and creating mutual supportive dependencies to undergird efficient and coordinated parallel operations (Heffernan 2014).

How Can We Do Better?

Margaret Heffernan (2014) critiques our general definition that “success” means “winning,” as well as the fact that what constitutes success is defined in part by those who previously have “won.” She proposes that collaboration is a solution both to strategic or managerial myopia and also to the absence of shared value development and communication. Echoing Levitt, she argues that “focus[ing] single-mindedly on the score” (Heffernan 2014:144) pursues short-term, shortsighted gain to the detriment of cooperation, resilience, innovation, and sustainability. Her cases illustrate that this principle applies both inside and outside of organizations, from relationships among individuals to marketplace interactions of entire organizations. Among people, competition disincentivizes sharing ideas, teaming up, and adding value outside of the job specification. Within organizations, competition discourages employees and managers from considering the broader welfare of the project because “it’s out of scope,” and it also pits projects against each other in the fight for resources. And among businesses, short-term hypercompetitiveness encourages decisions that decrease innovation and longer-term sustainability of a dynamic, competitive marketplace (Anthony 2014).

The reality of the global capitalist economic system requires competition within the market, but the critique of hypercompetitiveness is growing stronger (Meyer and Kirby 2012; Anderson et al. 2007; Graziano, Hair, and Finch 1997). In response, some research is exploring hybrid practices and strategies—for example, “coopetition” among companies in the same industry (Ritala, Golnam, and Wegmann 2014; Basole, Park, and Barnett 2014)—as a way to provide both dynamic competition *and* stability to the wider economy. Current structures of rewards and incentives encourage immediate market gratification and maximizing quarterly returns, but recent market shocks and recessions have highlighted the importance of more nuanced strategy with a longer horizon. Industrial ethnography has both of these capabilities, developed over the past few years in presentations at EPIC. In combination with the additional ability of ethnographic expertise to lead and facilitate collaboration, thereby maximizing foresight, flexibility, and resilience, this extension of industrial ethnography hints at the possibility for greater changes.

SHIFTS IN THE ROLE, SCOPE, AND CAPABILITY OF ETHNOGRAPHY

The diversity of industrial ethnography attests to the general acceptance of its value. To respond to Madsbjerg’s exhorting the discipline to “grow up” (2014), we must look for ways to expand its reach and influence—which has been something of an undercurrent to EPIC from the beginning, also occasionally touching on ethnographic collaboration. That conversation has evolved from focusing on the most effective means to extend the value and operation of ethnography in a globalizing marketplace (Mack and Mehta 2005) through discussing what “success” looks like for industrial ethnographers (Blomberg et al. 2006), reflecting on how best to communicate the nature and value of our work (Salvador 2007), and emphasizing the need to navigate corporate political reality (Thomas and Lang 2007).

2008 through 2010 saw the discussion broaden in two distinct directions: one reporting on ways that ethnography was becoming more central to and identified with broader corporate strategy, especially at Intel (de Paula and Empinotti 2008; de Paula, Thomas, and

Lang 2009), the other noting the ways that industrial ethnography seemed to be struggling with the combination of increased volumes of work, amorphous expectations, and inconsistent visibility (Hanson and Sarmiento-Klapper 2008; Mack and Kaplan 2009; Ugai, Aoyama, and Obata 2010; Lombardi 2009). This latter thread builds on the enduring observation that much of industrial anthropology adds strategic and operational value to business but is not involved directly in deciding what that business activity should be. The discussion of successful advancement of ethnographers at Intel into positions of greater corporate strategic agency and responsibility contrasts with the fact that many other papers continue to discuss industrial ethnography in terms of advice, consultation, and support. In the latter context, business or creative agency seem reserved, consciously or not, to designers, engineers, or business executives.

The distinction I wish to highlight is between two ends of a spectrum of organizational strategy, leadership, and operations. One is based on existing business and management orthodoxy, led by a typical C-suite. The other is based on the premise that ethnographic analysis and agency provide a framework for collaborative business process, incorporating ethnographers into fundamental positions of responsibility, coordination, and authority. In practice, ethnographic leadership means building explicitly on knowledge that emerges from researching interwoven and overlapping social, technical, and political systems in order to develop foresight and strategy. Intel and Steelcase, for example, lean towards this end of the spectrum. The benefit of this latter approach is that business decision-making becomes optimized to the full range of dynamic systems and contexts within which a business exists.

The benefit of ethnographic leadership builds on the insightful definition of a new kind of “ethnographic focus on Flux, Order and Catalysts (FOC) in the market ecosystem” (Anderson, Salvador, and Barnett 2013:246). Part of the goal of this paper is to respond practically to the cautionary statement at the end of that article: that a faster-moving and more complex market landscape requires that industrial ethnography be able to do more than just get to know people in context and articulate their points of view as a way to reduce uncertainty in product development. To meet this challenge, industrial ethnography must be strategically self-reflective (Foley 2002), about how to engage with the shifting ethical and business imperatives that arise from acknowledging flux and complexity as defining elements of an increasingly technological and globalized world (Anderson, Salvador, and Barnett 2013; Bezaitis and Anderson 2011). This paper suggests that combining several capabilities of industrial ethnography, elaborated at EPIC, with recent development of collaboration business philosophy sets up ethnography to play a more active and leading role in industry.

Strategy

The most fundamental of these ideas—ethnography as key to strategy (Anderson 2009)—is also the oldest, though recent discussion has shifted away from how ethnographers provide strategically-valuable information toward how the ethnography itself has strategic agency. The fundamentals of ethnographic analysis methodology have not changed from “placing into strategic and disjunctive juxtaposition different representations or perspectives so as to throw light upon the social contexts of their production and meaning, and to draw out their implications” (Fischer 2003:22). In the context of the flux and dynamism of systems of relationships and forces in the contemporary marketplace, static information about the state of those components is insufficient. Good strategy depends on dynamic understanding of

the system—being able to ask the right questions about those dynamics and relationships, as such taking an active role in defining strategy as much as informing it (Anderson, Salvador, and Barnett 2013; Bezaitis and Anderson 2011; Fischer 2003:262). Building collaborative relationships and organizations strengthens this agency by augmenting ethnographic expertise with specialist knowledge necessary to tease out important details of complex systems. And in return, such understanding makes it easier to identify what collaboration is necessary for pursuit of particular strategy and how to make it happen.

Positionality

The history of ethnography centers on an evolving understanding of the ethnographic point of view, from Western European objectivist “descriptive accounts of non-literate peoples” (A.R. Radcliffe Brown 1952 [1909], quoted in Segelstrom and Holmlid 2015:135), through realization of ethnographic subjectivity and reflexivity, to contemporary acknowledgment that “self” and “other” can be anyone with any perspective. The value that contemporary ethnography places on diversity of perspective and thick description makes it well suited to engaging with an increasingly complex and interconnected world (Tedlock 1991; Foley 2002; Cefkin 2010; Segelstrom and Holmlid 2015; Fischer 2003; Geertz 1973).

Kjærsgaard and Smith (2014) elaborate on the value of an explicit consideration of both positionality and “analytical distance” (p.268). The former describes the orientation of the ethnographic perspective; the latter describes the level of magnification. The argument is that both concepts are fundamental, but so far passive, elements of ethnography. However, an ethnographer *actively* may shift perspective on a system or consider several at once—inside looking out or outside looking in, from in among the most elemental participants to out at the highest possible altitude (Eames and Eames 1978)—with the intent to produce the thickest-possible descriptive analysis of all of its components. A variation on meta- or “para-ethnographic” research, activating positionality and analytical distance also benefits from and catalyzes collaboration (Powell 2015), in addition to contributing to development of extremely comprehensive and strategic understanding.

Fiction and Future

Absent actual clairvoyance, business must seek the next best thing to enable optimization of future plans—the operative word being “future.” People theorize constantly about the future (Bleecker 2009). Anticipatory *anthropology*—looking forward based on current knowledge—is not new (Riner 1987), but *ethnography* is rooted fundamentally in participation in the present (Ingold 2007). To enable ethnography to be strategically speculative, fiction can present the opportunity for immersion and participation in alternate or hypothetical realities: “the world of the story” (Lindley, Sharma, and Potts 2014:241; Brenkman 2005; Ronen 2005; English-Lueck and Avery 2014; Currie 1998; Carroll 1998; Gaut 1998).

Ethnographers can use existing thick data to build strategic, probabilistically accurate, speculative scenarios. We can do “fieldwork” in the fiction of others or observe the relationship and communication between contemporary reader and fictional work (Tedlock 1991). We can even look deep into the speculative future, using science fiction as both lens and mirror applied to human experience (Dourish and Bell 2014). Lindley, Sharma, and Potts (2014) present such *anticipatory ethnography* as an addition to the strategic foresight value

of industrial ethnography. It is not clairvoyance, and it does not necessarily foresee disruptive or discontinuous shifts, but it can start to clarify how systems of culture, behavior, business, and technology likely will change, based on comparative analysis of many potential futures and contemporary human experience of those fictions.

Design

Ultimately, the goal of industrial anthropology is not just to study the present, but also to have a hand in creating the future. The “appropriation of ethnography into design” (Segelstrom and Holmlid 2015:135) and propagation of “design ethnography” demonstrates the immediate practical value of ethnographic techniques to supporting goal-oriented, creative endeavors. But the distinction drawn between goal-oriented “design ethnography” and deeper ethnographic practice seems too binary. Thick-descriptive, “anthropological” ethnography in industry has strategic and creative agency to identify “design opportunities” from a deeper “knowledge about human behavior,” effectively bridging the two categories (Figure 1 in Segelstrom and Holmlid 2015:138). As “a planning exercise with intent to change behavior” (defined by August de los Reyes, Principal Design Director, Microsoft Xbox), design involves many different steps at which ethnographic techniques can add value. Madsbjerg’s encouragement to “divorce design” does not reject design, instead reasserting differentiating deep ethnographic research as providing a broader framework of knowledge and inquiry to catalyze and contextualize design. And this position likewise incentivizes ethnographic investigation to enable collaboration among all parties to the design process.

New Roles

Each of the four preceding sections highlights recent work on a key evolution in the theory and practice of industrial ethnography. Taken together, they illustrate the development of industrial ethnographic praxis capable of both deep and comprehensive engagement with the complexity of our contemporary reality and direct participation in shaping its future. The exposition of these emergent abilities of industrial ethnography—to develop and act on strategy, to operate deliberately and simultaneously from many perspectives, to provide well-informed foresight, to exercise creative agency to shape design processes—presents the discipline with an opportunity. It has the capacity to move beyond the success both of reaching prominence within organizations such as Xerox PARC, Wells Fargo, Intel, and Steelcase and of creating increasingly sought-after business and design consulting firms like ReD Associates, Sapient, Continuum, frog, and gravitytank. Growing business interest in the advantages of collaboration magnifies the opportunity for industrial ethnography to exercise its full range of capabilities in three new primary roles. First: to act in a visionary strategic capacity to identify and define business opportunities. Second: to identify the fields of expertise needed for successful and sustainable pursuit of those opportunities in the context of the complex and accelerating contemporary marketplace. And third: to catalyze collaboration by facilitating cross-cultural communication and the establishment of shared and mutual values, both within and between organizations.

PRACTICALITY

The practical and theoretical evolutions of ethnography and business philosophy discussed in this paper show up in various combinations across myriad cases. For example, Heffernan discusses the economic, innovation, and workplace culture advantages of collaboration at W.L. Gore (2014:101–104). Brun-Cottan analyzes Julian Orr’s work at Xerox PARC, highlighting the benefits of shifting positionality (2013:165). Ortleib describes the growth of strategic influence and agency of ethnographic research at Yahoo (2010:202). And Steelcase both relies on ethnographic research for internal strategic foresight and then shares that research via a bespoke publication as a way to drive the whole industry (Steelcase 2015). But for a detailed illustration of the power of combining the different elements discussed in this paper, we will turn to the complex, critical context of the operating theatre.

The Checklist Manifesto

Atul Gawande, by training a surgeon and scholar of public health, has built part of his career around a kind of expert participant-observatory analysis of surgical practice, both in personal practice and at varying degrees of removal and systemic investigation. The most widely-known of his works, *The Checklist Manifesto* (Gawande 2010), is a case-in-point demonstration of how a deep ethnographic approach enables comprehensive understanding: the what, how, and why of existing behaviors and operations; the social, political, and technical systems within which a subject of study is embedded; the characteristics of an ideal future; and the leadership, practical steps, and collaborative relationships necessary for achieving that goal.

Gawande’s research began as an observation of the routine chaotic unpredictability of surgical mishaps. Echoing Anderson, Salvador, and Barnett (2013), Gawande describes modern surgical medicine as a landscape of burgeoning complexity, in which technology, intensified focus, and hyper-specialization have been the unsurprising primary response (Morozov 2013). Yet fully half of surgical mishaps are evaluated as preventable errors, and that percentage has remained stable despite technical advancements. “Medicine, with its dazzling successes but also frequent failures, therefore poses a significant challenge: What do you do when expertise is not enough?” (Gawande 2010:31). This challenge is analogous to that faced by business and design in the increasingly complex marketplace: what combination of expertise to deploy, how, and to what end.

General scholarship of medical errors previously had shifted from blaming individual failure towards identifying deficiencies in the system (Bates and Gawande 2000), and began to suggest that enabling doctors to attend to the human context of interactions with both patients and colleagues could improve medical care in ways that technological advancement alone could not (Gawande 1998). Gawande started from these two premises, studying the systems and forces affecting surgical practice and interactions among surgical staff. Gawande’s process illustrates how shifting positionality—in this case, among the perspectives of the surgeon, patient, nurses, specialists, hospital administration, insurers, and even a hypothetical surgeon-as-patient—enables a detailed understanding of human systems and behavior present in a particular context. Comparative analysis with similarly complex, critical contexts in different fields revealed broader trends of behavior as well as commonalities among the specific solutions developed by each field.

The checklist solution came from nuclear engineering and aerospace, in which it provided procedural reference and order for frighteningly complex processes (Bates and Gawande 2000:763). The unpredictable, organic variability of medicine meant that extensive

mechanical checklists were inappropriate and even distracting in the surgical context. But Gawande's analytical finding was that the general key to managing complex, critical contexts is human, not technical: ensuring replicable collaboration and clear, complete communication of all necessary information, regardless of field. The surgical safety checklist concept pursued this goal, trying to ensure effective collaboration, deliberate communication, and attentive engagement among everyone in the operating theatre—medical staff and patient.

The surgical safety checklist was a strategic human solution to problems affecting a variety of systems—from rates of mortality and complications to malpractice liability, hospital logistics, and even doctor confidence. Designing and deploying a solution to a problem this complex and multidisciplinary required extensive collaboration among myriad interested parties—the initial journal article had fifteen coauthors (Haynes et al. 2009; Gawande 2010:ch.8). The resulting 19-item checklist was the product of many hypothetical iterations, and it caused subtle changes to pace, procedure, and power dynamics in the operating room. It faced some resistance, but the ethnographic character of Gawande's research required identifying and understanding the perspectives of all parties to the context of surgery, enabling their active collaboration in developing the solution. Beyond that, though, the fact that reducing surgical errors intrinsically would benefit so many stakeholders provided significant initial incentive for collaboration. The checklist proved extraordinarily successful, reducing surgical complications by 36% and deaths by 47% in the first six months of the pilot program (Gawande 2010:154). If anything, these numbers have improved since its wider adoption.

Gawande's multi-perspective, expert-participant-observation process and his subsequent comparative analysis of complex, critical contexts were both vital to the development and implementation of the surgical safety checklist. His work simultaneously was both goal-oriented and anthropological, and his development of a broader understanding of human engagement with complexity made possible the creation of a specific, strategic solution to surgical errors. The comprehensive understanding of both underlying behavior and specific context enabled identifying the collaborators necessary for building, refining, and implementing a concrete solution, learning how to engage those parties, and determining what leadership was required to make the hypothetical solution a reality.

Without the deep ethnographic character of Gawande's research and design process, it is possible that a similar solution eventually might eventually have appeared (Gawande discusses a few instances where more mechanical and logistical kinds of checklists were being employed elsewhere in medical contexts). But the focus on broader systems of human interaction and behavior in complex, critical contexts ultimately is what enabled development of a much more universal, concise, highly successful solution, in addition to advancing scholarship in fields studying teamwork, process management, disaster response, elemental types of tasks and decisions, interpersonal power dynamics, and holistic medical care (Gawande 2010).

MAKING IT HAPPEN

The broader goal of this paper, like that of EPIC as a whole, is to develop the strength, value, and potential for influence of industrial ethnography. Taking practical advantage of the ideas discussed in this paper could take several different forms in several different contexts.

Existing ethnographic presence within organizations, ethnographic consulting firms, academic training and support, and startup entrepreneurship all present distinct, strategic opportunities for expanding the purview of industrial ethnography. Ultimately there seem to be three or four pragmatic, practical steps that the discipline could take to work toward an industrial ethnography that can achieve greater authority, responsibility, and creative, strategic agency in a more collaborative business environment.

At the most basic level, we can work to shift ethnographic praxis subtly into a more actively creative and facilitating role, slowly leading by example. This is the most immediate, if slowest and least immediately gratifying, step toward a future in which ethnography provides the vision, structural foundation, and leadership in collaborative and innovative business. Existing high demands on industrial ethnographers make this route difficult, though current projects may see some immediate benefit from greater collaboration, multipositional methods, and incorporating the hypothetical. But proving the success of expanded industrial ethnographic capability by such quiet application in existing work, and calling attention to that success after the fact, may be the preparation needed to enable a broader paradigm shift.

The future of industrial ethnography also depends on the training of future ethnographers. In the academic context, we must push for wider acknowledgement of the agency, creativity, extensibility, and strategic applications of ethnography. Academic training in the social sciences tends to be oriented toward the history and theory of the discipline and the application of established methodology in the context of the present (Ingold 2007). Ethnography in this context tends more toward Segelstrom and Holmlid's "anthropological" end of the spectrum (2015:138), working toward deeper understanding of human experience and behavior. The rapid expansion of ethnography in industry argues for greater coverage of the practical applications of social science within academic programs. In particular, the recent scholarship of anticipatory ethnography deserves a place in academic training, including its creative, strategic, and practical implications. Whether added as elective material or as part of a core course (as a small segment on the vanguard of ethnographic praxis), the material discussed in this paper advances both academic and practical goals in the training of new ethnographers who possess a full complement of skills. EPIC or the American Anthropological Association could support such academic efforts by communicating directly with students about the value and potential of industrial ethnographic opportunities as well as by providing information to university departments to inform and encourage their support of students interested in more applied careers.

The educational context, specifically that of design or business training, provides another opportunity to advance a practical, agentic ethnography in support of collaboration. In both fields, exposure to and experience of ethnographic creativity, insight, and leadership potential while still in training lays the foundation for such collaboration in future practice. Establishing mutual disciplinary respect and understanding of values among students in design, business, and anthropology is a basic step towards a broader collaborative dynamic in industry. In practice, this suggestion requires the support of professors and academic departments to create both cross-disciplinary and practical partnership courses. Funding for new academic efforts is always a challenge, but the large volume of money currently supporting entrepreneurship and innovation, as either grants or commercial investment, is one potential financial resource.

Outside of academia, there are two immediate opportunities to advance ethnographic innovation and collaborative leadership. Existing ethnographic consulting firms are an ideal environment in which to nurture nascent ethnographic creativity and agency. These organizations could develop their own structures and strategies to encourage entrepreneurial research and innovation starting from deep ethnographic investigation of what Madsbjerg (2014) called “the large problems.” Larger companies might consider policies such as Google’s “20% time” for personal projects. And companies of any size could partner with other funders to create the ethnographic equivalent of business incubators, providing professional mentorship in industrial ethnography and requiring both scholarly ethnographic research and development of practical design opportunities as output. This proposal requires some legwork by individual firms as well as by EPIC to identify and develop relationships with investors who would support this modified path to entrepreneurial success, but the growth of industrial ethnography and adoption of collaborative business philosophies suggests that such investors exist.

CONCLUSION

Ethnography has come a long way from its roots. But that firm foundation of deep descriptive methodology, comparative analysis, and social theory is more relevant than ever to making sense of increasingly complex human systems and the constant stream of new forces shaping human behavior. This paper has proposed that recent developments in scholarship of ethnography and in business philosophy set the stage for ethnography to assume greater agency and leadership in industry and to catalyze more collaborative relationships. But at the same time, we must remember that the fundamentals of ethnography ultimately are what make possible this evolution in ethnographic praxis in industry.

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NOTES

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Shared Ethnography of Shared Cities

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This paper aims to foreground issues for design ethnographers working in urban contexts within the smart-city discourse. It highlights ethnography's role in a shared urban future by exploring how ethnographers might pave the way for envisioning digital infrastructure at the core of Smart City programs. This paper begins by asking whether urban development practitioners can design for inclusive interaction with Smart Urban Infrastructure. The research suggests how ethnographers can work with 'cities' to rapidly develop diagnostic tools and capture insights that inform design processes with both utility and inclusive interaction as their key values. This involves rethinking how we consider places where space and information intersect. This work led to developing rapid means to assay a site and sensitize to contextual issues by tapping into heuristic expertise innate in city dwellers. This means doing ethnography in parallel with publics as opposed to performing ethnography 'on' them. Hence we discuss a fresh ethnographic perspective that can be especially useful in this context; shared ethnography.

MOTIVATIONS & METHODS

Framing the development of Smart Cities in terms of inclusion acts as a potent stimulus to re-think Urban HCI. Through this paper, we identify gaps and harness opportunities to make meaningful interactions and warn against the grave implications of inaction. By beginning to fuse ethnographic practice's rich history of engagement with cities, with burgeoning developments in smart technological infrastructure, the research aims to provoke and inure the urban development, human computer interaction and ethnographic communities to think carefully about *the* Smart City, and then look beyond it.

In this paper, we argue that a crucial maneuver is necessary; by adapting heuristic methods developed to evaluate digital environments to diagnose physical sites. This affords thinking of an urban site as a user interface and prepares the ground for the appropriate application of digital infrastructure that can enhance and include, becoming a sustainable part of the urban fabric. The resultant general method can be used as an adaptable system for evaluating a city along with its *users*, drawing on their innate expertise; lived experience. Rather than attempting to erase the difference between physical and digital user environments, it suggests acknowledging their co-presence and interdependence with respect to enabling the utility of a city for users/inhabitants.

Inspired by Kevin Lynch's seminal approach to urban studies (1960a) and borrowing from Jacob Neilson's (1992) heuristic user evaluation for this purpose, the researchers devised ways of rapidly capturing insights about a place by tapping into the perceptual images of users. Lynch privileged the meanings that inhabitants ascribed to their environment and his work attempted to make user perceptions a central stimulus for planning spaces, he aimed to capture perceptual images of a city and identify their common

patterns. These two perspectives are a surprising fit and form an incredibly productive way of thinking about information layers of a city, its *smartness*. Coincidentally, these principles are sympathetic to third paradigm HCI thinking (Harrison, Tatar, and Sengers 2007).

Rather than suggest guidelines, too inflexible for designers and too general for broad application, this paper suggests first shifting our stance on how we regard cities. It finds that such reframing can reveal novel ways of harnessing innate expertise dormant in inhabitants. This strategy is also effective in engaging those that sit outside the present gamut of users. Seemingly, the savvy core that, ironically, are the creative technical class that design systems will find it inherently difficult to design for inclusion, our research suggests alternative strategies. This indicates an issue of epistemic injustice, where either prejudice de-privileges the credibility of a person's insights or there is a gap in collective interpretive resources that puts someone at an unfair disadvantage when it comes to making sense of their social experiences (Fricker 2007). The research findings suggest that; people's interpretive ability, especially concerning their environment can be very strong. Also, that this gap can be bridged effectively by facilitating capture of situated insights and contends that ethnography should give weight to these collective interpretations, especially when this group is the user.

Design for inclusion is not only responsible, it is a political and in some cases a legal mandate. Inclusion is a fundamental consideration to ensure the resilience and sustainability of Smart City programs, as soon as they are regarded as complex product services systems (PSS). It makes sense to frame the city as a user interface when we recognize it as knot of nested services. Manzini et al discuss the need for a framework to understand the new types of stakeholder relationships and/or partnerships that are producing new convergences of economic interests, and their potential concomitant systemic resource optimization (2003). Designed to understand the situated usability issues of an urban site, to underpin attempts to foster livable and sustainable conditions, as such this study might be regarded as a Design Orienting Scenario (DOS) by Manzini (2007). Space and computation are increasingly interconnected as fungible components of a blended whole. As we face a seismic upheaval in how information and space intersect, considering issues of inclusion is both prescient and pressing.

The Urban Future

Cities are sites of tremendous innovation, living labs for experimentation. The question presents twofold; how can ethnography reshape how we envision future urban interactions and how can ethnography harness innovation capability dormant in urban dwellers or 'users' to inform Smart City design?

Cities already generate 80% of global GDP (BIS 2013). Therefore, research and governance need to take a lead in removing barriers to inclusion and facilitating collaborative innovation between multiple diverse actors through civic engagement. Importantly, cities are also attractors for less privileged. Between 2000 to 2010 nearly half the world's urban population growth can be ascribed to rural to urban migration (Tacoli, McGranahan, and Satterthwaite 2015). Added to this, global populations are ageing, surprisingly in nearly all nations, not just developed ones. The number of older persons (over 60) is projected to double by 2050. After the sea change that came in 2004 when humanity for the first time became predominantly urban, by 2047 the number of older persons will exceed children for the first time (UN 2014).

Internet penetration grew from just over 6 per cent of the world's population in 2000 to 43 per cent in 2015 (UN 2015). Yet, the International Telecommunication Union (ITU) secretary-general Hamadoun Touré has stated that access signifies a 'tipping' point for global economic development. Forming a key point in the now expired 2015 UN Millennium development goals; access to information remains a key challenge. Touré frames access to communication as a human right; A right to participate in the knowledge society and the dawning digital economy, not to mention the 650 million people worldwide living with a disability of some kind (WCIT 2012).

Globally, every other person has access to basic Internet. In an older, poorer, differently abled and yet more urbane future the social value of inclusive access to technology is obvious, and so is the market opportunity. Paradoxically, those urban dwellers outside of the present smart city purview are in fact crucibles of process innovation perfectly adapted to the contingent mores of urban life. Finding ways to engage and include these sectors in meaningful interactions is an important strategy to enable social mobility and cohesion.

Ethnographic practice is especially germane to contend with these issues. By retooling industry ethnographers with useful perspective to quickly generate insights about an urban site is an important precursor stage in determining what digital services might bring greatest utility to a particular site. The ultimate aim is to beat the bounds for better urban fabric augmented with computation.

Smart City Critique

A growing critical perception of Smart City visions is that they 'construct the resident as someone without agency; merely a passive consumer of municipal services - at best, perhaps, a generator of data that can later be aggregated, mined for relevant inference, and acted upon, a brutally reductive conception of civic life'. Greenfield claims that Smart City rhetoric intertwines innovation and efficiency with exploitation and control (Greenfield 2013). This is a reality antithetic to inclusive, livable cities.

A fundamental conceptual problem is the distinction between physical and information spaces. For technologically savvy groups, the utility of smart systems is self evident, for others, this can be a source of anxiety and confusion. For the excluded, ubiquitous information signifies an anxious uncoupling or de-situating of information and space. Traditional sites of access for common services; libraries, banks and post become dislocated from visible, permanent sites and becoming ephemeral, always available but mediated through some kind of interface that may appear counter-intuitive or at worst may remain unavailable entirely.

Situating Urban HCI

Computation is becoming predominantly mobile. In early 2014, mobile device use exceeded static devices for the first time (Gens 2014). The present device-based ecology will steadily be displaced by growth in pervasive and ubiquitous computing. Furthermore, the underlying trope is toward computation that it will also become a less visible, more integrated feature of spaces. This signifies a megatrend that is already underway (Vidyasekar 2013).

Often used interchangeably, for clarity, Ubiquitous computing is best thought of as the underlying frameworks or infrastructures that allow people to interface with information.

Pervasive computing represents a vision of the blending of the physical components of our lives with computation, in other words the distributed networks of tools within an environment, through which we access information. Presently, an ecology of devices acts as interface to these systems, however looking forward, systems are likely to be increasingly embedded and shared resources (Kostakos 2005). In other research, we have explored how ethnography can anticipate future developments before they arrive (Lindley, Sharma & Potts 2014).

Mark Weiser envisioned computing as an integral, invisible part of the way people live their lives. As Weiser's vision portends 'the most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it' (Weiser 1991). Usefully, Weiser gives the example of reading a street sign, we absorb its information without consciously performing the act of reading, this phenomena suggests in essence, that only when things disappear in this way are we freed to use them without thinking and can focus beyond them onto new goals. Weiser envisions computing performing this role, extending reach, silently. In terms of Urban HCI, this means removing barriers to interaction and drawing from these effortless, situated interactions as a stimulus. This capacity can act as bridges across groups who may be unfamiliar with or unable to access present technology.

There is an underpinning 'machinery of interaction' that reinforces this apparent deftness in reading the road sign, so, can this deeply innate interaction become a gold standard stimulus for HCI? As Crabtree et al argue, uncovering this is ethnography's prize. Finding it is what doing ethnography as we know it is all about. Arguing, it isn't especially difficult to do but it does require that we pay careful attention to that which we would ordinarily let pass us by (Crabtree, Rouncefield, and Tolmie 2012).

Steve Harrison and Paul Dourish famously brought interaction with space and place within the auspices of HCI. Space for them refers to a context's physical configuration. Place refers to the way we are framed by social conventions and experience. Their view emphasises the ways in which we generate spatial forms and articulate spatial experiences. More importantly, it is vital to see both space and place as critical aspects and products of the circumstances of interaction (Harrison and Dourish 1996). In Harrison and Dourish's words, 'Place-making however reflects the *conscious arrangement* of elements to create a space that accommodates activity, and (here is the hard part) the interplay of reflective design and happenstance to give expression to the values of the occupants and their wider community'. In other words, as we have observed, a space can only be made a place by its occupants. The best that the designers can do is to put the tools into their hands (Dourish 2006). Here ethnographers should take issue with what we actually observe in the street to operationalize this vision.

The interpretation of the study reveals the enormous impact from mobile devices, already extant, on the way society interacts with information. We notice the central importance of interaction with these systems and their potential to facilitate shared interaction, however the way users interact presently is still mainly very individually focused. Change in the way we utilize and share information is necessarily shifting the form of interactions from individual behaviors to shared ones. Notionally, inclusive systems are best conceptualized as shared ones because this enables people to share what they know and include new users in their experiences, this employs a social learning theory, where legitimate peripheral participation leads to membership of a community of practice (Brown 2002).

What's more developments in ubiquitous and pervasive computing systems signify the perfusion of computation into physical spaces or as Weiser (1991) suggests tend to disappear entirely. In practical terms, this means these embedded services drop below the line of visibility. This coincides with the emergence of a third paradigm of HCI, named by Harrison *Situated Perspectives*. This perspective treats interaction as a form of shared meaning making in which the artifact and its context are mutually defining and subject to multiple interpretations. In this view system interactions should amplify and embody situated perspectives (Harrison, Tatar, and Sengers 2007). It is important then to develop a situated perspective on urban HCI, to shape meaningful shared interaction with the city as a user interface. There is a closing window to shape the utility and value of situated information systems before they 'disappear'.

This means refocusing onto embodiment and shared use from a single user / single device view, foregrounds collaboration and communication through shared artifacts and spaces. This means a shift to situated usage within a shared context. In an era of *infospherization* (Fattahi and Kobayashi 2009) exploring implications and evaluating the impact of emergent digital layers and how people *image* their surroundings becomes an invaluable role for design ethnographers.

Throughout the course of our observations we were forced to ask, how do we capture these situated *shared perspectives*? How can ethnography be tooled to examine concrescences of interaction that have both a digital and spatial character with both physical and mental components, that can be both personal and shared experiences. This entails crossing a difficult etic - emic threshold about how inhabitant users experience and interact with cities. We searched for an effective means to do this quickly, with integrity. We resolved to engage the public in ethnographic capture, to acknowledge their expertise by making inclusive tools to understand our site; an ethnography in parallel.

Indicatively, Fischer & Hornecker employ the term *Urban HCI* to denote situations that are composed of the built environment, the interface and any associated computer system, and the social context. They build on the concept of *Shared Encounters* which bridge existing research in architecture, urbanism, social sciences, anthropology and computer science. They adapt the concept of the shared encounter from Goffman's "Behaviour in Public Places". A Shared Encounter here is defined as "an ephemeral form of communication and interaction augmented by technology" (Fischer and Hornecker 2011). Their work focuses on the specific interaction patterns with media facades, this research advocates taking a more general view. Where Smart infrastructure is a vision rather than a reality, it is important to begin with a precursor stage; to understand how a city is used as an interface. This ethnographic work is essential as a stimulus to inform the design of appropriate services and interactions for Urban HCI.

The Study

The study approaches these issues by starting simple. Observing an urban site with a view to understanding how people interact with information is problematic; this was the stimulation to regard it as an interface. Cities are certainly crucibles of shared interaction and interminably subject to diverse interpretations from their inhabitants, we sought to peer into this process. As Coyne intimates at our core we are interpreting (hermeneutical) beings. Our whole world is imbued with this imperative to interpret (Coyne 2005). This insight gave

license to engage ordinary people in the interpretive work usually ascribed to ethnographers and to entrust this interpretive expertise to the public as a user group. This is the self same capacity that allows such seemingly effortless interactions with common features of a city where people live e.g. traffic lights, signs, paths. The tool was designed to activate this invaluable faculty that we came to characterize as innate interpretive expertise. The interaction logic of ethnographic tools needs to be designed with inclusion as its first principle. This meant producing a tool that had extremely low barriers to access and effectively agnostic to the ability to use or access technology.

We developed an open evaluation tool system based on the following twofold logic; (i) color (ii) positive and negative value. The underlying assumption was that two orders of complexity remain generally interpretable but allow for enough complexity to generate rich responses. We chose the traffic light color value system because it binds onto a universally recognized visual code, is inherently connected to motion and mobility in urban areas and because it was easier to communicate the following 6 values to our research participants:

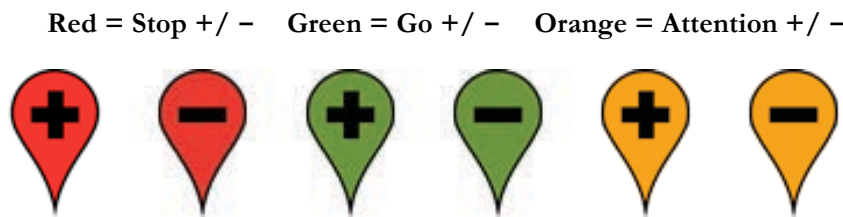


Figure 1: Heuristic tagging tool

The binary value system (+ or -) was chosen because it is universally representative of positive and negative values. It is coherent with affirmation and negation in decision-making and again, the widely held connotation of positive and negative allows for simple choices to be made quickly. For example, a Red - (*stopped negatively*) would indicate feeling obstructed whereas a Red+ (*stopped positively*) would mean that someone made a conscious decision to stop.

Each evaluator was briefed loosely to connect 6 key locations in the city surrounding a central starting point. We asked participants to identify the 'best' routes between these locations, giving as little direction as possible. We standardized an introduction to using the tool and produced two versions; one reliant on using a GPS enabled smart phone and camera, the other using physical materials. We offered a free choice for which to select and designed the capture tool such that both data sets could be entered into the same space for analysis. We provided each participant with a set of six tags to represent each of possible choices.

The tags were deliberately developed to be reminiscent of place-markers used in digital cartography. This was a deliberate strategy that itself resulted in a key insight to pre-sensitize users who feel less comfortable with technology, whilst drawing upon what they do intuitively. In this sense, enabling participants to harness their expertise in interacting with common urban situations. The emplacement of artificial signifiers in the physical world and vice versa points to an approach to designing situated HCI with inclusivity as a key organizing concept. This became a conceptual maneuver to nudge interaction behavior positively (Thaler and Sunstein 2012). Overlaying iconography from digital environments in

physical contexts is a phenomenon that is already underway and itself became a principle insight from the study. The tool was also designed to encourage our participants to employing their evaluative faculties whilst making judgments about what they observed in situ. The tool was designed to elicit both analytic and synthetic insights from participants – a *walk aloud* method equivalent to think aloud protocols (Van Someren, Barnard, and Sandberg 1994) commonly used in evaluating the usability of digital systems.

The study took the form of a research through design process in three iterative phases (Gaver 2012). We located our study in Lancaster, UK; the university town of Lancaster in the North of England. Lancaster has a vibrant merchant culture and an active city council that seemingly is determined but uncertain of how best to implement and capture the value of digital strategy for infrastructure and services. The University itself is engaged with the city with a growing number of collaborative research projects and also provides the city with a diverse international student population. Lancaster has aspirations to enrich its heritage with sustainable innovation.

The research began with a series of semi-structured ethnographic observations of the site, taking the form of static observations and free walking observation by the research team. This was followed by a series of workshops to gauge requirements and frame a problem space with multiple stakeholders and members of the public. Way-finding was deemed to be a key problem in the site, Lancaster was thought of as holding rich heritage and social capital assets but felt disconnected both socially and spatially.

Throughout we used a card sorting method borrowing from (Moore and Benbasat 1991) and (Nielsen 1995a) to develop a method to thematize insights for feeding back into a design research process. Although not statistically rigorous, this method allowed the researchers to derive conceptual constructs from our observations and we brought some internal validity to the data by spreading the analysis amongst our research team and calling upon a wide variety of interpretations around a common problem from broad user groups.

A pilot study with 7 pair teams engaged in tagging the city, researchers passively observed some of these studies and short debrief interviews were conducted after each session. This allowed the honing of the tool design through user feedback. The first participants were all tracked using a commercial GPS application, to trace their movements. This allowed the development of a study strategy and captured 500 data points and associated semantic data of incidents of attention. Finally, a public research intervention trialed the tool with the general public; 35 pair teams comprised of members of the public, resident and nonresident. Their raw data, necessarily, was more uneven, however the qualitative responses formed a rich perceptual image. The sessions lasted around 90 minutes on average, although a timeframe was deliberately not stipulated. The task instruction urged participants to build the activity into their planned movements and was designed to be similarly replicable for each team.



Figure 2

Participants were briefed to attend to moments that drew their attention and assign one of the six tags provided, marking the time, location and direction. Participants were asked to evaluate which of the tags pertained to the incident. They were instructed to use the tag to point out the issue, using the tag held at arms length and take a point of view picture. The tag was thus in the field of the photograph, giving context. Using an open tagging system allowed for a quick way to capture perceptions and allowed participants to evaluate which incidents were worthy of mention and to ascribe their own meaning to each.

Each photograph was GPS tagged and time stamped. For participants who preferred to use a paper map we asked them to mark the appropriate symbol by hand. We encouraged both groups to make extensive notes and drawings to supplement each tagged incident. Each team tagged on average 60 incidents resulting in circa 2000 separate tagged incidents. This data was assembled into a database for pattern spotting and the data was loaded into a digital model of the city showing location data and user choices. This allowed for a rapid unraveling of the perceptual usability issues in urban contexts, the tool mediated a way to capture shared perceptual images (Lynch 1960b) of research participants of the city in parallel and then assemble these into a shared artifact. Deploying this data into a digital environment was extremely useful for further interpretive work and pattern spotting, drawing on the pattern language work of Alexander, Ishikawa, and Silverstein (1977)

Nielsen's heuristic evaluation matrices show the success of evaluators in finding usability problems. This heuristic evaluation principle relies on parallel evaluations of user environments to collectively identify a broader gamut of usability problems than experts can (Nielsen 1995b).

Discussion of Insights

The outcomes of this study are useful for both urban planners and system engineers but also to a third class of activity that blends the two practices. The ambiguous boundary between information and space afforded by technological mediation suggest a growing sense that place is experienced as a blended space (Turner 1998) where physical and symbolic features are reciprocally projected onto one another. Fixed systems are unlikely to remain useful in public contexts, as users will have flexible interpretations of the worth of a system and how to use it.

It may also be of interest for researchers interested in innovative research methodologies. Although the study was quite specific, the underpinning aim was more general. The tool itself was not designed as a research method (although it proved useful as one).

It was a good fit to repurpose usability heuristics because the underlying premise of heuristics is that with an increase in evaluators engaged in using a system there would be a commensurate increase in the proportion of usability problems that can be identified. All that was required was to frame the type of problems to be identified and then facilitate the capture of incidents flagged up by users whilst interacting with the system. In a traditional HCI context, the user can be observed or the interactions recorded. In the context of a city, a tool was needed that would facilitate this. Determining that this tool should itself be assembled from common heuristics and call upon heuristic capacity, in the true sense, meaning designating or relating to decision-making that is performed through intuition or common sense, was a vital design strategy. Heuristics can be thought of as methods that place participants as far as possible in the mindset of the discoverer (OED). In psychology, heuristics pertains to simple, efficient rules, learned by experience that have been proposed to explain how people make decisions, come to judgments, and solve problems typically when facing complex problems or incomplete information (Sternberg 2011). Heuristics tap into innate cognitive ability; they explain our ability to deal effectively with contingent events, by using situated insight to inform onward progress. This could be characterized as an *abductive* approach (Peirce 1901). As such, abductive reasoning lends daily decision making the kind of deftness to do the best with the information at hand, which often is incomplete. This resembles the mode of thought a trained ethnographer assumes to understand a context. The professional relationship between design ethnography and user experience design ensured this connection would be commensurate and mutually intelligible.

Taking an abductive approach to decision-making allows for rapid flexible thinking and recognizes the value of intuition (or *nous*) to work with effectively in contingent situations where no optimal situation exists. Herbert Simon identifies that engagement with complex research contexts requires *satisficing* as in these situations, single optimum solution exists (Simon 1996). As this research engages with a lived context, it must proceed via satisficing, proceeding by finding the best available interim step towards a goal. Essentially, establishing a continuum of informed guesses, this seems to harken the mode of thinking people rely on whilst navigating an environment. Generally, people are innately very good at this. The resultant strategy meant borrowing from this insight to ensure the methods were fit for purpose in unstable contexts, but also calling upon this faculty in our participants to unravel usability problems in the site. This meant that our epistemological stance was a good fit for what we observe in the field.

The core principles of heuristic evaluation were found to be good match for identifying usability problems in an urban context. This would seemingly work equally well in sites that have little or no digital infrastructure and sites with extensive Smart infrastructure. Having said this, we advise that ethnographers working in Urban HCI contexts begin this work in earnest to determine what smart layers could bring to the civics of a city, rather than refigure a system after the fact. In this way, ethnographers have an enormous part to play in a global Smart City market projected to have cumulative value \$1.565 trillion USD by 2020 (Vidyasekar 2013).

Harrison & Dourish give weight to the reasoning that reinforcing the loop between way-finding in physical environments with equivalent digital systems should be indispensable:

“We live in a three-dimensional world, the structure of the space around us shapes and guides our actions and interactions. With years of experience, we are all highly skilled at structuring and interpreting space for our individual or interactive purposes” (Harrison and Dourish 1996). By acknowledging this tacit spatial and interpretive expertise that humans bring, developed through the course of their daily lives, our ability to produce meaningful systems is greatly amplified, a view strongly mirrored in the work of (Suchman 1987) and (Orlikowski 2009). This is the same machinery of interaction spoken about by (Sacks 1984) and later (Crabtree, Rouncefield, and Tolmie 2012).

Exclusion will always result from a user’s inability to find utility in a service; this seems to result from a failure to make meaning from an interaction. In lieu of finding validity in an interaction system a person will resort to orientating themselves with reference to physical features, this strong instinct to return to embodied experience is evidence of an innate spatial expertise. We see this as a source of insight for the design of emerging systems. Our tool was ridiculously simple but enormously productive as a mode of thinking through the site as ethnographers, furthermore, it facilitated the participant group to reflect on the usability of the site. As such simple interventions like this can act as enormous resources for learning quickly about a city. Drawing on Lynch’s methodology, our data acted to form an inter-subjective perceptual image of the city. We present the product of our data analysis and what this leads us to understand about design for inclusion in Urban HCI.

We recognize this as a resource for intelligent design of situated HCI. Way-finding was deemed to be a key problem in the site. A shared perceptual image emerged, representing Lancaster as rich in environmental, social and economic assets but a sense of dislocation. An overarching political climate of funding cuts to public services, a national scale transition towards self-organizing public services to replace legacy government funded ones feeds into the megatrend of transitioning traditional built space into spaces of situated information. There is little digital infrastructure presently in Lancaster, but a sense that the existing information environment was not able to adapt or signify the life of the city. Insight about life in the city is held by inhabitants and exchanged somewhat tacitly (Polanyi 1966). Accessing knowledge that lies in networks of people, using co-creative strategies to harness value is an increasingly important role for design ethnographers (Ramaswamy and Ozcan 2014).

We found that for each physical characteristic, there was a counterpart that would tell us something about the role information played in informing decision-making. What we observe is a growing evidence for linguistic and interactional structures born of e-culture finding their way into public space. We see great desire in our participants to feel oriented and connected to the history and social dimension of the city. The engagement pattern in our study was asymmetric, just as engagement in digital infrastructure would likely be. The study gave us a keen sense of how the city is used as an interface and delivered rich insight into quickly deploying effective diagnostic tools in neighborhoods, streets and city centers.

We found a skew in our participation rate towards families with young children, visitors to the city and persons with factors limiting their mobility. The common thread between engaging groups was a sense of disorientation, difficulty in connecting social and spatial experiences and a vested interest raising conviviality through place-making. This is likely because the study was phrased as an activity, a way of engaging with the city and finding more about it, more importantly, these groups unanimously expressed a sense that the city was disconnected and badly provisioned with orienting information and services.

There also seemed to be division amongst social groups in the city, a rupture between different social worlds using the city in parallel but without interaction. This was typified by a group of disenfranchised local people who did not engage with the study, but watched intently throughout. They used the central space outside the town hall to conduct their social interactions with a sense of ownership of the space, ignoring and being ignored with some anxiety by the wider populous.

Engagement - Our initial, more conventional attempts at ethnographic observations and interacting with people proved to be extremely difficult and did not seem to permit ‘participation’ of any kind. In response to this however, a research through design process was useful to rapidly develop tools to engage participants resulting in a more ‘emic’ view, akin to the perceptual images sought after by Lynch. The tool and the activity together in some ways performed as a shared boundary object (Star and Griesemer 1989). The tool was open enough to sustain a degree of interpretive flexibility, becoming a way to express different meanings and agendas through a common framework. The activity in itself stimulated independent dialogue around the theme and begin to raise the issue into public awareness. The assemblage of the people, the tool and the activity itself in its various different configurations allows us to frame interaction within a wider activity system (Engeström, Kajamaa, and Lahtinen 2015) that could be usefully deployed in cities, the challenge remains to develop shared experiences that are more than fleeting moments and become an integral part of the shaping of urban interaction. As such, ongoing, shared ways to contribute to civic planning and contextualizing appropriate Urban HCI would mean establishing and sustaining boundary objects in use (Barrett and Oborn 2010).



Figure 3: Heuristic data visualization maps – with photographs (left), with tags (right)

The data visualization compiled from the tagged incidents was also incredibly effective to delineate the perceptual boundaries of Lancaster and the clustering of perceptual usability. Participants tagged certain areas of the city as being of value to them and our further investigation in the form of debrief interviews revealed patterns of interaction, blockages in flow and areas of convivial interaction (Ilich 1979). Multiple mobility and access challenges to certain parts of the city and these were tied into the physical and information features of the landscape and there was a reciprocal relationship between these features. For instance, signage performed similar obstructing or facilitating roles, one was able to ameliorate the affect of the other. In some cases, concrescences of failures to orient and afford appropriate

utility caused clusters of tags indicating where a place was failing to support the people's intuitive interaction, conversely, where information and territory intersected and afforded flowing interaction, a place emerged. There were alternate routes that the city dwellers were most likely to know, these were indicative of a wider expertise shared amongst inhabitants that was able to circumvent problem areas. This information was rich enough to begin delineating how local knowledge had begun to form informal districts that provided particular services well and other areas that seemingly failed to orient users and give them a sense of place. The data patterns shown together present a powerful way of understanding these failures or successes and provide insight to hack these spaces, borrowing from the success of one to recondition another.

This emergent pattern would be incredibly useful for planning the fundamental dimensions of urban flow; signage, tourist movement and commerce. This also gave rich semantic issue of how embedded digital services could raise public awareness of these patterns that could assist both in better in situ and long-term decision-making. In the long term usability of particular patches of space could be associated with their perception of success and utility value to city users. It would be a fundamental step to make informal contribution to a public perceptual picture an ongoing process and make this public intellectual property. This could act as a de facto shared boundary object (Star 2010) in public ownership and accessible to all. This data could function as both an online artifact or as physical part of the city, ideally the two would be entangled. This would be a potent means of participatory planning and a useful stimulus to determine capabilities capture for inclusive Urban HCI systems.

Semblant Interaction – This point of synthesis indicates the utility of affording semblance between digital experiences and physical ones, thus situating HCI. The research data presented the potential of drawing upon innate experience to inform inclusive design choices in HCI. A common reported situation for older participants was attaching anxiety to using online services or mobile technology (to interact with services like banks, online shopping or even navigation). As some sectors become increasingly used to performing interactions with these services, for others the situation is becoming increasingly exclusive, and frankly, mystifying. Participants found that the conventional architecture of information in the street; signage, access to postal, shopping or banking services was in decay and in some cases gave entirely erroneous information. This presents an opportunity for meaningful, smart design interventions. Investment in shiny smart services often means decay in functional physical services that are relied upon. As those with access become more comfortable with digital cultures and services we see lots of evidence of digital language and iconography becoming present in cities and becoming part of how we understand space. For others this becomes a barrier to use and interpretation.

The attitude of shared ethnography and rapidly iterated contextually sensitive tools can help to uncover these otherwise hard to articulate issues and help to diagnose solutions appropriate to users (inhabitants and visitors). Finding ways to make the online interaction experiences resemble familiar interactions that occur without a second thought i.e. reading a sign, using a post office, bank etc. is a potent way to both inure excluded groups to feel comfortable with online interactions and to design situated information systems that afford a similar level of usability. This reciprocal bridging of insight is the core concept of this paper. This also instantiates the directive that if an excluded group, for instance the elderly struggle

to interact with an HCI environment equivalent to a service they use with ease when in a physical site, it should be evaluated as poorly designed.

Where there exist complex interactions that these same users find to be second nature, this is a potent place to inform better design interactions. This raises an important issue of equivalence of access and inclusion. Rethinking a cities' ecology of services in terms of equivalence would cast in a stark light the success of changes in city environments and the relative success of technocratic attempts to provide smart services. This argues the case for aligning experience expectations across services. For instance, simple changes like introducing the user interaction steps from logic of logging in to online banking service, subtly into face to face banking interactions would be an important behavior change strategy for inclusion. Allowing features of each user experience to bleed into the other, removing complexity resulting in interaction patterns that are common to physical and digital interactions is an important inclusive strategy. Finally, emplacing equivalent services interactions in the street in a hybrid form, capturing the effortless utility of traditional services with the expanded capability of digital services, points to efficacious ways that smart city services could become a sustainable part of urban life.

CONCLUSIONS

This paper's contributions are four-fold. Firstly, it discusses how smart-cities should not only be seen as enabling environments as they can potentially be extremely exclusive for someone with limited digital skills such as the elderly, migrant workers from rural settings etc. Secondly, it argues that a city is an informative environment that is constantly lived, understood and interpreted by its dwellers. Therefore, a city's *users* should be seen as an invaluable resource possessing innate interpretive expertise that needs to be captured and harnessed in order to uncover the 'perceptual' (Lynch 1960a), as opposed to the three-dimensional image of a city prior its *smartening up*. Thirdly, this paper presents ways of augmenting urban ethnography with modes of gathering rich insights by developing boundary objects that afford doing ethnographies *with* a city's users (in parallel) rather than *on* them (in series). And finally, this paper proposes a novel approach to mitigating anxiety induced by technology in less technologically savvy city-users by fostering *semblant* physical experiences that map and replicate a user-journey in the digital world. This points towards the potential of new standards for Urban HCI interfaces with inclusive values at their core. This implies a barrier free HCI that has been so far elusive, we suggest that this would best draw upon effortless interactions we already see urban users perform with extant urban systems. It also implies the need to afford interpretive flexibility, defined as the capacity of a specific technology to sustain divergent opinions (Doherty and Coombs 2006). In other words, open systems that allow multiple users to ascribe their own meanings and utility to them. Above all, this positions ethnographers to enact connections between theoretical and situated perspectives, between plans and situated actions (Suchman 1987) in the development of integrated Urban systems.

As such, the research asks pertinent, lasting questions to rally the ethnographic community around redefining how we engage in Urban HCI contexts. If our interactions with urban HCI should be based around the values of absolute utility and inclusion, do they resemble present systems? This short paper is a footnote for urban ethnographers concerned with inclusion in Urban HCI. It connects ethnographic practice and user experience to

fundamental commercial and technological developments just over the horizon. It bridges a number of disciplines with the potential pitfalls and opportunities of smart city developments that are already underway at mass scale and often failing to deliver meaningful interaction, supporting conviviality and livability. It shapes thinking on how system development and HCI can be effectively guided by experience design agencies and the ethnographic community directly. These soft principles for inclusion are thinking tools for better situations and situated technologies. In discussing the issue of Physical > Digital > Hybrid bleed, we can outline a blended space that remains mutable as new technologies appear. This means using ethnography to shape a soft HCI made up of shared interactions that are mutually semblant with existing deeply embedded practices opening up new possibilities for urban spaces.

The problem is clear; ‘The technologies deployed in the process of smartening up our cities will succeed if they are embraced and integrated into the modalities people chose to live their cities and they will fail if their deployment is seen as the end of a process instead of a beginning’ (Roche et al. 2012). Let’s make the shared city truly “#epic”.

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Tangible Tools in Para-ethnographic Fieldwork

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This paper sets out to explore how tangible tools can invite industrial managers to have a say in how ethnographic fieldwork can be conducted to explore the use of products in real-life contexts. We draw upon video materials and field notes from a series of customer visits in four European countries. Our main aim is to address the following questions: How can tangible tools help facilitate dialogues in the field to bring awareness and to challenge taken-for-granted assumptions? In what ways can company managers be involved in conducting fieldwork? To what extent can we involve the participants so that they do not solely serve as informants? Our arguments focus on challenging industrial manufacturing companies' assumptions and expectations about their customers' use of their products, as well as bringing awareness to company managers about the advantages of ethnographic praxis instigating collaboration across different levels. By showing that ethnography essentially becomes a collaborative practice, the arguments challenge the traditional approach to ethnographic fieldwork and thus takes a more social form that invites co-production of knowledge. Our findings show that tangible tools are powerful in 1) challenging informants' perspectives and 2) empowering non-ethnographers to take ethnographic roles in fieldwork activities. We also argue that this "para-ethnographic" practice suggests that ethnographers as "facilitators" in a process of entrusting co-producers of ethnographic knowledge will increase the spectrum of skills and the impact of ethnographic work in business contexts.

INTRODUCTION

In multidisciplinary situations, relationships between stakeholders are being increasingly seen as valuable sources for innovation. This is particularly crucial for the concept of Participatory Innovation (Buur & Matthews 2008), upon which our research approach is built. Although it seems more difficult to bring conflicts to the surface than to disregard them, new meanings can emerge in the interaction of a multitude of crossing intentions (Buur & Larsen 2010). When working on a large-scale project engaging multiple stakeholders, challenges have emerged around the understanding of the different roles and perceptions. We became interested in exploring what these challenges meant for ethnographic praxis and how our work with tangible tools impacted this.

Contextualizing the "SMART Project"

This paper draws upon an innovation project developed within four Danish medium-sized manufacturing companies. Together with the companies' management we conducted field studies involving their customers to evaluate and re-design the companies' products. We utilize the generated qualitative empirical data, which includes video material and field notes,

in an attempt to uncover new ways of shaping ethnographic praxis. The innovation project is called the 'SMART project' (*Suitable, Moderate price, Attractive value, Return on investment, Timely to market*), and was organized by a private research foundation, financed by The Danish Industry Foundation and managed by four different external partners: the University of Southern Denmark (SDU), the Technical University of Denmark (DTU) and two consultancy companies. It was developed in collaboration with Danish manufacturers and customers from Germany, the United Kingdom, the Netherlands and Poland over cycles of twelve months for each of the four companies involved. The project was developed from an assumption about the quality and usefulness of Danish products. The claim was that manufacturers in Denmark tend to over-specify their products with unnecessary features, rather than lowering prices to compete with similar products on the European market.

During this project, various people with different interests were involved: sales and product managers from manufacturing companies together with purchasers, dealers, planners, technicians and users from customer organizations. At a larger scope, the project involved governmental, organizational and research interests which had to be taken into consideration when designing workshop materials and carrying out the fieldwork.

In this paper, while acknowledging that our reflections were influenced by all four project cycles, we will only focus on the two more recent collaborations. We will primarily draw upon empirical materials gathered from our collaborations with two manufacturing companies: a producer of compactor machines for handling cardboard waste and a manufacturer of refrigeration equipment for industrial kitchens.

Tangible Tools in Design Research

In the search for inviting participation in design research, tangible artifacts have been explored as tools to help people to express their thoughts more visually (Sanders 2000). The Scandinavian tradition of Participatory Design has extensively used these tools in co-creation sessions as a means to facilitate a dialogue between users and designers while generating new ideas for products and services. The concept of 'Generative Tools' (Sanders 2000) is a practical example of this approach. In Generative Tools, physical materials and objects of different shapes are given to participants who are prompted to make sense of the given materials as a way to express their own experiences and ideas in relation to a particular matter. The main assumption is that the tools' visual and tangible qualities reveal personal stories and lead to an awareness of subjective viewpoints.

In a similar manner, the use of tangible tools has been argued for in relation to processes of collaborative business modeling. Buur et al. (2013) suggest that in comparison to the traditional business modeling methods, the advantage of using tangible tools is that they allow participants without a background in organizational management to understand and innovate a company's business. The tangible nature of the tools also invites different stakeholders of a business venue to relate more easily to one another in a value network.

Common to all these techniques [techniques for modelling business] is that they keep people's hands busy, which often appears to take the pressure of verbal articulations. The use of objects and images provides an indirect means to commence talking about topics, which may be difficult to approach head on. It seems to even out hierarchical imbalances between participants and allow people to effortlessly contribute with their different

perspectives. Providing material as 'things to think with' also seems to provoke more unexpected discussions. (Buur & Mitchell 2011, pp. 373)

In our work, tangible tools are sets of physical materials designed within a particular framework, aimed at supporting the execution of research activities in the field. Although inspired by Buur & Mitchell (2011) and Sanders (2000) as described above, our approach was slightly different. We intended to design tangible toolsets to facilitate dialogues in the field; not solely to understand the participants' everyday practices or to prompt them to generate product/business ideas. Our aim was to bring awareness to their own assumptions and challenge how they perceive the world, or in this particular case, how company managers perceive their customer's use and appreciation of their products.

Para-ethnographic Operations

As Vangkilde and Rod (2015) explain, ethnographic work is increasingly becoming more focused on collaboration, which is opposed to the traditional Malinowskian way of understanding ethnographic praxis. That tradition is partly focused on observations from distances to help develop objective descriptions and analysis. Seen in the light of this new approach, ethnographic praxis is now moving beyond the traditional conditions and is taking more of a social form, in which it provides possibilities for closer collaborations between people in the field.

We will here discuss the concept of para-ethnography, which according to Holmes and Marcus (2008) mainly refers to the notion of building an analytical relationship with the informants we seek to study. This relationship is in some cases founded on the desire to explore ethnographic inquiries in collaboration with the participants involved in the study. However, in other cases this is a condition that according to Marcus and Holmes (2008) cannot be avoided (even if we might wish to), since informants often have their own agendas and interests, and for the researcher/ethnographer to get access to the informants' practices it becomes necessary to involve them. This leads to a different kind of relationship between researchers and informants, where the informants are treated as partners, who have a say in how the research is conducted and interpreted, rather than being perceived as objects from which information needs to be extracted. Allowing the relationship between these two parties to emerge differently than from traditional ethnographic fieldwork opens up an exchange of insights and the development of a new analytical framework. Even with different understandings and aims of the analysis, it is possible to collaboratively form the research towards an understanding of the informants and their everyday practices.

Holmes and Marcus (2008) argue that para-ethnography is a concept undergoing continuous development due to its novelty. Their main findings show that the informants, who are treated as research partners, are no longer simply informants to be understood and whose insights need to be translated into design criteria. Instead, they act as alliances that are already present within the environment where the fieldwork will be taking place. This gives rise to an interesting connection between formal anthropological inquiry and authentic field materials provided by informants that are involved as para-ethnographers.

Thus, the research presented in this paper, sheds light on a para-ethnographic collaboration due to the active involvement of the company managers in conducting fieldwork, as well as the engagement of customers and company employees in discussions that sought to explore and challenge their perspectives on a product's use. With an

additional focus on work practices and social relations in the setting of manufacturing companies, our aim is not only to present other researchers with insights into how this kind of relationship can be developed or how it can enrich their work and bring valuable knowledge to the analysis. It also seeks to, as Powell (2015) states, bring awareness to the fact that ethnographers are already engaged in this kind of work and that we need to bring recognition to the importance of these kinds of relationships when executing ethnographic fieldwork in industrial contexts.

DESIGNING TANGIBLE TOOLS TO CHALLENGE PERSPECTIVES

Through the use of tangible tools we aimed to support discussions and help participants easily relate to the research agenda and to emerging issues regarding the design of their products and work practices. At our meetings, we introduced several tangible tools, however in this paper we choose to introduce just a few that we argue have played an important role in instigating dialogues and challenging existing assumptions and perceptions.

For this particular project we designed four sets of the tangible tools through a process of several iterations that experimentally allowed the toolsets to develop through ongoing involvement in the field. Two of these four toolset were “stakeholder chess” and “competitor landscape”. The stakeholder chess was presented as a combination of chess pieces with stakeholder cards and a chess-like board in a circular shape. It addressed the dependency that companies have on other individuals or organizations to create their business. By igniting a conversation around this puzzle of relations, it provided a quick understanding of the particularities of the industry and it helped to establish a common language among external partners. The stakeholder chess invited participants to think about the people involved in the value network within their specific industry. They were initially prompted to fill out the stakeholder cards as detailed as possible, writing in the level of job titles on the cards. They were then challenged to match the cards with the chess pieces—taking into consideration the different colors (internal vs external actors). A question for them to consider was, for example: *Who would be the king? And why?* The participants were finally asked to position the pieces on the circular board according to the distance of the competitor’s relationships (Figure 2). This forced the participants to do something collaboratively, which was crucial to start the discussion. It was not about mapping facts, but rather to initiate dialogue and build awareness of the different perspectives a single participant might have on the web of relations, which would depend on one’s own role in the business. In this way, stakeholder chess was about drawing attention to stakeholder relations and positions, and especially to highlight that it is a dynamic landscape that looks different depending on the position from which one is standing.



Figure 2. Example of the “Stakeholder Chess” activity run with company managers in Denmark.

Similarly, the Competitor Landscape was a 2x2 matrix that showed how competing suppliers were ranked according to price and function. It collected essential information about competitor profiles and showed the customers’ perceptions of the business (Figure 3). This activity involved the participants by asking them to fill out their company profile and giving the companies “nicknames”. Participants were then instructed to make profiles for the companies they were currently collaborating with, had previously collaborated with or were considering collaborating with in the future. They were then challenged to place the company profiles on the matrix according to price and function/quality to discuss each company’s strengths and weaknesses. On this foundation we encouraged discussion about the ways in which the landscape had changed in the past few years and how the participants imagined the landscape might change in the future.

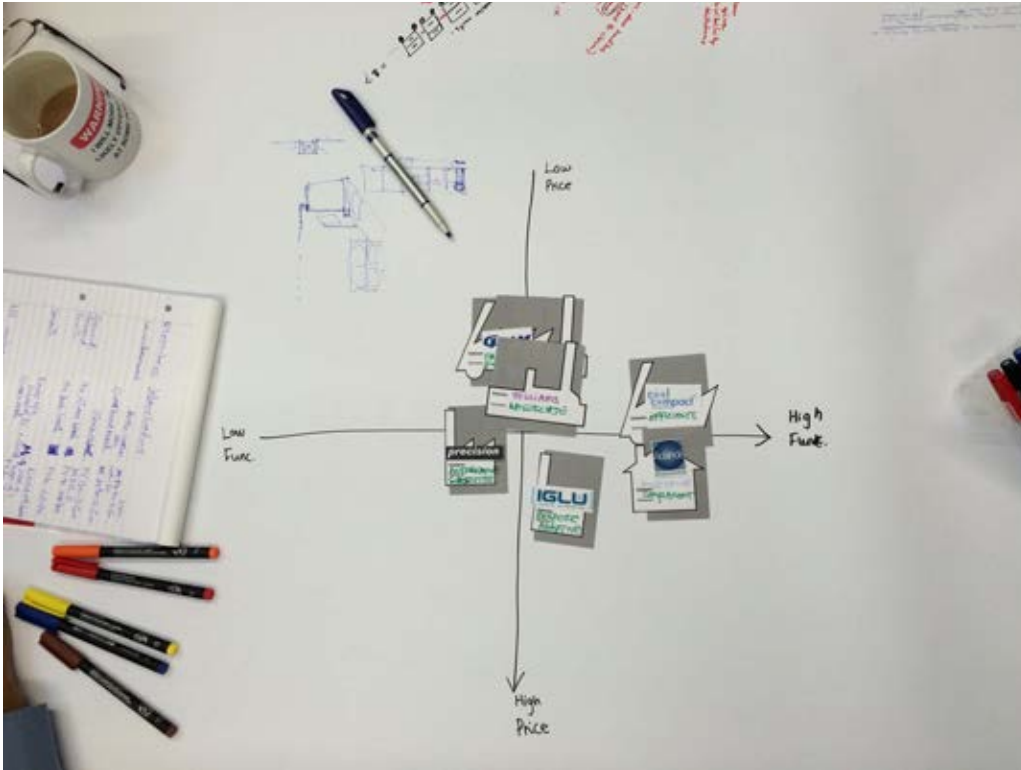


Figure 3. Example of the “Competitor Landscape” activity conducted with customers in the UK.

An example of how we used the Competitor Landscape tool can be drawn from a meeting in Poland with a purchaser of the cardboard compressor, who was responsible for a large Polish chain of supermarkets. We were present as the design researchers facilitating the activities, together with the product manager, who was following us along in the fieldwork. At this point, we had given the product manager an increasingly active role as a co-producer of ethnographic insights throughout our collaboration. The activity with the Polish purchaser began by us asking him to identify three competitors that he knew well. He was invited to select three factory-shaped pieces to represent each of these three companies according to his perception of the company size and characteristics (medium, large, traditional, progressive, etc.). The characteristics of the pieces were not predefined by us, but were open for his interpretation. While choosing the pieces, he was asked to give the competitors nicknames that reflected his perception of them. Instead of settling on a decision too quickly, we encouraged him to freely articulate his impressions until he found nicknames that he was satisfied with. While the pure visual comparison of nicknames was already very valuable to us, his attempts to put words on a feeling were even richer. Once he had made his decision on the nicknames, we finally invited him to position the pieces in the matrix of “functionality” vs. “price”. We asked him to focus on a specific product line, making us capable to compare responses from other sites, and we mainly encouraged a discussion around the functionality of the products. Our intention here was to get an

understanding of his perception of the landscape within which he operated. From an ethnographic perspective, this was an interesting way to highlight different perspectives in the “business landscape”.

Interestingly, the Polish purchaser ended up positioning all the pieces in the exact same spot of the matrix: in the very center. When asked why, he explained that from his perspective, there was essentially no difference between the three companies. As a purchaser he was purely interested in the value the machine brought to the supermarket stores, rather than how well it actually works. For him, the only functionality that all the machines had was to compress cardboard. This realization struck us in many ways. As researchers we were new to this particular industry prior to the project and, as expected when one enters a new domain, we had worked hard to understand it the best way we could. However, in our attempt to understand the industry, we had focused so much on the particularities of the competitors’ products that we were unaware of their striking similarities. This episode also challenged the purchaser himself to become aware of his own perceptions of the different products on the market, and ultimately made us empathize with the customers who do not hold a technical background and thus might face great challenges in understanding the differences in the various products’ functionalities. Not only did this moment make us aware of perceptions that were not visible before, but it also provoked the underlying assumptions of the product manager who was following us along in the fieldwork. It was quite shocking for him to see the three companies positioned at the same spot. Being the lead of the engineering group, he was knowledgeable about the three main companies and their products, which put him in profound disagreement with the purchaser’s visual representation of how similar they were. For him, the products offered by these companies differed deeply in functionalities, features and interfaces. In opposition to being accompanied in the visits by salesmen, who are the ones in direct touch with the customers, we deliberately insisted on the presence of a product manager in the field with us. Our rationale for inviting him was to build a relationship with customers through a meeting that was not meant to sell any products, but rather to allow the customers to feel welcome to express their genuine impressions of the products. Thus, we aimed to challenge the internal beliefs among engineers around how customers perceive the competitors’ and their own products.

A few weeks earlier, before going on the trips to visit customers outside of Denmark, we met the same product manager and some of his colleagues. He was an experienced engineer in charge of the product development team. In our first meeting, we prompted him, together with one of the CEO’s and the lead of the sales team, to conduct the same activity of positioning competitors in a landscape. One of them took the role of explaining how he had thought it through beforehand and the others jumped in and out of the discussion to agree or challenge his explanations. The tangibility of the tools helped visualize their landscape of competitors, as well as their ongoing disagreements on where to position each of the pieces. This interaction proved to be of high significance for us to build a solid understanding of the connections within this new domain. While we encouraged discussions about their perception of the current landscape, we also prompted them to talk about their positioning in relation to their competitors in the past few years, as well as how it could change in the future.

We wish to emphasize that the tangible nature of the tools encouraged the participants to think of our work as slightly different from traditional ethnographic fieldwork. Solely the

act of unrolling a large sheet of paper on the table (for one of our workshop activities) caused the company employees to look confused and to remove their coffee cups, glasses of water, notebooks and other office-related objects from the table in an unexpected manner. In every case, the simple act of unrolling an odd-sized piece of paper gave the participants a clear hint that we would be doing something different than a traditional business conversation. Our intention with these tools was to challenge the informants, to make explicit what might have been implicit to them all along. We believe that the tangible tools work as physical facilitators of dialogues, which provoke reflections on what matters for both customers and company managers. For this reason, we intentionally designed the tools to be concrete enough to provoke manufacturer's assumptions on how customers and users perceive their products, yet abstract enough to have an open-ended focus that could afford unpredictable follow-ups. In similar veins, the process of designing the tools was likewise grounded in an exploratory approach, as we developed and tried them in the iterations of the project itself. Throughout this iterative process we came to change shapes and types of materials (from acrylic to paper, for instance) in a constant search for a balance between concreteness and openness. However, each encounter introduced us to new puzzles of relations that proposed different sense-making for the activities, calling for situated acts of improvisation. Eriksen (2012) sheds light on this understanding, arguing that transformation among different situations can be marked by changes in time, topic-(re)framing, place, materials, or groups of people. In reflecting upon transformation of roles and materials experienced in this project, not only do we agree with her, but we also add that each encounter in itself establishes a stage for improvisation and shift of roles between people and materials.

CO-PRODUCING ETHNOGRAPHIC KNOWLEDGE

In our work, tangible tools are strongly argued to have an effect on the interaction between researchers, company managers and customers in different ways. The challenge, nevertheless, is to understand how this actually impacts relations and roles. In this research we are particularly interested in how these tools can challenge roles and perceptions in co-producing ethnographic insights. We suggest three forms in which this impact is identified in our empirical material: 1) when the fieldwork was facilitated by us synchronously during our collaboration with the managers and customers, 2) when the company managers in particular moments of our collaboration ran the activities with the tools, and 3) when the company managers started making use of the toolsets in their own work practices asynchronously after we handed over our responsibilities in the project.

It is not new for us to experience an immediate reluctance to engage with playful materials that bring people out their comfort zone. Prior to this research, together with other colleagues, we have introduced tangible tools in various research and business contexts. From our experience, it does not take long for people to overtake their initial reluctance and start a conversation mediated by the materials (e.g. paper, plastic or wooden bricks). In this research, we have observed similar situations a few times when we introduced the chess pieces for company managers when talking about the key players related to their industry. In the SMART project, one of the companies with which we used these tools was a producer of fridges for industrial kitchens. When involving three managers from this company in the "Stakeholder Chess" activity, the conversation began with a hesitation in naming the chess

pieces: “*well, it all depends on which country and customer we are talking about*” – one of the managers quickly argued when we asked them to give titles to some of the pieces. However, after we encouraged them to choose a particular case and point out specific job titles for each stakeholder, they provided us with a rich understanding of the other companies whose businesses are positioned in between the manufacturer and the final users. This left us with an understanding that some export markets hold a wide spectrum of dealers and planners that are responsible for relevant tasks to the market, such as the involvement of kitchen layout designers. These intermediate professionals become part of the informants in our study, taking the role of what we refer to as “customers”.

Another form in which we explore the impact of tangible tools is manifested when the informants become active in a co-production of ethnographic insights, as well as when the company managers were encouraged to carry out field visits on their own without being held back by our agenda or methods. We specifically encountered this form of para-ethnography together with a product manager who accompanied us during fieldwork trips. Our first meeting with this product manager happened at the company facilities along with other internal employees: the sales manager, one of the two CEOs and him. We introduced the two mentioned activities (“*the stakeholder chess*” and “*the competitor landscape*”) to soften the facilitation as much as possible and to observe their own discussions. Even though they work together, disagreements on how they perceive their company and their competitors were inevitable, which was very rich data for us. This long meeting led us to decide on the two most relevant export markets to visit, in this case: Germany and the UK. To create ownership of the project, the product manager was encouraged to join us. In total, four people traveled to both countries: two researchers, the consultant and the company manager. Although aware of our approach, during the first couple of visits, the two non-researchers distanced themselves and watched what we did from a detached (and somewhat skeptical) point of view. Our work progressively gained a certain trust and interest with them, which gave us room to bring hidden mistrust conflicts to the foreground by inviting the company manager to take our role and facilitate the activities on his own. This invitation came when he posed a critique about our way of conducting the fieldwork and, with some hesitation, he took the opportunity to run the activities. At this point, we believed that the manager’s deep involvement in the facilitation of the workshops and his influence on the agenda and the methods warranted us calling this work para-ethnographic.

Although it is difficult to know, and argue for, the impact of our involvement after our research was formally concluded, we did experience some indications of these effects. An example can be drawn from the collaboration with the producer of cardboard compressors. Being responsible for the one of the four phases of each cycle of the SMART project, we came to formally end our collaboration with this specific company by the end of August 2014. By then, the goal of the last meeting with them was to share research findings to empower the next external partners and for the internal employees to take ownership of our work. Besides focusing on the content produced in our study, we also left them with a few tangible toolsets from the activities that we had used in our fieldwork together. We had no control of what would happen with the materials, and we did not really expect much of an engagement with the materials by them independently. However, in June 2015 we had the opportunity to meet again with the company manager who spoke to a broader audience of researchers and practitioners about the impact of our research in his organization. On this occasion, he emphasized the company’s engagement with some of the materials and the

value of this engagement. He also suggested that the use of the tools might be understood as a seed for organizational change.

FRAMING RELATIONS AND TOOLS TO SUPPORT PARA-ETHNOGRAPHIC PRAXIS

From our experience as designers involving an ethnographic approach in our work practices, we have come to understand that the identity of ethnographers in design is shifting away from individual expertise and towards the role of a facilitator who empowers a collaborative process among multidisciplinary professionals. Although the role of ethnographers in design as “bridge builders” is not new to the literature, insights about how to deal with emerging real-life challenges are rather imprecise and still hard to grasp. In our work, we address these challenges from the perspective of relationships and support of knowledge production.

Accepting and inviting co-producers of ethnographic knowledge

Although the emerging collaborative processes might already seem clear for generating ethnographic knowledge, what it actually means for the role of ethnographers is still ambiguous. We are not encouraging professionals to disregard the importance of formal ethnographic training, but findings from our research suggest that collaborative practices where some of the responsibility (of production/preparation of fieldwork agendas, methods and materials) is given away are increasingly provoking ethnographers to accept that professionals from other domains can benefit from conducting ethnographic fieldwork. This could include work such as interviews, participants observation and conducting workshops without the formal training that was once required for ethnographers to perform their profession. Accepting this call for collaborative ethnographic processes is guiding ethnographers to not only prompt other professionals to play a role in field activities, but to also invite their genuine engagement with the research that will lead to a synergetic and multidisciplinary work practice. The challenge for ethnographers is to not just allow this shift to happen without a defensive attitude, but to also develop an ability to prompt others in accepting the offer.

From our experience with industrial companies and their customer organizations, we argue that this exchange of roles is increasing the spectrum of skills and the impact of ethnographers in business contexts. In our work with the “SMART project”, we have deliberately encouraged one of the company managers to take an active research role in conducting fieldwork. The shift gradually moved him from being an informant in our initial meeting, to a role as an observer/partner in the field activities together with us. This transition, which happened over a couple of months and several encounters, led us to inviting him to take an active research role in running ethnographic activities with customers of his own company. In doing so, the feeling of being “reduced” to an observer role questioned the value of our own work. By “giving up” the driver role of our own research we put ourselves in a secondary position that seemed to have much less at stake and thus, gave us an impression that we were not important for the project. However, the later reflections on these episodes lead us to recognize our new role as “facilitators” and its impact to the project was very strong. We came to understand that the exchange of roles did not diminish our work; instead it challenged the company manager’s perspectives of the

work of an ethnographer. It gave him the chance to take ownership of the research findings across the organization, while becoming more aware of the struggles and advantages of ethnographic praxis for his own work as a product manager.

Paradoxically, while we celebrate the empowerment of managers as “para-ethnographers” we would also like to attend the discussion that we can be seen as para-ethnographers ourselves. As previously mentioned, we (the ones who directly ran the “SMART project”) are formally trained designers and engineers who have been taking the role of ethnographers in different research occasions. As individuals, we share professional and academic experiences with anthropologists, but we do not hold a formal background in anthropology. This could point to a practice of ethnographically inspired design researchers training “para-ethnographers,” which already constitutes a motivation for our interest and ability in helping to frame para-ethnographic praxis and other forms of multidisciplinary collaborations, which is actually happening in the professional world.

Empowering para-ethnography with tangible tools

In this paper we have argued for designing tangible tools that can challenge informants’ perspectives in fieldwork. We have also pointed out three forms in which these tools can impact relations among the participants involved in research: when the tools are used by the researchers in doing fieldwork, when the tools are used to encourage “para-ethnographers” in facilitating ethnographic activities and when the tools are used by research partners in their work practice after the research is formally over. Here, we want to emphasize how the tangible tools can empower non-ethnographers in taking active roles.

Unlike prior claims, indicating that tangible tools can facilitate the collaboration between different stakeholders, in this research we have come to understand their impact on *both* the facilitators and the “participants”. We do not see the role of these tools in competition or replacement of the researchers’ role in doing ethnographic fieldwork. Instead, our work suggests that a designed set of tangible tools may help professionals without a formal anthropological background take more active roles in ethnographic research. We argue that after an initial discomfort, the tangibility of the tools helps to keep the informants busy with particular tasks while it becomes easier for the facilitator to control the flow of actions and dialogues. While the structure of the activity, shaped by the tools, may lessen the pressure on the facilitator to guide the conversation, the openness of the materials may lead to improvised and unexpected outcomes. Thus, the tools might be used as a concrete framework to offer confidence for non-ethnographers to step into the foreground and thereby help the ethnographers to more easily identify opportunities and make an invitation. In that sense, it can also soften the feeling of the ethnographer as being “reduced” to an observer, as it becomes clear that important background work was made in designing the tools that can work in a particular setting. In essence, what we are arguing here is for the use of tangible tools in encouraging informants to take facilitator roles in para-ethnographic praxis.

CONCLUSIONS & RECOMMENDATIONS

This research was undertaken to design tangible tools, which deliberately were involved in field studies investigating the use of products developed by various Danish manufacturing

companies. The tools were, in an on-going manner, evaluated from one field encounter to another and the company managers even took responsibility for facilitating some of the workshops. The study set out to determine if the use of tangible tools could enable or facilitate para-ethnographic explorations and the results of this investigation shows that there is an interesting relation between these two approaches for collecting ethnographic field materials. Our main findings suggest that, in general, tangible tools help support the facilitator and enable the participants to easily relate to the research agenda, while having an impact on the direction of dialogues taking place.

The findings of this research provide insights for researchers considering entrusting other professionals to do their work and support the idea of inviting inexperienced industrial managers to take the lead in conducting field studies. It helps them acknowledge the professional practice of ethnographers, as well as being challenged in arguing for their design decisions when developing products they claim are what the market needs. These findings have significant implications for the understanding of the role ethnographers undertake in the industry, as well as for how managers can get first-hand experiences of the use of their products on the market, and thus challenge their current perceptions of the end-use. The current findings thereby add to a growing body of literature on para-ethnographic operations and the advantages as well as drawbacks of this kind of research approach in industrial contexts. The present study confirms previous research findings and contributes additional evidence suggesting that anthropologists and ethnographers can benefit from taking the responsibility for designing the frameworks of field studies (tangible tools in this case). However, it also requires the ethnographers to take a step back and allow non-ethnographers to be challenged in doing ethnographic work, thus allowing them to acknowledge the valuable insights emerging from it.

Despite its exploratory nature, this study offers some insight into how tangible tools can support para-ethnographic work in industrial settings and how this combination can challenge company managers' perceptions of the use of their products on the market to help them better meet the expectations of the end-users, both in respect to price and functionality. The research has allowed for the emergence of a range of new questions in need of further investigations and thereby invites future explorations that assess the impact of company employees taking a more active role in the execution of field studies, rather than involving them as informants only. The challenge now is to expand the exploration to other real-life contexts that converge business agendas and ethnographic research, in order to identify patterns that can lead to new concrete suggestions for continuing framing para-ethnographic and other multidisciplinary praxis.

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Enriching Ethnography in Marginalized Communities with Surrealist Techniques

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This paper describes two projects, Vila Rosario and Vila Mimosa, two pieces of ethnographic research that aimed at improving public health in poor corners of Rio de Janeiro, Brazil. The research sought to improve public health in these two marginalized communities in Rio de Janeiro. The main objective of the paper is to explain how Surrealist techniques can be applied to enrich ethnographic fieldwork. The broader question of the paper is the tension between these imaginative techniques work with fieldwork, a tension that goes back to the disciplinary differences between design and the social sciences.

INTRODUCTION

This paper describes two projects, Vila Rosario and Vila Mimosa, two pieces of ethnographic research done when the authors were working with pro bono organizations aimed to improve public health in poor corners of Rio de Janeiro, Brazil. The main objective of the paper is to explain how Surrealist techniques could be applied to enrich ethnographic fieldwork. The research sought to improve public health in these two marginalized communities in Rio de Janeiro.

The authors studied Vila Rosario and Vila Mimosa in depth to learn how people in these communities understand diseases such as tuberculosis, and their contagion mechanisms. This knowledge, it was assumed, would help people to protect themselves from these diseases. The original goal of the study was to develop information systems to improve public health in impoverished areas of Rio, but as the research went along, the design work was refocused to low-tech designs such as posters, educational booklets, and games that could be used in the community to teach these issues to children and young mothers. As the community had little exposure to digital technologies, and even less previous exposure to design, we had to find ways to enrich fieldwork with techniques that would unleash technological imagination in the community, while giving them few cues about what we were after. We derived some of those methods from techniques that were originally inspired by Surrealism and its idiosyncratic interpretation of psychoanalysis.

We had precedents in ethnography, which had connections with Surrealism, especially in France with Mauss and his followers Metraux and Bataille, as Clifford noted (Clifford 1981). Ethnographers have used many types of elicitation visual techniques over the years. Yet, a gap between Surrealism and ethnography has been established, and discussion about it has

largely been removed from ethnographic literature, at least in Sociology, the academic background of one of the writers. With few notable exceptions (see the survey of Wood 2007), this has been the case in design as well: after functionalism, semiotics, and user-centered design its ideology has leaned towards science rather than art, (see Mecacci 2012). Yet, artistic techniques have made a comeback in design for reasons at the very heart of design as a discipline, which finds its justification from imagining realities that could be rather than capturing realities that exist. We can only speculate about the reasons for why artistic techniques are coming back to design, but our guess is that they liberate designers from the strictures of science, engineering and business, by suggesting that even things like gravity can be thought of as social constructions that only have an exact meaning in some discourses, but can be treated as metaphors outside that discourse. Surrealism may be particularly liberating in this regard.

THE TENSION BETWEEN WHAT EXISTS AND WHAT COULD BE

Ethnographic methods have proved their value in design several times over the last twenty years (cf. Salvador and Anderson 1999; Squires 2002; Cefkin 2010). From these initial stages, a well-established practice has grown. The uptake has been especially robust in IT and ICT industries, but consumer industries are increasingly joining the ranks of companies who hire ethnographers. Unlike traditional quantitative marketing research, ethnography provides vivid and evocative stories that can be used to guide product development and – in rare cases – strategic decisions in companies.

If done in the same manner as in the mother disciplines of anthropology and sociology, ethnographers build design insights on usually careful (or thick) descriptions of existing social and material practices and mentalities, without affecting them. In their training, they learn to be wary of things like the ethnographer's blues, and about the ways in which people react to their presence and activities (Baranauskas 1999; Becker 1970). The interests of designers, however, are usually in possible worlds rather than in the existing reality. This creates a problem for design researchers who build their research on ethnography, because ethnography has an inherent tendency to focus on what exists at the expense of what could be.

In design literature, there are several ways to solve this problem of imagination. The first two techniques are well known. Researchers may first treat a place as a natural laboratory, where the future exists before it becomes a reality elsewhere. Well-known examples from design literature include Scandinavia and Japan in mobile technologies around 1996-2002, and South Korea a few years after (see Koskinen et al. 2002; Kurvinen et al. 2008), Hong Kong as a laboratory of high-density living (Manzini 2003), street ethnography and cool hunt in fashion (Polhemus, 1994; Gladwell 1997), the location of car design studios in Los Angeles (Molotch 1996: 257–258), and studying copy machine repair technicians in the advanced market of Chicago rather than elsewhere (Orr 1996). Secondly, they may create a version of the future with prototypes. Technically, these vary from slightly straightforward field tests to studies using artistic techniques (Dunne and Raby 2001), and from studies with imaginative prototypes (Gaver 2015) to studies with ready-mades, assemblages and appropriations (Koskinen 2013). The most elaborate arguments suggest building technologically supported practices that are open in their design, and following what

happens with these practices through theoretically informed frameworks (see Kurvinen et al. 2008).

A different technique is what we shall call Surrealist fieldwork for want of a better term. Here, the idea is to unleash imagination from everyday habits by building research on props and protocols that provoke strange and dream-like associations among users.¹ Design researchers use many types of techniques borrowed from projective psychology, Surrealism (and Dada) world that use existing spaces and objects as props for something else, but which also help people to detach themselves from existing realities (Presence Project 2001). Researchers target these imaginations rather than the props as such; they are but a canvas that sets Freudian primary processes at motion. The best-known examples are Liz Sanders's Make Tools, that tell us to focus on dreams, Tony Salvador's props and Iacucci's Magic Things, a technique that build on Salvador's work (Sanders 2000: Salvador and Howells 1998; Iacucci et al. 2000). The difference between the first two techniques is pronounced. Here, the imaginations are laid over social reality, and designers need not to build a prototype to study dream-like imaginaries; their job is to set primary processes going and follow them.²

The heart of the Surrealist approach, as we saw in our work, is to put out a sketch just to see what happens, and to capture what comes out of it. Through techniques like these, the designer-fieldworkers can manage to see the world in terms of imaginary constructs that animate people. These insights from interaction with these imaginary constructs are there waiting to be captured by researchers, and their workflow turns these insights into product ideas after a more or less careful analysis that usually builds on analytic induction.³ Most research of this sort, however, has been made in relatively privileged settings, with populations that tend to be educated enough to understand the imaginary format imposed on them. In contrast, this paper adds to that literature by describing Surrealist techniques in communities at the margin of society, where people steal electricity, illiteracy is common, diseases like tuberculosis and yellow fever are real threats, and where university degrees are rare.

THE SITES AND THE PARTNERS

The studies we describe in this paper took place in two communities characterized by extreme poverty and its implications, but having a different set of problems. Both sites are in the State of Rio de Janeiro. The fieldwork was done in three batches between 2006 and 2010 and resulted in two PhD theses (Judice, A. 2014; Judice, M. 2014).

The first study was conducted in Vila Rosario, which is a community of 60,000 inhabitants in the municipality of Duque de Caxias, in Rio de Janeiro State. The study was conducted with the support of Instituto Vila Rosario (IVR), an organization dedicated to improving long-term health in the community of Vila Rosario, where the researchers rely on empowering a group of Health Agents working for IVR to reduce levels of tropical diseases. Health Agents were a group of local women the Institute had hired and trained to carry out home visits in Vila Rosario. They shared information about contagious diseases, did preliminary diagnosis for doctors, supervised treatments, and additionally recruited people for the Institute's activities. When we were doing our study, there were 11 Health Agents. We worked with six of the more experienced Health Agents, Marluce, Clara, Dulcinea, Custoodia, Maria, Leila and Deolinda. Their average age in 2006 was 52. The population in

Vila Rosario had a very low socio-economic status, a high level of tuberculosis, inadequate housing, and other problems such as addiction to alcohol and drugs (cf. Costa Neto 2004).



Figure 1. Vila Rosario: streetscape, local housing next to an open sewer, A. Judice with Health Agents fitting the uniform designed for them

The second study was conducted in the vicinity of downtown Rio de Janeiro, but worlds away from its business elites. The study was supported by a pro bono organization working at Ambulatório da Providência, a clinic working to reduce levels of HIV/AIDS, other Sexually Transmitted Diseases (STDs) and Tuberculosis at a cheap prostitution district widely known as Vila Mimosa. Vila Mimosa is located near downtown Rio, in the shadow of a major railway station and the Maracana stadium, and it is one of the main hubs of transmission of HIV/AIDS in the metropolitan area.



Figure 2. Vila Mimosa: the interior of a brothel, a textiles working space for the prostitutes, and an outpatient clinic where doctors met prostitutes

The study proceeded in four phases involving contact with people, the first three of which took place in Vila Rosario, and the last in Vila Mimosa: (1) probing; (2) ethnographic fieldwork; (3) fieldwork with designs; (4) transferring the research process into Vila Mimosa. Given the status of Vila Mimosa as a way of streamlining our method, we mainly focus on Vila Rosario in this paper.

These studies have been described elsewhere in detail (Judice, A. 2014; Judice, M. 2014). This paper describes two techniques used in ethnographic fieldwork, Magic Things and Good Fairies. These techniques had basis in Surrealism and projective psychology, both in debt to psychoanalysis, and were inspired by Cultural Probes, which share these similar roots.

MAGIC THINGS AND INFORMATION TECHNOLOGY IN VILA ROSARIO

The first phase of the study was conducted in Vila Rosario in 2005, when the Brazilian authors were working in Helsinki, Finland. Although both main authors were from Brazil, and one of them was from Rio de Janeiro, the research team were aware that they did not know enough about Vila Rosario. It was only 20 miles away from their previous home, but social worlds apart from places like Barra de Tijuca and Botafogo. The first contacts with Vila Rosario were done with cultural probes, the brainchild of Bill Gaver, Anthony Dunne and Elena Pacenti (1999), and although the study in Vila Rosario was inspired primarily by Mattelmaki's (2006) empathic understanding of the probes, the projective roots of the methods were carefully observed.

Following Mattelmaki, the researchers used the probe returns as inspiration, but they also validated the returns with interviews and ethnographic observations. The validation had two phases. While still in Helsinki, the researchers did Skype interviews with research assistants in Rio de Janeiro. Later, the researchers flew to Rio for fieldwork, on the understanding that it is impossible to know Vila Rosario just through words. The ethnographic work focused on understanding the population of Vila Rosario, its etiological geography, the work of the clinic and its relationship to the community, as well as the uses of information technologies.

Although this ethnography was seen mainly as a way to validate the interpretations done with probes, and the main idea was understanding the clinic in context, the fieldwork also went beyond thick description in its understanding of ICTs, which were the early focus of the study. The problem was that few Health Agents had experience with the internet, not to mention mobile phones. The existing uses were elementary, and as the Health Agents had no experience in working with designers, they could not put into words their technological and design wishes. They knew how to do their work, but they could not imagine how communication technology could help them.⁴

Here, projective techniques came to help. The key tool for eliciting these wishes became Magic Things by Iacucci et al. (2001). Magic Things are blocks of foam or wood that have no functionality, but serve as props that people carry with them for some time. People carrying them are asked to stop in situations in which they are facing problems and to think what kind of assistance they would like to receive from the thing. The method is used to collect dreamlike ideas from fieldwork, and situate these ideas within the reality of the people, without researchers controlling the situation.

To apply Magic Things, we were monitoring the activities of community Health Agents during one working day. The activities were recorded on a diary and on maps to understand their mobility. In addition, we took photographs, recorded video, and conducted semi-structured interviews in combination with the Magic Thing. The aim was to register all kinds of facts and to observe what happened when Health Agents were doing their work. The method highlighted many interesting aspects of the situation. As designers, we had a well-structured idea of which factors contributed to the problems faced by the community, but we did not understand in detail how Health Agents encountered things like inadequate sanitation and poor nutrition. At this point of the study, the main question was: what types of products and services would meet the needs of this community?

The following example is from an interview transcript with Custodia, one of the Health Agents. It was done after she had kept a Magic Thing for a week:

1. The other day a lady came to complain to me: “my
2. ‘daughter’, this is the ‘septic-tank’ (fossa) of my
3. neighbor, when she flushes the toilet it fills my yard with
4. dirty water (wastewater). I am getting crazy with this
5. situation. I do not know what to do anymore! I am afraid of
6. getting hepatitis; I have my children and have to be
7. careful. My ‘daughter’, tell me what can I do to prevent
8. illnesses in a situation like that?”
9. In that moment I had no answer for that woman, I felt
10. so sad!
11. I told her: “Madam, Did you already ask for directions
12. in the city hall?” and she answered: “Yes, I did. But
13. they said that they can do nothing to help me!”
14. The street where she lives is half asphalted. It is
15. asphalted in the beginning and in the end, but not in the
16. middle of the street. For me, that land was a swamp and
17. they just added sand to it and started to build their houses
18. over it. This woman has a two-month baby, a little 4-year girl
19. , a 6-year boy and a little boy with a year and
20. ten months. That day her kids and some friends, around
21. five kids, were playing in her yard.
22. Because of this lack of basic sanitation, this street has
23. many illnesses, as Leprosy (Hansen's disease), hepatitis, and
24. others. I already took care of two people with tuberculosis,
25. three with leprosy and some with hepatitis.

Using The Magic Thing with Health Agents elicited several insights about the situation of the community. Understanding the mobility of agents was not restricted to geography/physical mobility and navigation, or to the way Agents accessed and transmitted information. The Magic Thing also gave us access to how the agents would have wanted to use technology, and what capabilities they would like to have on a mobile device. It also gave us access to different types of community in Vila Rosario, and how these communications were organized and how they occurred in social activities of the village. The Magic Thing reinforced some of our observations, but it also brought about new insights into the habits of the social group, its local culture, its behaviors, its beliefs, and their interconnections.

The Magic Thing worked well for us because it is a tool applied without a specific focus. The user can feel comfortable in context as she is in control, and the context is familiar to her from her own life. She allows herself to dream and to show to researchers what the community needs. She also lets them to take part in her own world. Two other interesting points to be highlighted are: the low cost for developing the Magic Thing, and, as it has no predefined functions and shapes, it helps users to deal with it and allow users to point concepts and functions of products based on their own experience. Therefore, it fills the gaps between current experience and future use (cf. Iacucci et al. 2000). Magic Things were

applied as yet another step in deepening our understanding of Vila Rosario, its local culture and its daily life.

Magic Things have some obvious limits. The main problem as we see it is that they assume that people can imagine an inner life to an inanimate block of wood, and can think how it might function in situations they encounter in their daily routines. When Iacucci and his colleagues were doing their study, their subjects were information technology students in Helsinki, which was one of the leading centers of mobile telephony. A student like “Sergey,” whom Iacucci followed, had no difficulties in seeing the life through a Magic Thing; his mind most likely saw these opportunities anyway. This was a luxury not available to us in Vila Rosario. Whatever Health Agents did with their Magic Things were constrained by how they encountered people, situations, and things in Vila Rosario. Where Sergey saw sensors, interfaces and actuators, health agents like Custodia saw people and characters from telenovelas. To appreciate their concerns better, we developed another Surrealistic device, which did not constrain Health Agents’ imagination through a prism of a handheld device.

HOW A GOOD FAIRY LED US TO REFRAMING MEDIA AS A DESIGN RESOURCE

As effective as Magic Things were in eliciting views about mobile technologies, they were restricted by their appearance. As open-format as they are, they remain handheld devices, which gives several hints about their potentials and limits. To create a form that is even still freer, we developed another Surreal device, the Good Fairy. The Fairy was our own creation.

During fieldwork, people described many types of problems they faced in their daily life. We asked them to imagine a Good Fairy who would come to rescue them – or people with diseases. This technique gave us a cue that came to be fundamental in our design work, which was the importance of media appropriations in helping people to manage their diseases.

After many workshops, inquiries, observations, and other contacts, Health Agents started to get used to our presence. As they were comfortable enough with us, we decided to ask them to try a new experience. We asked them to imagine a Good Fairy, and asked them how the Fairy could help them in their work. When they were telling what they would wish from the Fairy, we also ask them to explain how they thought the Fairy could help. Once more, we could borrow a story told us by Custodia, as an example of an insight into what kinds of themes figured in the imagination in Vila Rosario:

1. You know, when I was in Maria’s house, the same family that
2. I told you in that story, I would like to have with me
3. a cleanness kit, to teach her how to clean her house. I also
4. wanted to have a photo album so, I could show her that
5. these photos are showing the reality of her house, the house
6. she lives with her family, and if she does not help me to
7. clean it and keep it clean the situation is going to get
8. worse!
9. In this album, I want to have photos from her house and
10. photos from another family, like Maria’s family and a house
11. like her house too, but the family living in a clean house,

12. all of them healthy and happy. Maybe, with this album I can
13. find a motivation for her to clean her house and keep it
14. clean!!
15. In her house, there are many illnesses: Leptospirosis,
16. cholera, most of the time the kids are vomiting and with
17. diarrhea.

As we see, Custodia felt herself very confident in telling us the story, and gave us many tips that helped us to develop suitable products for situations she was describing. She chose to tell us Maria's story again. Based on her choice, we could see that despite Vila Rosario's Institute program's focus on tuberculosis, we also had to reach out beyond this disease. In Maria's case, nobody is ill with tuberculosis, but there are other issues, such as poor hygiene and the lack of information about health, which are of equal importance to tuberculosis, and complex enough to warrant attention on their own.

Earlier, Custodia talked about the necessity to compare a bad scenario with a good scenario. At the end of her Good Fairy Story, she talked about how the Fairy could help Maria to do the choices that would lead to many positive changes in her life. For Custodia, a dramatic intervention is needed to shake people up and change their habits. If the approach is too smooth, people usually stay with their habits and do not make the effort to improve their situation (lines 9-12). Finally, we can identify more diseases that Health Agents need to deal with in her description, like cholera, leptospirosis and diarrhea (lines 15-17).

The main message the Good Fairy told us was a theme that helped to organize our design work: the importance of understanding Vila Rosario through its media consumption. When we looked at the themes people used to organize their imagination in Vila Rosario, we saw that among the few elements everyone was familiar with were football stars and the main telenovela (soap opera) characters. Compared to football, telenovelas gave us much richer design opportunities. As stereotypical as they may be, their characters inhabit a social world rich in demographics, roles, positions, and ambitions. Building on media was useful for another reason as well. Vila Rosario was largely illiterate, and using information technology in any straightforward manner would have been a waste of resources. However, like anywhere else in Brazil, the inhabitants of Vila Rosario were keenly aware of the telenovelas on television, and they followed football with an enthusiasm rarely found outside Brazil. With Good Fairies, the Health Agents told us that they would like to use the loved and trusted media figures to communicate their messages to patients and their families. Unlike local authorities, largely seen as corrupt, the figures of doctors, nurses and teachers on media provide a picture of what to expect from professionals. This picture is idealized, but yet real in its consequences.

Building on this observation, we built a fictional Vila Rosario, and used this fictional village as a reference in creating designs. This story world became a reference point we came back to in doing more detailed designs for our products. At the center of the story world were characters that were created with a telenovela style, for several reasons. Everyone in Vila Rosario understood those characters. They were simultaneously stereotypical and detailed, easy to identify with, but not too close to any particular person. Furthermore, their behaviors and their impact on other people can be followed over time, making it easier to communicate things, like how some behaviors lead to certain outcomes (e.g., getting a TB diagnosis followed by a cure, and finally getting better) and how these behaviors affect other

people (e.g., what happens to the loved ones if one does not take care of TB properly, or stops the treatment early).



Figure 3. Using the characters in design: the example of a poster explaining the symptoms of tuberculosis and the course of its treatment

This world was used throughout our design work, giving it a unified look and feel that was also conceptual in its approach. It was also a significant reframing of our work. Before realizing the importance of media, we had entertained several design options. With the media observation, we rejected artistic and commercial styles, as they were alien to both Vila Rosário and the seriousness required by our topic, health. We also rejected medical style, i.e. typical medical design stressing white colors, simple, clean surfaces, and scientific shapes that

communicate technical sophistication and reliability. These would have been out of place in Vila Rosario, given poverty on its streets and its tropical landscape.

DISCUSSION

In the beginning of this paper, we speculated with the idea that design ethnography may differ in many ways from ethnography in such mother disciplines as anthropology and sociology (for example, Jordan and Lambert 2009; Jordan and Yamauchi 2008; Fulton Suri 2011). Although ethnography has Surrealist roots, as Clifford has shown (1981), it has usually been taken as a scientific rather than artistic technique in design. The key dilemma we focused on was between focusing on what exists and what could be as defined by the designers' imagination. We outlined a few responses that designers have given when they faced such dilemma, and focused on one of these, which is building fieldwork on Surrealist techniques that aim at eliciting dream-like products of imagination from the people studied by designers. Design literature is rich in references to techniques that owe their inspiration to Surrealism (see Presence Project 2001; Sanders 2000; Salvador and Howells 1998; Iacucci et al. 2000; on the practical side, see Wood 2007), though as far as we can see, there are few sustained discussions of them.

In Vila Rosario, ethnographic methods proved to be an invaluable asset in our methodological approach. By doing fieldwork in Vila Rosario, we managed to create a rich understanding of the place, its people, and its culture. Our work was not designed to be an anthropological study of the village, and we did not go in depth into its culture or social organization. Yet, ethnography gave us an image of what we should do in our design work, and what would be out of the question. Our fieldwork was not pure ethnography, though. We used design-specific methods to make sure we could elicit dreams driven by primary processes, like associations. The two methods we built on were the Magic Things and Good Fairies, the former picked up from Iacucci et al. (2000), the latter being our own invention. These two methods aimed at freeing people's imagination by giving our research a playful character; this was particularly important for us, as we dealt with people with little experience in information technology. Ethnography as such helped us to identify several tools they could use to address issues identified earlier on the study, but it focuses on reality as it exists, not on how people imagine it could be made better. These projective methods gave us a way to tap into their dreams about Vila Rosario.

A few remarks are necessary before closing this paper. First, as usual in design, results of even Surrealist techniques, of course, are suggestions and recommendations for products, services and strategies, not art works. Second, these techniques are often used in combinations. Third, as designers have already led people into a product of their imagination, the way in which people react to the designers' artifacts (following Becker 1970, we called this "reactivity") becomes a secondary concern, unlike in traditional ethnography. Finally, when designers work with these techniques, they share the same limitations and time pressures as their colleagues in industrial ethnography.

The researchers developed design products based on the inhabitants' context to improve the Health Agents' work in preventing tuberculosis and HIV/AIDS, and in improving inhabitants' quality of life. According to people from the communities, the design products allow people to easily understand the message allowing people to identify themselves with "established" products and understand how they were built for the day-to-day life. As of

2015, almost ten years have gone since the beginning of our field work. Although living in Brasilia and Hong Kong, we are still in contact with Health Agents, and regard many of them as our friends. The main method of contact is Facebook. Through it, we know that the IVR project is still going on, and our designs still facilitate its work. We have not been able to continue our work in Vila Rosario, but we still consult with them when they need help in designing things like leaflets or even Web pages. From anecdotal evidence, we can say that the project still lives and our design work still lives with it. Perhaps even more importantly, as one of the Health Agents told us after our study, the fact that we had taken them seriously as partners in our effort taught them self-esteem. In her words, our work told them: “You are important!”

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Marcelo Judice is a designer working in Brasilia. Like Andrea Judice, he received his PhD in design from Aalto University (formerly UIAH) in Helsinki. Currently, he is teaching and working on social design in Brasilia. His thesis, titled *You Ar Important!*, developed a series of graphic designs to help doctors in a fight against tuberculosis in Vila Rosario in the state of Rio de Janeiro.

Iipo Koskinen was a sociologist, but has worked as a professor of industrial design since 1999. His main research interests have been in mobile multimedia, the relationship of design and cities, and methodology in design research. His most recent book is “Design through Research: From Lab, Field, Showroom,” a book on constructive design research (Morgan Kaufmann, October 2011). He has been working as professor in Helsinki, Aarhus, Melbourne, and Hong Kong.

NOTES

1 As Michael Powell noted to us, so much of this literature referenced and surrealism is founded on or closely tied to Freud’s work on the individual mind. Imagination can, of course, also be seen in social, collective and cultural terms, maybe following the Lacanian versions of psychoanalysis in which unconsciousness is structured like language, Jungian psychology in which imagination becomes archetypes, or even Winnicott’s transitional objects that after all are objects and a part of the intersubjective realm. In design, the problem is usually designers’ imagination which tends to go after iconic designs through design techniques like moodboards, sketches and CAD programs.

2 Surrealism, of course, presents a highly sublimed version of Freud’s theories of the unconscious.

3 This is a dense sentence. Artists are usually happy to capture the world and communicate their interpretation through singular art works. While there is a market for sketches, models, and prototypes, and galleries sell limited editions and unique, signed design pieces too, design usually ends up in the mass market. The main worry for designers is the group and collective level of society, while artists have the luxury of exploring individual subjectivities for in-group discussions.

4 It is good to keep in mind that this was the situation before the current generation of smart phones. By 2015, Health Agents in Vila Rosario are much more adept at using smart phones. Around 2006, only one or two of them had a mobile phone, and none had an Internet connection at home.

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The Missing Tool in the Design Leadership Toolbox: Integrating Conflict Management into Collaborative Design

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Businesses often face the challenge of reaching out to people in contexts that are wholly different from the world they operate in and they are regularly attempting to create experiences for consumers that exist within complicated dynamics of social, economic, political, and cultural flux.

Arriving with training that encompasses everything from design research, iterative prototyping, tolerance of ambiguity, process-driven approaches, and an appreciation for wicked problems, Designers are uniquely positioned to be in roles of leadership within these businesses who are trying to create experiences for consumers.

Design Leaders ARE the bridges between businesses and the people they're trying to serve.

Unfortunately, while Design Leaders can speak in the voice of the customer, drive the innovation process, advocate for deferral of judgment, and diverge and converge with the best of them, one critical skill set is lacking from their Design toolbox: conflict management. Design Leaders need to develop conflict management tools or they will be left off of the invitation when all the leaders sit down around the industry table to talk about innovation.

Conflict management as an area of research and development has been around for quite some time and has a number of valuable tools that can be easily adapted to fit into Collaborative Design processes. This paper will provide a deeper dive into one tool that has been developed specifically for Design Leaders to incorporate into the convergent phases of their Collaborative Design process: the Interest-Based Converge Process.

INTRODUCTION

The last decade has seen social, industry, and practical trends calling for collaboration as the answer to achieving alignment. Whether it's called co-design, participatory design, people-centered, or user-centered design, insights developed around people's needs are widely recognized as being the lynchpin to driving the Collaborative Design process for the sake of creating more relevant and innovative outcomes.

Design Leaders are in a perfect position to facilitate Collaborative Design as the champions of the Design process. Unfortunately, the critical skill set of conflict management is lacking from many Design Leaders' toolbox.

Collaborative teams of people from varying perspectives, backgrounds, and contexts are common environments for conflict to arise and Design Leaders need to begin developing conflict management tools to address the issues that arise.

Many tools and methods exist for Design Leaders to incorporate stakeholders into their design process (the majority of which are for the sake of divergence and ideation). [39] However, Design Leaders should look to the field of conflict management research for tools that can be adapted to fit Collaborative Design processes.

One such tool has been developed for specifically for Design Leaders to use when collaborative design teams are trying to make a decision, which is when conflict is most

common. The process is an articulated set of steps that incorporates interest-based negotiation into the convergent stages of the design process and is called the Interest-Based Converge Process.

The title “Design Leader” has been used in this paper with the intent of speaking to an aspirational audience. Regardless of whether one considers themselves a visualizer, researcher, manager, strategist, or designer in any other emanation of the word, this author believes that everyone in the design industry should aspire to lead (projects, processes, organizations, etc.) through their unique set of skills.

The Interest Based Converge Process is agnostic of what type of project is being collaboratively executed. The author is a design strategist and researcher by trade and all of the examples provided to support this paper come from this context. However, regardless of whether someone is designing a research project, executing a research project, planning a design activity, executing a design activity, etc., the skills/processes/tools apply. The only real requirement is that the activities happen with other people in order for conflict to arise.

PROBLEM SPACE: COMPLEXITY & COLLABORATION

Trends in business today tell us that companies are increasingly putting people (users, consumers, etc.) at the center of their decision-making and finding great success doing so. A significant challenge with this is designing for the complexity of people themselves. In addition to the complexity of being a human being, each of these people experience products and services within a complex context of home, career, family, politics, religion, and so on.

In addition to the people they are trying to serve, organizations are by nature complex creatures as well. Between ever-shifting internal politics, increasingly competitive markets, and the threat of endless reorganizations, companies must constantly evolve in order to stay one step ahead of the market. While this may be slightly easier for smaller, more agile companies, the core complexities of being in business and serving consumers still remain.

If we accept that there is value in putting people at the center of organizational decision-making (and we do), then the task of complex organizations trying to serve complex human beings experiencing products and services within complex contexts becomes daunting and well... complex.

No single designer, executive, or decision maker can account for all this complexity, which creates the need for an interdisciplinary approach to designing experiences. When you have more people from more varied backgrounds involved in the design process, experiences (products, services, and the systems they live within) can be more dynamically designed to serve the complexity they will exist within in a more holistic and valuable way.

Whether it's called co-design, participatory, consumer-centric, or user-centered design, businesses are finally taking the people-centered approach to designing experiences very seriously. [1, 5, 6, 12, 14, 15, 42] Research commissioned in all three of these areas [1, 2] recognizes the importance of people with differing backgrounds lending their individualized expertise to solving problems of all kinds. Many design professionals [1, 14, 15, 42] already recognize the potential for collaboration as a key resource for innovation.

DESIGN LEADERS ARE THE BRIDGE

Designers are unique to the dialogue about collaboration in that they can play either a content role or a process role. In a content role, designers have interests regarding the subject matter of their design. In a process role, their interests concern how the process proceeds and how the group functions. When working in teams of designers and stakeholders, designers are constantly positioning and repositioning themselves between these two roles. [25]

Design Leaders understand the need for alignment—both within the business they’re serving and between the business and their consumers. The last decade has seen social, industry, and practical trends calling for collaboration as the answer to achieving alignment. Insights developed around people’s needs are widely recognized as being the lynchpin to creating alignment and driving the Collaborative Design process for the sake of creating more relevant and innovative outcomes. [40, 41, 44]

The average business executive, marketing manager, or sales director most likely do not operate with the same perspective of or within the same context of a Millennial shopping for renter’s insurance, a single mother trying to teach her child how to drive safely, or a lifetime forklift operator. Appreciating and understanding these varied perspectives from wildly differing contexts through research efforts is the key to unraveling this complexity.

Arriving with training that encompasses everything from research, iterative prototyping, tolerance of ambiguity, process-driven approaches, insight translation, and an appreciation for wicked problems, Designers are uniquely positioned to be in roles of leadership within these businesses who are trying to create experiences for consumers.

Design Leaders ARE the bridges between businesses and the people they’re trying to serve.

Regardless of the challenge, Design Leaders recognize that Design serves as a creative problem-solving process. [4, 8, 11] While the actual process may differ from one designer to the next and one challenge to the next, the gestalt of design processes generally consists of three steps: Problem Definition, Solution Generation, and Solution Implementation.

It is in Problem Definition that Design Leaders use their research toolkits (including everything from ethnography to co-creation) to create a deep understanding of the people they’re trying to reach as well as the complex contexts these people exist within. Solution Generation sees Design Leaders bringing together the consumers’ perspectives and the business’ objectives to facilitate identification of opportunities for innovation. These opportunities are then tested, refined, and iterated on in Solution Implementation. [4]

Design Leaders are taught to approach this process with an open mind, an appreciation for the unknown, and a deep respect for the need to defer judgment. This respect has given rise to acknowledging the value in separating the activities of diverging and converging. [1, 4, 5, 8, 11, 14, 15, 26, 27]

Diverging is the opening stage of each step during which possibilities are generated. In order to successfully diverge, Design Leaders defer any thoughts or behaviors that might constrict the generation of possibilities. The convergent stage, during which Design Leaders reintroduce behaviors of judgment, is for the purpose of making decisions and narrowing the field of possibilities. [4, 27] It is during this convergent stage when the potential for conflict is highest in collaborative design.

VALUE & ROLE OF CONFLICT MANAGEMENT IN COLLABORATIVE DESIGN

Design Leaders are in a perfect position to facilitate Collaborative Design as the champions of the Design process. Unfortunately, while Design Leaders can speak in the voice of the customer, drive the innovation process, advocate for deferral of judgment, and diverge and converge with the best of them, one critical skill set is lacking from their Design toolbox: conflict management.

Working with so many people with so many varying perspectives, backgrounds, and contexts is the perfect breeding ground for conflicts to arise and if Design Leaders are truly to become the facilitators—or the bridges, if you will— then they need to begin developing these conflict management tools that are missing from their toolbox or else they will be left off of the invitation when all the leaders sit down around the industry table to talk about innovation.

Factors required for successful collaboration have been defined and include: trust, understanding, respect, clear and attainable common purpose, interdependence, shared values, accountability, shared commitment, democratized leadership, shared “time” and “place,” well-defined relationships, agreed rules of engagement, mutual support, shared language, organization, appropriate people, flexibility and adaptability, balance and equity, conflict management, mutually beneficial rewards, and effective conversation. [9, 10, 29-33, 35, 37, 45] While all of these factors are important, the key factor that has significant impact on all others (either positive or negative) is the ability to effectively manage conflict. [7, 9, 10, 19, 29-33, 46]

Conflict is defined as a situation in which the concerns of two or more people appear to be incompatible. [23] While it is both natural and desirable, conflict unmanaged will only become more serious. [16, 17, 36] As seen all around us in every arena from the nightly news to pageant parents, our society has a strong cultural belief in an adversarial approach to conflict. [16, 17, 36]

Conflict is usually seen as a result of one (or a combination of) the following causes: different views or interpretations of data; incompatibility of interests; outside structural impositions on situation; incompatible personal beliefs or values; mistrust or negative emotions among relationships. [23]

In the field of Conflict Management academics recognize that the traditional approach to conflict is when two parties disagree, there is an “argument” in which each tries to prove the other party wrong. [18, 24, 28] An “argument” can vary wildly in practice and encompasses everything from a mild verbal disagreement between individuals to military aggression between nations.

Negotiation, however, is an alternative method of managing conflict. Negotiation is defined as the process of engaging in a dialogue, discussion or written exchange aimed at resolving conflict. [23] This approach is critical when working with collaborative teams—especially when maintaining positive working relationships is required.

There are many approaches to negotiation—each of which yields its own benefits in different situations. The approaches to negotiation are: reconciling underlying interests (needs), determining rights (laws or contracts), determining who is more powerful (the ability to coerce someone to do what they don’t want to do). [28]

For the sake of maintaining relationships and meeting the needs of multiple parties in complex challenges, Interest-based negotiation presents a relevant and valuable problem-solving approach. [17] In this approach, parties set aside focusing on positions

(demands/tangible outcomes that parties cling to) in order to educate each other about their interests (underlying considerations/needs that motivate people to take a position) and jointly create solutions that meet those needs. [23]

Through addressing the underlying interests, many other causes of conflict are often naturally addressed [16, 17, 24, 36] and additional benefits include time and cost savings; a greater sense of self-determination and creativity; and increased satisfaction with outcomes and relationships among participants. [23]

When you have an interdisciplinary team from varied backgrounds coming together for the sake of collaborative design, it is inevitable that these stakeholders will bring wildly varying perspectives to the table. Building empathy and shared understanding among these stakeholders and their varying perspectives is the starting point to setting up successful interest-based conversations. [17, 23]

Without an understanding of conflict management tools, Design Leaders often stumble as a result of some common misconceptions. The root of these misconceptions is that “compromise” and “accommodate” are synonymous with “collaboration” and are the best way to make a decision. [25] Despite the illusion of collaboration in these approaches, they are actually counter-productive to collaboration and finding solutions to meet the needs of multiple parties. [45] Both approaches are ultimately the quickest route to “designing by committee” which results in solutions for the lowest common denominator. [21, 38] Oftentimes, this means that they take the form of voting to let the majority rule or splitting the difference between solutions, which produces results that are either watered down or pared down to the barest minimum that satisfies a few people—as opposed to truly collaborating to identify solutions that address the needs of all parties.

By incorporating interest-based conflict management tools into the decision-making moments of collaborative design, Design Leaders can avoid the pitfalls of designing by committee.

The Design Leader’s Conflict Management Toolbox

If designers are to function successfully as leaders of the collaborative design process in both process and content roles, methods and tools need to be developed to aid them in navigating rocky waters when conflict inevitably arises. Much to Design Leaders’ benefit, conflict management as an area of research and development has been around for quite some time and has a number of valuable tools that can be easily adapted to fit into Collaborative Design processes.

One such tool has been developed specifically for Design Leaders to manage conflict in collaborative design: the Interest-Based Converge Process. Iterations of testing and refinement were conducted through participant observation, focus groups and interviews with teams of participants working on a series of various collaborative design projects in order to develop this process that would integrate interest-based negotiation into convergent stages of the design process. [25]

The Interest-Based Converge Process has been applied successfully in many contexts. In one such situation, a design research team was attempting to develop a methodology tailored to a company’s complex research objectives. Once the initial ideas were identified, two approaches emerged as strong possibilities—conducting observation before an evaluation or vice versa. Both approaches had clear and relatively equal pros and cons and the team

struggled to agree on which approach would be best. The team (which only consisted of 3 people) was on the verge of simply voting and letting the majority rule, however doing so would alienate an entire 1/3 of the team and could effect the atmosphere of collaboration. Through the Interest-Based Converge Process, the team identified a previously unspoken underlying need that could be used to evaluate the options—the idea that the clients felt the observation would be more interesting for their executives to participate in and that the executives would not be willing to sit through the entirety of every interview. In bringing this underlying interest, the team was able to collectively agree that only one of the two possible directions would satisfy this deciding criterion.

In another example, two junior visual designers were tasked with collaboratively developing the design guidelines for a collection of reports and marketing materials. Both had developed multiple moodboards of possibilities, but each had become particularly attached to a single moodboard that they felt was best. When viewed as an entire solution, the moodboards were representative of each designer's individualized set of beliefs about what consisted of “good taste”—the ultimate example of position-based conflict. They were at a stalemate and resorted to spending a good amount of time going in circles arguing about why they were each right and moved into making disparaging statements about the other's design choices. This situation quickly declined and ultimately the working relationship between the two designers had become tense and unproductive. After being coached on the Interest-Based Converge Process, the designers were able to develop a set of evaluative criteria based on the underlying interests that each believed defined what “good taste” meant. In working together to identify these criteria, they were able to re-establish a respect for their aesthetic similarities and differences. Using these interest-defined evaluative criteria, they were able to systematically evaluate each component of their moodboards in isolation (type, palette, etc.) and distance themselves from the moodboards themselves, which had become the representation of their individualized design identities. This process allowed them to create a collaboratively defined set of design guidelines that respected each of their individual aesthetics and recombined them into a stronger finished effort.

When allowed to engage in unstructured decision-making conversations, teams often struggle with staying focused on underlying needs and would habitually fall back into the familiar pattern of position-based argument. In an attempt to avoid arguing or arrive at a timely decision, many teams default to voting, compromising an individual's need, and/or designing for the lowest common denominator that everyone can agree on.

The Interest-Based Converge Process was developed to directly address these faulty patterns of non-collaboration and provide a structured, positive, respectful process for making a mutually beneficial decision. The process is an articulated set of steps that incorporates interest-based negotiation into the convergent stages of the design process in order to facilitate more people-centered collaborative design.

The following guide provides the Design Leader with directions to navigate each step, pointers to facilitate conversations and variations that the Design Leader can incorporate into the process. One variation explains how steps can be altered to include the use of negative evaluative criteria. The second variation provides a method for the group to narrow a larger number of alternatives before they begin the process because the Interest-Based Converge Process works best when a collaborative design group is evaluating a “handful” of alternatives (ten or fewer, but three to five alternatives is ideal).

Interest-Based Converge Process [25]

1. Frame the process

The first step is critical to set the entire process up for success. The Design Leader should identify what step in the process is being converged on and what the outcomes should be in order for this process to be considered a success. Once these items are understood, the Design Leader should articulate the alternatives that are being weighed in a way that everyone clearly understands the options before them.

2. Identify interests

The second step is for participants to identify the interests they must have met by the outcomes. An interest is any need regarding the outcome of this decision that must be met. As prompts, the Design Leader may encourage generation of interests by explaining the categories of Personal- and Project-specific interests.

Personal interests may include, but are not limited to: professional development needs, proof of success, and learning experience. Project specific interests may include, but are not limited to: time-specific needs, budgetary-specific needs, location-specific needs, functional needs, material needs, audience needs, purpose-driven needs.

Participants in a collaborative environment need to maintain a clear division of private action and public action, where private action is any articulation of ideas that occurs in privacy and isn't required to be shared with the group and public action is any articulation of ideas that is shared (required or not) with the group. It is important, therefore, that the Design Leader create a clear division of private and public actions. This is done by encouraging each participant to first self-identify needs on a private space, such as their own computer or pad of paper. This action contains an element of reflection and a certain degree of honesty that creates a feeling of vulnerability. Maintaining privacy managed the discomfort enough to allow all the participants to be truthful while examining their interests.

After individually identifying interests, all the participants should then be encouraged to share their interests with the group in order to develop a collective list of interests that must be addressed by the outcomes. In following this procedure, individuals accept some responsibility for whether their needs are met or not in their decision about whether or not to share their self-identified interests with the group.

Once individuals share their interests with the group, the Design Leader should lead the group in a round of discussion identifying any additional interests that may have been sparked by seeing others'.

3. Generate evaluative criteria

In the third step, the Design Leader guides participants in down-selecting interests that are important to them. These interests will be translated into evaluation criteria.

This step can be done individually or as a group and should be left up to the designer facilitating the session to gauge which method is necessary based on the degree of comfort with public sharing displayed by individuals in the group.

When generating evaluative criteria, the Design Leader must ensure that each criterion is framed using specific guidelines. Evaluative criteria should:

- Be a question that can be answered with a “yes” or a “no”
- Use clear language that all participants understand and agree on
- Be able to be directly applied to weighing the identified alternatives

4. Select Evaluative Criteria

For the fourth step, each participant should identify criteria that they consider the most important. The Design Leader should determine the number allowed based on the number available and the number of participants. The goal is to give each participant enough “votes” that there will be a significant patterning among selected criteria while not giving them so many that all criteria patterns. Generally, allowing participants to identify their 3-5 most important generates a successful number of criteria.

Similarly to Identifying Interests, this step requires a clear distinction between private and public actions. It is important that these selections are made privately and not shared until all participants have “locked in” all their choices. Doing so prevents anyone from making attempts to sway the selection based on what others are identifying.

Once the private selection is shared, all selected criteria should be listed in order of most selected to least. Any criterion not selected is removed. A target number of criteria (pre-determined by the designer facilitating the session OR collectively agreed to by participants) are identified to move forward starting with the most heavily chosen.

If only a couple criteria are clearly chosen above all the others, they are set aside to move forward and the remaining criteria can be isolated for the purposes of repeating the private and public identification process until the target number of criteria is selected.

5. Apply evaluative criteria

Once evaluative criteria have been generated and identified, the fifth and final step of the process is to apply the criteria to the proposed outcomes.

The evaluative criteria and the alternatives to be decided between should then be put into a decision-making matrix. A decision-making matrix is “particularly powerful where you have a number of good alternatives to choose from, and many different factors to take into account. This makes it a great technique to use in almost any important decision where there isn’t a clear and obvious preferred option.” [34]

One by one, the alternatives should be measured against the criteria for a “yes” or “no” answer. The questioning should either proceed across a row (one alternative measured against each criteria in turn) or down a column (one criteria measured against each alternative in turn). For every “yes” selection, the corresponding option receives one point for the corresponding criteria. For every “no” selection, the corresponding alternative receives no points for that criterion.

It is important that these selections are made privately and not shared until all participants have “locked in” all their choices. Doing so prevents anyone from making attempts to sway the selection based on what others are identifying.

Once all participants have completed all fields, participants should reveal all “yes” and “no” choices so each individual is held accountable for their choices. After everyone has

shared their individual answers and those have been compiled publicly, the numerical value should be tallied for each alternative and displayed in ranked order. This final ranked order represents the collective outcome of what each participant mutually agrees meets their most critical underlying interests.

If only one final alternative is desired, the top-ranked alternative is the final outcome. If multiple alternatives are desired, the final ones are selected starting with the top-ranked alternative and moving down in rank.

Interest-Based Converge Variations

Variation A: Weighted Evaluative Criteria

In addition to the basic list of identified and prioritized criteria, Weighted Evaluative Criteria can be used to strengthen the outcomes if there is any doubt that the differences in outcomes may be too subtle to agree on.

For this variation, all participants identify a small number of criteria (the number allowed will be determined by the designer facilitating the session) that they deem the most important. The same process of private identification and public sharing should be used as in the step Select Evaluative Criteria. This can be done at the conclusion of step four.

The most frequently identified criteria should then be assigned descending numerical value. The majority of criteria should be given a value of 1; the approximated top third should receive a value of 2; and only the one or two clear “winners” should receive a value of 3.

In the final tallying, each point should be multiplied by the criterion’s associated weighted numerical value.

Variation B: Negative Criteria

Negative criteria can also be employed when there are conditions that a team would NOT want an outcome to satisfy. For example: Will this alternative cost too much? This variation is useful in 3 situations: when many alternatives are being weighted, when participants generate negative criteria easier than positive, when the potential outcomes are subtle enough that participants may disagree with the outcomes.

If participants desire negative criteria, weighting must be implemented in step four. In that step, negative criteria should be assigned a value of -1, -2, or -3 in step 4 according to the severity of the criteria.

In the final tallying of numerical values, a “yes” answer is still afforded one point multiplied by the weight, but the result of that calculation will be a negative number.

Following basic mathematical rules in tallying the final outcome, a positive number increases the alternative’s balance and a negative number decreases the alternative’s balance.

Variation C: Gut Check

In some groups, an additional criterion of “Does this alternative feel good” has been used to great success. This additional criterion is the primary place for participants to identify their intuitive preferences and allows for an element of the “gut-feeling” to be recognized and

validated. This variation should only be used when using weighted criteria and the “gut check” criterion should be assigned a weight of ½.

Variation D: Pre-process Narrowing

If a multitude of alternatives exist such that the process becomes unwieldy to complete, the Design Leader can lead the group through this variation to narrow the field of alternatives before the final iteration with only a few viable options.

For this variation, the Design Leader should guide the group through the first four steps, ending after only one round of identifying criteria. Taking the single most important criteria agreed upon, the group then measures the multitude of alternatives against this one yes/no question. Any alternatives not clearly garnering a “yes” against this criteria should be set aside.

If the number of possible alternatives is still too cumbersome, repeat this variation with the second most important criterion, then the third, and so on until a manageable number of alternatives have been identified to proceed with the process.

CONCLUSION

Social, industry, and practical trends call for collaboration as the lynchpin to creating alignment and driving the Collaborative Design process for the sake of creating more relevant and innovative outcomes. Designers are uniquely positioned to be in roles of leadership within these collaborations. Unfortunately, while Design Leaders have many uniquely qualifying abilities, one critical skill is lacking from their Design toolbox: conflict management.

Conflict management as an area of research and development has a number of valuable tools that can be easily adapted to fit into Collaborative Design processes. Many tools and methods also exist for Design Leaders to incorporate stakeholders into their design process. [39] However, the majority of these tools function within the context of divergence and ideation and none of them incorporate conflict management tools. The Interest-Based Converge Process, fills this gap. However, areas for future research still remain.

Long-Term Dependency

The Interest-Based Converge Process was developed so that the functionality of the toolkit and process would be transparent. This transparency allows a collaborative design team the ability to learn the process and become less dependent on the toolkit materials. Research on experiential learning might show that teams using the process over an extended time would learn the process and become independent of the toolkit. [3, 13, 20, 22] Long-term evaluation of teams using this process may exhibit the process becoming a crutch that enables the team’s lack of collaborative skills development. The first scenario would be considered a successful outcome, while the second would not.

Trust Building

Long-term use should also be examined to determine whether or not teams build an ever-

increasing sense of trust among collaborators. This evaluation could be measured by the degree to which the division between public and private action space and time is reduced with repeated use of the process over time with the same group. If this division and the amount of time required by participants before sharing publicly are reduced, it could be concluded that the process facilitates trust building between collaborators.

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Challenges to Internet Connectivity in the Himalayan Foothills

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Understanding Internet connectivity in remote regions presents a host of logistical and methodological challenges. As researchers and business professionals, we cannot just assume that these places are simply Unconnected. We must understand the challenges people face in connecting, in what ways they have connectivity, and in what ways they do not. This paper examines research methods and framing to investigate Internet connectivity options for residents of the diverse terrain of the Himalayan foothills.

INTRODUCTION

Developing interventions to connect the two-thirds of the world that does not have Internet access is filled with technological and social challenges. It requires creativity and innovation, and thinking beyond the scope of what is canonical in developed markets to ensure that the features Internet access product will function properly at its endpoint.

In this study, we examined a remote region in the Himalayan foothills rife with technological challenges to providing affordable connectivity. The technological challenges include everything from structural hurdles – proximity to fiber backhaul, (i.e., the Internet backbone), and the expense and logistical complexity of installing and maintaining infrastructure such as cellular towers – to the technical limitations of signal propagation in mountainous terrain with intermittent power.

Even when an intervention clears the technological hurdles of broadcasting signal in a region such as this, it still needs to fit into the daily lives of those it is meant to serve. As such, understanding the human factor – not just in terms of usability, but more fundamentally in how social mores and individual perceptions will influence the adoption of this new offering – becomes inextricably linked to the potential success of any Internet access program. Understanding people who are Internet Unconnected is critical to successfully providing relevant connectivity solutions.

This paper describes the research processes by which Facebook Research sought to understand the state of connectivity in this region from the perspective of those who live there. By better understanding the people of this region, we were able to provide foundational information to the Internet.org team about how to best serve this market.

At first, the definition of “Internet Unconnected” seems like a straightforward concept (i.e., those who do not connect or have not connected to the Internet). Nonetheless, an individual's Internet-connectedness is more complicated than a binary distinction of being “Connected” or “Unconnected”. Her proximity to conversion is not simply a matter of access, but a complicated equation of access and perceived value: barriers vs. benefits. This is nicely illustrated by a few simple statistics about this region.

In the locations we examined, only 29% of people had ever used the Internet, and only 22% had used it in the past 30 days. Yet, even among this relatively “unconnected” region, nearly all (97%) people had access to a mobile phone, and 40% of people had access to phones that were internet-capable. Moreover, 3G cellular data was available in much of the region. Simply having access to a device and connectivity does not ensure that people will (or will be able to) use the Internet. Whether people are Connected is not just about physical or technical access, but also about what they perceive as the benefits of and barriers to connectivity. Access has technical preconditions, but even when those preconditions are met, other factors influence the individual's choice to go online.

Consider the story of Karin. Karin is 24 and lives in Village B with her parents-in-law and a 6 month old son. Her husband works in Delhi and visits infrequently. She does all the household work, which includes cooking three meals, all cleaning, washing utensils and clothes. In addition, she goes to the jungle to gather grass for the cows and tends the cows. She is not allowed to watch TV with her in-laws, and tells us that any free time she gets is spent on stitching her own clothes.

As a wedding present, she got her first phone, a Nokia C1, on which she only makes and receives a few calls from her family a week, and calls her husband every day. She spends about Rs.60 per month on recharging it, and is scolded by her in-laws if she exceeds that amount. Because her in-laws dislike her leaving the home outside of gathering grass for the cows, she sends someone to recharge the phone and does not go to the market herself. Her Nokia C1 is, in fact, Internet capable. While Karin has heard of the Internet and says she does not know much about it, she actually has a reasonable idea of what it can do:

“It’s some ‘electric’ thing which allows you to sit at home and find out things, and talk to others. You can see the outside world through it. But I don’t know what you can see. I hear about it from here and there.”

She feels using the Internet will be easy for people who know how to use it, but not for those who do not. Her perception is that mostly, villagers do not use the Internet and city people do. She believes that if she can use it, it will only benefit her and her family, and personally does not see negatives in its use.

Karin’s story is a single example of how diverse and complex Internet Unconnectedness can be: familial pressure about expenditure and mobility, varying amounts of information about what the Internet is and what value it brings, dispersion of friends and relatives and a desire to connect with them, and perceptions of whom the Internet is truly “for”.

Looking at the human element in connectivity reveals that there are multiple levels of Connectedness and Unconnectedness. A survey might show Karin’s access to an Internet-capable phone, and her price sensitivity. Nevertheless, the socio-cultural challenges she faced (she literally said she was not allowed to try the Internet) might not allow her to convert to Internet trial.

As researchers, and business professionals, we cannot just assume that these places are simply Unconnected as defined by statistics around phone penetration, Internet usage rates, etc. We need to understand the challenges people face in connecting, in what ways they have connectivity, and in what ways they do not.

THE BUSINESS QUESTION

In 2014, Internet.org was investigating Internet access in villages in the Himalayan foothills. At the broadest level, we researchers were charged with helping the team understand what are optimal ways of providing Internet access in different geographic locations in the Global South.

The team had several options for technical solutions to access, but needed additional context for this specific region and the people the technologies would be serving.

RESEARCH QUESTIONS

In previous Internet.org research, we had seen many additional barriers to Internet use beyond the problem of access (including sociocultural and environmental factors). Focusing solely on access would not allow opportunities to understand challenges to connectivity adoption (and without adoption, it becomes very difficult – if not impossible – to optimize technological specifications at scale).

Framing the research questions to focus on the perceptions and needs of people – understanding the local context and the local barriers to and benefits of connectivity – would allow us to create better strategy, marketing, and ultimately, product for the people we serve. Specifically, we wanted to define both the barriers and benefits to accessing the Internet in general.

We ultimately reframed the business question as a broad research question:

“What are the local barriers and benefits to adoption of Internet?”

We further articulated the main research question into a number of research sub-questions, aimed at uncovering the interplay of factors leading to Internet adoption. Leveraging a modified version of McCarthy's Marketing Mix, we proposed understanding several different elements of any potential intervention:

Who is the addressable market?

Who is immediately reachable with proposed interventions, and at what cadence (e.g., do they have a device that can connect? Do they know what the Internet is? Are they interested in the Internet?)

- Establishing where in the conversion funnel (awareness / familiarity / consideration / trial / usage) people fall to better understand where to focus product design and deployment efforts to ensure equitable access to connectivity deployment.
- Understanding structural barriers: device ownership, proximity and access to extant modes of connectivity (N.B. for the purposes of this research we focused on phones as they are the most widely distributed connectivity platform, and also are core to the designed interventions)
- Defining demographic composition (age, gender, literacy, employment, etc.)
 - Divergent rates of Internet penetration among different demographic subgroups.

- Data on gender-specific differences in device access and Internet use, and associated barriers.

What is the product market fit?

What services are already offered, as well as reception to and adoption of those services? What might be a resonant value proposition for Internet (particularly for people who have not used Internet before)?

- Identifying Internet understanding and perceptions
- Identifying unmet needs relevant to Internet benefits

How should we promote an intervention?

The hope is always that there will be organic growth and virality of a product offering, but there is also the possibility that marketing efforts will boost organic adoption rates. In-person research could be leveraged to help the team utilize relevant language and convey what was most relevant and compelling information about the intervention and Internet.

- Revisiting the funnel: successful programs cannot just be about promoting the benefits of Internet, but must also help educate people with lower familiarity about how to actually use these services.
- Understanding how people have heard about the Internet in the past
- Measuring access to media and other communication channels to be able to optimize messaging reach

Where should we place the intervention?

Given the unique terrain and geography of the Himalayan foothills, we needed to:

- Understand where people spend their time, and in what densities
- Identify any potential challenges in universal accessibility (i.e., for all populations) related to where signal reaches

Underlying these four questions, we wanted to ask what socio-cultural conventions influence Internet usage: Are there any underlying beliefs, behaviors, or restrictions around Internet usage? Is it perceived to be beneficial to society? Are there any subgroups for whom it would not be considered beneficial? Are there any perceived risks, and if so, what are they?

RESEARCH EXECUTION

Survey Research Methodology

The survey was designed to measure the extent of technology awareness and usage in seven villages, towns, and cities in the selected region. Within each location, households were

selected via a random walk procedure, producing a sample of the household population age 15-64. Fieldwork teams used smartphones to complete interviews with 5,371 respondents. Data were collected between December 2014 and February 2015.

Ethnographic Methodology

A total of 24 in-person 1.5 hour semi-structured in-depth interviews were conducted across six different locations (varying in size from small villages to bigger towns).

Table 1. Survey & Interview Locations

City A Pop: 102,000	Town A Pop: 23,000	Town B Pop: 15,000
Village A Pop: 3,000	Village B Pop: 5,000	Village C Pop: 4,000

Recruitment parameters included:

1. Gender: 13 male, 11 female respondents
2. Age: 14 respondents 18-24 years old, 10 respondents 25-34 years old
3. Socio-economic levels: mix of socio-economic levels, excluding the highest classification (SEC A)
4. Marital status: mix of married and unmarried respondents
5. Internet-capable device access: mix of those with and without access to an Internet capable device (more than half did have access to an Internet-capable device)
6. Internet usage: a sub-selection of respondents were Internet users

We endeavored to conduct these interviews without assumptions about the desire for or reputation of Internet connectivity. In short, we never want to assume that Internet connectivity is desired. To get the fullest perspective on the potential role of the Internet for these populations, we went beyond simply asking about the Internet, and let people tell us about their everyday lives, the challenges therein, what things they would like to be able to do but currently cannot, and eventually about their thoughts on the Internet specifically.

The rough structure of the interviews included prompts about the following:

1. Respondent overview: who they are, what they do, what they hope for in life, what is important to them in life.
2. Technology overview: what technologies they currently used, what technologies exist in their village/town, how that has changed over time, what technologies they hope to have in the future.
3. Device access: what kind(s) of (Internet-capable) devices do they currently have access to, what are the device specifications.
4. Internet knowledge: awareness of the term/concept Internet, familiarity with the Internet, knowledge of how to access the Internet

5. Internet perceptions: specifically eliciting both good and bad perceptions, consideration, egocentric network usage and perceived social restrictions on Internet usage.
6. Internet usage: trial history, usage patterns (among users).

To supplement the perspective of individuals, we additionally conducted one expert interview in each of the six locations (ranging from village heads to local government-sponsored healthcare workers and educators). These expert interviews allowed us to gain a fuller perspective on the technology status and challenges of the locations we were visiting. They also allowed us to get a more general sense of what life was like in each location, beyond the limited number of interviews we were able to complete with specific individuals.

CHALLENGES IN EXECUTING THE RESEARCH

Population density & layout

This region of the Himalayan foothills has a frigid climate in the winter and a dramatically hilly landscape. The towns and villages where we conducted fieldwork often lacked a physical center, and were instead a scattering of houses and buildings on steep mountainsides, and a roadside market along a winding road. For individuals for whom cellular Internet connection is not an option, this landscape complicates the selection of centralized locations for alternative Internet connections that can be accessible to many.

Mobility and transportation

The region's generally poor state of roads, complicated by seasonal snows, mud and rockslides make physical mobility in the foothills region very challenging. In the case of this research, conducting fieldwork in early winter months meant we had limited access to potential field locations, and increased travel time to get to locations. For example, with the winding roads, which had not even yet iced over in December, it took well over four hours to travel 175 km (109 miles) in a modern passenger van, with effectively no traffic.

For residents, mobile phones were considered a lifeline for both practical uses and entertainment during these periods of limited accessibility, but respondents said that during long periods of road blocks, mobile data package top-ups wouldn't be available (because the scratch-off cards used to add mobile credit would not reach vendors).

Patrilocal habitation

In our initial imagining of the research, we wanted to speak to people in their own homes to increase levels of respondent comfort. However, over the course of conducting the interviews, we observed and were told that patrilocal habitation was common. As such, when conducting interviews with early-adult women (as our respondent set were people 18-34), we often encountered situations where the interview would be wholly observed by one or more of the respondent's parents-in-law. We found it difficult for interviewers to have

open conversations with daughters-in-law in these cases, and (on multiple occasions) received different or modified answers when parent(s)-in-law left the room.

Gender

Cultural norms about appropriate behavior for women required that we conduct ethnographic interviews with researchers of the same gender as the respondent.

Weather constraints

Conducting research in winter meant that people were not often in public spaces, and respondents needed to be interviewed indoors. Indoor in-home space constraints were challenging, and on more than one occasion the interview team did not fit into the respondent's home, or were not allowed inside. This forced us to conduct the interviews outside, which was sub-optimal for all involved, and often curtailed the duration of the interview.

Electricity blackouts, often weather-induced and accompanied by road blockages, were so frequent that respondents interviewed in a pitch-black room during a blackout blithely responded that “there are no electricity problems here.”

FINDINGS FROM THE BASELINE QUAL AND QUANT

Addressable Market

Most people have never used the Internet

Roughly seven-in-ten people have never used the Internet (71%).

Awareness is high, but familiarity is low.

While roughly three-quarters (73%) of the surveyed population had heard of the Internet, only one-third (33%) of the surveyed population felt that they knew more about the Internet than just the name.

Interest in using the Internet is not a given.

Among those who were aware of the Internet, but had never used it, only 18% said that they would be interested in using the Internet. This contrast is strikingly low compared to other countries where we have administered the same survey.

Table 2. Cross-Country Comparison of Internet Awareness, Penetration, Interest

Market	Internet Awareness	Internet Penetration	Internet Interest [†]
Himalayan Foothills	73%	29%	18%
Guatemala	60%	30%	34%
Kenya	70%	24%	57%

[†] Among non-users aware of the Internet

Not everyone who could access the Internet does

Fatima (City A) used to use the Internet regularly through her father's Samsung Android phone and the local Internet café. At some point, however, she was disallowed from using it by her parents who asked her to concentrate on her studies and housework instead. Karin (Village B, whose story we discussed in the Introduction) has an Internet-capable phone, and is interested in using the Internet, but faces pressures from her in-laws about her phone behavior and expenditures.

While the survey data provided evidence that there is a gap between those who theoretically could use the Internet and those who do, the ethnographic data allowed us to generate hypotheses about the reasons behind why people had not adopted the Internet, and understand how, if, and when to address those reasons.

Product Market Fit***Resonant Value Proposition(s)***

Another consistent theme was that people less familiar with the Internet did not have knowledge or understanding of the value of the Internet. Accordingly, making sure to communicate relevant and resonant value for the people considering using the Internet became one of the highlights from our research findings. These value propositions included:

1. Providing/supplementing educational benefits for children and adults

Moderator: "What are the other places where Internet can be used and of benefit?"

Respondent: "In our village the main place where it would benefit more is the education field ..."

(Saeeda / Leena, Non-Users Interview, Village C)

"I have also seen that abroad, even a small child gets a lot of knowledge about the Internet, laptop and mobile. Even they study there on a laptop. But here we don't have all that ... the education that is given to the children here is not as great as what it should be ... [W]e need to improve the education system here. We need to change everything ... Children should learn on the laptop."

(Fatima, Non-User, City A)

2. Reducing travel: Due to the inaccessibility of the location, traveling to submit forms or conduct business is challenging. The Internet offers an opportunity to reduce the functional and temporal costs of travel.

"We can also get the information regarding the posting for our work and the details about the last date for the submission of forms and all such things, so it is good to have internet connection..."

(Saeeda, Non-User, Village C)

3. Connecting to other people (particularly outside of the town/village): due to the trend of emigration, staying in touch with friends and family who have left the region to seek employment were important to respondents.

Desired connectivity features

Those familiar with the Internet were able to identify current connectivity challenges and offer proposals for what they would like to improve or alternatively have. These features included:

1. Faster and/or more reliable connection than current Internet service offerings in the locations.

“Connectivity is not smooth here. Therefore, they face so many difficulties. And I think particularly in the time of rainy season.”

(Village C, Lecturer, Expert Interview)

“I have Internet on my phone, but I go [to the Internet shop] at times in case I don’t have network connectivity, because they have Wi-Fi over there ... Wi-Fi helps me access Internet faster.”

(Reza, Internet User, Town B)

2. Good value (more data or faster speed) for money

“[The Internet] is quite expensive which is why not everyone can afford it. I can take out some time to learn something if required. But when I go there, the money they charge is too high.”

(Fatima, Non-User, City A)

3. Need for “easy” access —no codes, passwords, other hurdles to actually getting into the service itself

“In phone you can get better Internet, and whereas Wi-Fi it is a bit difficult it’s a bit tricky one, you have to connect to the connection and then you need to enter the codes and then Wi-Fi gets access.”

(Satya, User, City A)

4. Needs to work without consistent electricity

“Also, when there is electricity we can watch TV or read but when there is no electricity then we are helpless.”

(Saeeda / Leena, Non-Users Interview, Village C)

Marketing & Promotion

Harkening back to the conversion funnel, while many people had heard of the Internet before, less than half of those aware felt as if they knew more about the Internet than just the name. Through the ethnographies, we came to understand that the varying assessments of what the Internet is often had kernels of truth to them, but still contained hefty doses of mythos or inaccurate information. As such, we counseled that any intervention needed to educate people about how to connect, not just contain messaging around awareness and appeal.

The survey data additionally revealed differences between demographic subgroups in rates of awareness usage. Interviews highlighted instances where respondents believed that the Internet was for people who were “smarter” or “lived in cities”. Marketing efforts are uniquely positioned to create an inclusive portrayal of Internet usage by ensuring a diverse representation in marketing materials to address gaps in access and perceptions (e.g., gender, age, socio-economic levels).

Product Placement

Conducting this research also allowed us to provide insight about where people might be able to (or want to) access the Internet. For the purposes of this paper, we will talk about two types of access: fixed-location and geographically-pervasive access. Each type of solution inherently comes with its own benefits and challenges, and we were able to uncover some of those that are unique to this specific environment.

Fixed-location solutions (e.g., cyber-cafes, Wi-Fi hotspots)

1. Due to the terrain, weather, as well as the dispersion of residents, in several of the locations we visited, there was no “town center”. In cases where there was a town center, it was not particularly inhabited. The lack of centralized gathering points create additional challenges for range-limited interventions in terms of addressable market, as well as marketing challenges in terms of marketing reach.
2. Women in this region described limitations on their mobility (e.g., not being able to freely leave their home). If fixed-location solutions are to be deployed and accessible to all, it is imperative that they be locations that are safe locations for women (to be in public).

Geographically-pervasive solutions (e.g., cellular data networks)

As discussed earlier, the cellular technologies are widely available but it is challenging to deploy strong, reliable signal due to the terrain. A solution that would improve signal reliability and strength is something for which residents who use the Internet state a strong desire.

NOTES

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From UI to UX: Building Ethnographic Praxis in a Usability Engineering Culture

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In this never before shared case study, we explain how our UX research team increased its scope of work from surface-level UI issues to a full portfolio of user-centered research. We use organizational ethnography and organizational change literature to develop a three phase model of research team growth. We then discuss the implications of our model for strengthening ethnographic praxis in cultures dominated by usability engineering. We conclude with a reflection on building internal bridges to facilitate change. Keywords: organizational change, UI, UX, research, ethnography, usability, lean.

“It is by logic that we prove, but by intuition that we discover.” (Poincaré 1914: 129)

INTRODUCTION: EXPANDING THE SCOPE OF RESEARCH FROM UI TO UX

The skill segmentation deck went viral. Huh? Even we were surprised by the diversity of teams consuming the report. Unlike research reports of recommendations for a specific feature, which often read as gibberish or truisms to project outsiders, this content answered a myriad of questions that teams had debated for years. Product managers adopted the language of the user segmentation overnight. Scrum teams reprioritized their work to align features to their new understanding of users, asking, “Is this feature suitable for each segment?” Executives demanded more of the same, asking for similar research to be conducted for each product line. Our little side-project had done its job, moving us one step closer to earning research a seat at the strategy table. But before the fanfare, we worked for months to build the organizational readiness to hear and act upon the insights from the report.

Organizational Context: Product Development at Salesforce

When we joined Salesforce, most product managers (PMs) understood research to mean “usability testing.” PMs at Salesforce are subject matter experts, and are commonly described as “owners” of products or features, linguistically implying their decision making authority. PMs are usually staffed to a particular feature for years, unlike user experience (UX) researchers who are more commonly staffed to a feature for a weeks or months. This staffing dynamic understandably made it abnormal for PMs to seek out UX researchers for insights on user behaviors or industry trends. Unlike other models of product decision making where PMs, engineers, and researchers are all required to agree before moving forward, at Salesforce product related decision making historically fell squarely on the shoulders of product managers.

Compounding that challenge of UX researchers (and UX practitioners in general) having less domain knowledge than their PM counterparts, and consequently being left out of conversations about strategy and road maps, is a culture of aggressive product development schedules. Salesforce commonly releases multiple breakthrough products at each Dreamforce, the company's annual convention and product release showcase. Prior to our user segmentation, we—researchers and stakeholders alike—were perpetually swept up in the sprint to meet Dreamforce deadlines, not often enough pausing to ask ourselves, “Are we building the right products for the right people?” The focus of investigation was more commonly “Can we get these working in time for Dreamforce?” which manifested in a deluge of requests to UX researchers for usability testing. While usability testing is an important component of a research portfolio, the collapsing of research into one method concerned us—and many of our fellow researchers.

Today, things are improving: while usability still dominates research efforts, we are slowly but surely expanding into other types of work. To describe the cultural shift we are working towards on our team, we find Wu and McMullin's design maturity stages useful (Figure 1). There is naturally variation from team to team, but the UX team historically has been engaged and valued for contributions at the level of Feature, Form, and Function. However, as a UX team, we aspire to also contribute at the level of Problem Framing, where both design and research contribute to defining the broader challenges facing our organization.

DESIGN MATURITY	COMPETITIVE ADVANTAGE	AUDIENCE FOR THE DESIGN WORK
Problem Framing Design redefines the challenges facing an organization.	Decades These design advantages change the rules to the game in ways that can take competitors years to understand, let alone imitate.	Senior Executives The highest levels of authority and sponsorship are required because design at this level can feel like big bets that defy conventional wisdom.
Problem Solving Design finds new opportunities by solving existing problems.	Years Design at this level often combines multiple functional enhancements in combinations that create new products or product categories.	General Managers Because design at this level may create new or branching product lines, sponsorship needs to be able to authorize and fund those activities.
Feature, Form, Function Design makes things work better than they did before.	Quarters Functional advantages last only as long as it takes for competitors to mimic the enhancements, although first mover status may strengthen brand perception for much longer.	Product Owners & Scrum Teams Stakeholders at this level are often implementation partners with deep expertise in technical constraints for the work.
Style Design is the avenue to being hip and cool.	Months Stylistic improvements remain a differentiator as long as the style is in fashion, requiring frequent updates to remain competitive.	Product Owners & Marketing Corporate style guides often determine the scope of autonomy to make stylistic design changes.
No Conscious Design Design has no perceived value for the organization.	Style and aesthetics have become table stakes in most industries. To ignore this is detrimental to most B2C business, and increasing for B2Bs.	No conscious audience.

Figure 1. Design Maturity Stages. Adapted from Ambidextrous Magazine, 2006-2, and Jan Schmiedgen, 2013.

Each stage of design maturity is valuable and can be conducted strategically. While the model's authors describe the “style” stage in a superficial light, we argue that it is equally as

important as the other stages and provides equal opportunity for strategic contribution. For example, style guides like Bootstrap and Salesforce's recently released Lightning style guide enable a visual and functional consistency that greatly benefit end users and empower third party developers who may not otherwise have access to design guidance. Our goal was never to ignore "lower" stages of maturity, but to enable strategic contributions at each level.

Based on our insights from academic literature, the industry context, and our own ethnography of UX research culture change at Salesforce, we develop a model of organizational change for UX research teams that shows the path from fixing bugs to building businesses. We use "fixing bugs" to describe the mindset that the job of research is to identify and diagnose usability issues. We use "building businesses" to describe the mindset that a balanced portfolio of research also includes initiatives for de-risking new product development and co-creating entirely new lines of business with product development teams. Our model has three stages: excavation, foundation, and construction. We illustrate the stages of our model with ethnographic examples of projects from our own research team, both successes and mishaps.

Fixing Bugs: The Job of Research Is to Diagnose Usability Issues

In the beginning of our company and many others, the role of UX research was widely considered to be fixing bugs—that is, identifying and diagnosing usability issues. Most researchers had backgrounds in engineering psychology or human-computer interaction, and devoted their careers and skill development plans to understanding the fine details as well as the big picture of usability and ease-of-use concerns, for both software and hardware. Groups such as BayCHI, which is the San Francisco Bay Area chapter of the ACM Special Interest Group on Computer-Human Interaction (SIGCHI), and books such as *Measuring the User Experience* (Tullis and Albert 2013) exemplify this type of work. In this mindset, excellence is defined at the level of form, feature, and function. Further, excellence is easily quantifiable and measurable. This manifests as optimizing flows for end users, increasing conversion rates, and the like. There is little reference to redefining the user's problem or the approaches being used to solve that particular problem. The emphasis is on improving the metrics is not contextualized by the problem, as currently defined. In this mindset, product managers make statements such as, "We think this change will help users accomplish X more quickly." It is then the role of the researcher to define the study and to test that hypothesis. Excellent research quickly provides feedback to the product manager on whether their intervention helped move the needle of user experience in the desired direction.

The fixing bugs mindset is useful for optimizing implementations. When the product and market are well-defined, users' expectations are well-understood, and technical constraints are well-understood, research aimed at optimizing a UI is the fine-tuned craftsmanship that makes things better.

Yet this optimization mindset falls short when applied to undeveloped products, or new markets, or users whose expectations are unclear, or unknown technical constraints. For that, a broader mindset is needed. The broader mindset includes problem framing skills, subject matter expertise, a wide toolkit of research methods, and empowerment on the part of individual researchers and the research team as a whole.

Sometimes this broader mindset means researchers advocate for no research at all on a specific problem. For example, in our work, we observed a product manager asking, "Should

the lock button be on the screen or not?” The researcher who had conducted prior related studies on the target user segment, said, “Well, experienced users look for it, and are anxious if it is not there. And it teaches inexperienced users a good behavior. So yes, it should be there.” The room agreed. In this example, no study was needed. A/B testing a version with the lock button alongside a version without the lock button would have been a waste of resources. By including researchers with problem framing skills and subject matter expertise earlier on in the process, we avoid the time and expense of unnecessary usability studies.

We believe research has a greater impact when researchers are involved in the problem framing with product managers from the beginning. Researchers and product managers can create better hypotheses faster when they work together. That is a hallmark of the building businesses mindset. But before we can get there, we must proceed through three stages of change: excavation, foundation, and construction.

Building Businesses: The Job of Research Also Includes Co-Creating New Lines of Business

We have not yet reached our end goal. We seek a state in which the work of our research team spans all the design maturity stages, so that UX excellence is reflected in both UI nuances and in shaping product-market fit for new lines of business. We seek a state in which truth is triangulated through mixed methods studies, including a broad array of qualitative and quantitative analysis techniques. In sum, we seek a state in which product development stakeholders, from product managers to the director of product, see UX researchers as strategic partners.

In this stage, researchers will lend rigor to evaluating and documenting opportunity spaces—a role that was previously exclusively the domain of product managers. Further, researchers and product managers alike will use lean startup methods to test value hypotheses and iterate on them before platforms are extended into multiple languages and archaic browsers. In other words: we will answer “Is this a good idea?” before devoting large amounts of resources to optimizing for ease of use.

HOW DOES ORGANIZATIONAL CHANGE HAPPEN? ACADEMIC AND PRACTITIONER PERSPECTIVES

Before moving on to our model, we address the broader question of how organizational change happens. In this section, we draw on both academic and practitioner perspectives of organizational change. In terms of academic literature, we contrast Armenakis and Bedeian’s (1999) framework of content, context, process, and criterion issues with Tsoukas and Chia’s (2002) argument that organizational becoming requires addressing values and beliefs. We use this contrast to build a political map of stakeholders for organizational change in the UX Research team. In terms of industry best practices, we discuss success stories in our industry. We build out our mile markers for organizational change based in part on models developed by management consulting firms Jump Associates and SecondRoad. The political map and the mile markers together form the foundation for our model of organizational change at Salesforce.

Academic Perspectives: How Values and Beliefs Interact with Content, Context, Process, and Criterion Issues to Create and Sustain Change

Organizational change is a broad topic. To organize the mass of academic literature on the subject, Armenakis and Bedeian (1999) reviewed influential studies from 1990-1999 and uncovered four key themes: content, context, process, and criterion issues. Sixteen years later, their framework still offers useful insights for organizational change in general—and for UX research teams in particular. We dive more into these insights below, then contrast them with Tsoukas and Chia's (2002) paper on organizational becoming, a model focused on the key role of values and beliefs in organizational change. We conclude this section with open questions for practitioners derived from the academic literature.

While reviewing academic perspectives on organizational change, we kept the following questions in mind. First, what is change? We were curious about conceptual and operational definitions of organizational change, and about how those definitions moved our understanding of how we might organize UX research teams forward. Second, how does change happen? We wanted to know how, if at all, researchers described temporal and causal patterns common to organizational change across organization sizes, ages, sectors, and industries. Third, what interventions make change more successful? We were interested in how, if at all, particular organizational interventions led to more successful experiences of change from both individual and organizational perspectives.

Armenakis and Bedeian's (1999) framework of content, context, process, and criterion issues addresses all of these to some degree. They point to a variety of conceptualizations and operationalizations of organizational change in the management literature. More importantly, they use their four themes to illustrate both how change happens and what interventions make change more successful. In their paper, content issues refer to the substance of the desired change within the bounds of an organization. For example, changes in organizational structure and in performance evaluation processes count as content issues. Context issues refer to how environmental factors influence the substance of an organizational change. For example, changing FDA regulations regarding requirements for clinical trials affect the substance of an organizational change in a biotech firm that is bringing new drugs to market. Process issues refer not to organizational processes but to how organizational change happens over time. A timeline of the transformation of Apple from 1976 to present would illustrate process issues. It may make more sense to call these phases of change. In Armenakis and Bedeian's paper, the process issues section reviews published models of how organizational change happens in an attempt to synthesize them into a broader model of organizational change. Finally, criterion issues refer to outcome variables. In other words: how do we know if organizational change is successful? Traditionally, success has been measured by bottom line metrics such as profitability and market share. But Armenakis and Bedeian point out that individual metrics such as commitment to an organization and job-related stress also matter. So we may summarize their contribution to the literature as follows: when discussing organizational change, describe the substance of the change (content), the environment in which the change occurs (context), the shape of the change over time (process), and the success metrics for the change (criterion).

Armenakis and Bedeian's paper helps us think about organizational change for UX research cultures as follows. First, it is a useful reminder that the substance of the change we

are trying to make—say, from usability to ethnographic praxis, or from no UX presence to earning UX a seat at the strategy table—is only a small part of organizational change. If we focus on substance to the exclusion of context, process, and criterion issues, we will fail. Second, the paper reminds us that small and large organizations alike have successfully navigated contextual pressures—so “our firm is too large to really change” is not an excuse. The transformation of Intuit is a case in point. Third, organizational change takes time. While longitudinal, multi-decade studies of organizational change are lacking in the literature, it would do us well to remember that any of our change projects will take several years and involve ups and downs. For example, Armenakis and Bedeian point to a four-stage process of change developed by Jaffe, Scott, and Tobe (1994):

Denial occurs as employees refuse to believe that a change is necessary or that it will be implemented. This is followed by resistance, as evidenced by individuals withholding participation, attempting to postpone implementation, and endeavoring to convince decision makers that the proposed change is inappropriate. Exploration is marked by experimentation with new behaviors as a test of their effectiveness in achieving promised results. And, finally, commitment takes place as change target members embrace a proposed change. (Armenakis and Bedeian 1999: 303)

While it may not be fun to think about denial and resistance, preparing for those stages will help change agents navigate the inevitable challenges associated with transforming UX research cultures from the inside out.

Finally, Armenakis and Bedeian’s paper reminds us to clarify success metrics for change efforts from the outset. Do we define success in terms of higher headcount for UX, having UX representatives at executive level strategy meetings, measurable impact on the shipped product, some combination of these, or something else entirely? Our definitions of success—and building relationships and shared understandings of those definitions—influence the trajectory of our organizational change efforts.

In contrast to Armenakis and Bedeian’s work on organizational change, Tsoukas and Chia (2002) use the term organizational becoming to reflect the notion that change is constant—humans and their interactions are dynamic—and organizations are consequences of these interactions. In other words, change comes before organization, ontologically speaking. Further, and more importantly for our paper, the process of organizational becoming rests on an internal transformation of values and beliefs. It is much easier to change an organizational chart than it is to change the values and beliefs of employees in an organization.

Both Armenakis and Bedeian and Tsoukas and Chia emphasize the importance of interpersonal relationships and interactions. But they do so in fundamentally different ways. For Armenakis and Bedeian, process models of organizational change include stages that reference the state of relationships between those advocating change (“change agents”) and those resisting change. For Tsoukas and Chia, organizations emerge from a dynamic system of interactions between actors, and so any conversation about an organization without reference to the interactions between members of the organization is nonsensical by default. They define change as “the reweaving of actors’ webs of beliefs and habits of action as a result of new experiences obtained through interactions” (Tsoukas and Chia 2002: 570)—something fundamental to the daily human experience, not reserved for special initiatives designed to turn an organization around or develop new innovative capacities.

In terms of creating a useful model of organizational change for UX research cultures, these two papers offer two key insights. First, relationships matter. If organizations are indeed emergent properties of systems of relationships between actors, then focusing on relationships first makes sense. How to focus on those relationships brings us to our second point: the highest leverage point for change is navigating value and belief conflicts within relationships. For example, in our work at Salesforce, we noticed researchers with usability backgrounds felt self-conscious about not having as much domain knowledge as product managers. They were reluctant to say “I don’t know,” whereas researchers trained in ethnographic methods were thrilled to say “I don’t know,” since that is often the beginning of a fascinating period of learning. It is impossible to build a culture of ethnographic praxis without addressing the fundamental values and beliefs (“Admitting I don’t know makes me look stupid and diminishes the respect the UX team deserves”) at stake, one at a time, in interpersonal interactions. Value and belief conflicts exist in relationships within and across job roles. In another example, we noticed marketing executives saying “we drink our own champagne around here” in reference to testing our own products internally, as opposed to the industry standard term “eating our own dog food.” In this case, our marketing culture emphasized excellence at the expense of celebrating learning: champagne is good by definition, so there is no conceptual or linguistic room to experience and learn from failure. This is in stark contrast to the values and beliefs held by the Lean Startup movement, in which failure is expected and welcomed as a learning opportunity.

Open questions for practitioners, then, include how to discover the values and beliefs of stakeholders as well as how to prioritize interpersonal work on aligning values and beliefs across a diverse set of stakeholders. We address these next.

Practitioner Perspectives: How Design Thinking Cultures Connect with Organizational Change

When lamenting the organizational challenges of building UX teams, we find it helpful to remember that the mainstream burgeoning of the field of design, or UX, is only 15 to 20 years young. Many companies became interested in design thinking in the years following Steve Jobs’ return to Apple. By 1998 the iMac G3 had shipped, kicking off a succession of product launches that led the company from near bankruptcy to world leadership in consumer electronics. Then in 1999, the renowned design agency IDEO was featured on ABC’s Nightline News. By showcasing how IDEO reimaged the experience of grocery shopping and redesigned the shopping cart, the episode introduced design thinking to audiences well beyond practitioners. So, while the disciplines of UX, human-centered design (HCD), and design thinking were far from new, the increasing prominence of these disciplines piqued the curiosity of Fortune 500 companies enough that many of them sought to bring design thinking skills in house. It was in this context that the idea of a design-led company emerged. Despite Apple’s success and example, the value and role of design—and and consequently the role of research in informing design—remains a highly contentious issue.

Because the discipline of UX is still rapidly developing, so too is the language practitioners use to describe our work. Many practitioners use the terms HCI, lean, agile and design-led synonymously, while others bristle at the inconsistencies between those schools of thought and the implied process discrepancies. Even more often, stakeholders with the

authority to implement design-led cultures are too busy with other responsibilities to investigate the value of a design-led culture—much less to operationalize a change effort to create one. Recently, Alex Schleifer, Airbnb’s head of design, cautioned that “the point isn’t to create a ‘design-led culture,’ because that tells anyone who isn’t a designer that their insights take a backseat. It puts the entire organization in the position of having to react to one privileged point of view” (Kuang 2015a). Practitioners like Eric Ries and Laura Klein are greatly helping to define the lean approach to product development and the role of design and research within that process.

Not surprisingly, some of the most notable success stories touting the power of design thinking are linked to Ries and Klein. In his 2011 book, *The Lean Startup*, Ries describes many of the cultural and process changes implemented at tech giant Intuit. Further, the increasing availability of methods and guidebooks like Klein’s 2013 *UX for Lean Startups* are providing structured guidance to help tech companies embrace UX research in the product development process. Still, even the best guidebooks alone cannot bridge the gap of cultural change.

Google provides an interesting case in point. For years, the culture which had deep roots in engineering and empirical evidence was considered at odds with design. It was only a few months ago that Fast Company proclaimed that Google “finally got design” (Kuang 2015b), describing the company’s transformation from valuing the best design as no design at all to the design-savvy culture that launched the Material Design system. The article describes the importance of executive support for design from founder Larry Page as the tipping point for valuing design sensibility in product development decision making. In the same article, the author references the now infamous anecdote of teams A/B testing 41 shades of blue, scoffing that “it wasn’t a design philosophy as much as a naked fear of screwing up Google’s cash machine.” It was only six years ago, in February of 2009, that Marissa Mayer, then head of UX at Google, was citing that same work of “41 shades” as an exemplary design practice (Holson 2009). As outsiders, it seems nothing less than miraculous that Google made such drastic cultural changes in only six years’ time.

The teams at Google didn’t abandon rigor or engineering excellence. They simply expanded their culture to be inclusive of design values, like consistency and approachability. In Tsoukas and Chia’s terms, Google became a new organization by reweaving its values and beliefs to be more inclusive of both engineering and design.

OUR MODEL IN PRACTICE: ORGANIZATIONAL CHANGE AT SALESFORCE

We illustrate the three stages of our model—excavation, foundation, and construction—with examples from organizational change at Salesforce.

Excavation: Smoothing and Documenting the Lay of the Land

In the excavation stage, research teams use mixed research methods to document the history, culture, processes and contributions of the team. The outcomes of this inquiry provide a documented lay of the land, including shared language and mental models describing what the team is and does. By clearing away the distractions of day-to-day particulars, like specific tools and linguistic styles, the team can align on the values, principles and language they share. This alignment creates a team brand, and a unified message to stakeholders about

occurred in 2007, when the research role split into two: one team of usability analysts, focused on evaluative work, and one team of user researchers, focused on generative and formative work. From approximately 2007 to 2010, usability analysts conducted heuristic reviews and usability studies, while user researchers conducted interviews, focus groups, and diary studies. The two roles remained distinct until early in 2010, when the third cultural shift took place. An individual contributor (IC) was promoted to manage the growing team of researchers, which became known as the Usability Team. While not all ICs formally changed their title, the focus of the team was clear: researchers were asked to prioritize conducting heuristic evaluations and usability studies to inform scrum teams' decisions for the current product release.

Early in 2012, the pendulum swung in the opposite direction. At an executive's request for the team to provide insights that could inform future releases, the Usability Team was rebranded the User Research Team, and ICs' titles were updated to reflect the change. This was the fourth major event defining the team within the organization. Unfortunately, while the mandate was clear, the operational expectations for how the team's day-to-day work would change were not. The organizational change was made before stakeholders reached alignment on how the team should change its work practices to produce new types of insights. For example: Would the team get more headcount to cover this additional work? Should researchers deny work requests from the scrum teams they'd been supporting to prioritize time for future-oriented work? Unresolved tensions about the new mandate for the team led many senior members of the team to leave the team.

Documenting this history reminded stakeholders, including the team, that we are indeed in a perpetual state of "becoming," and that this is historic precedent for correcting course to fit the times. It also showed that the team had long been researching both UI ease of use and more abstract user behaviors, clarifying that both types of work are and should be within this team's domain.

Usage Data and Sample Sizes: Stakeholders Describe What They Mean by "Research" –

Next, we needed a similar understanding of our stakeholders' impressions of the team and expectations for work. The team interviewed 25 of the company's most senior stakeholders, from product managers to senior vice presidents to general managers of product verticals. These interviews had two key goals: first, to understand the types of information stakeholders valued for making product decisions, and second, to discover areas in which stakeholders wished they had more research and informed perspectives to address strategic concerns. The team synthesized the interviews into one-page summaries (Figure 3) that outlined how each stakeholder found information for making product decisions and identified each stakeholder's primary strategic concerns.

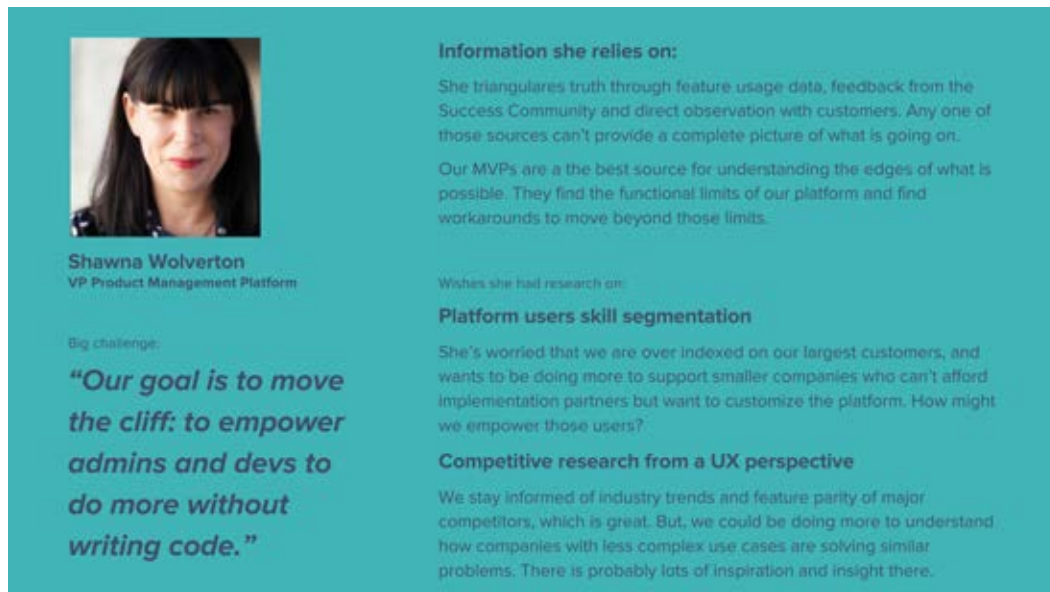


Figure 3. An example of a one page summary of the challenges of a Salesforce executive.

This work helped us identify executives most likely to be allies in culture change, and helped us understand the major concerns of both allies and those who might deny or resist culture change. Such a cultural map is essential for any change effort.

Over and over in our interviews, two themes emerged: usage data and sample sizes. Stakeholders across the board wanted to understand how customers used our product, and they wanted that information from our own usage data—server logs on the behavior of millions of users. Such datasets naturally lend themselves to quantitative analysis on large samples.

Yet usage data in our organization was hard to find for two reasons. First, our service level agreements severely restrict the collection and analysis of customer data, including usage logs. This is one of the many reasons banks and other large firms with sensitive information trust us with their data in the cloud. While these restrictions largely benefit customers, they are at odds with executives' requests for more insights derived from usage data. Second, in those cases where our service level agreements permit the collection of customer data, instrumenting our product to collect that data is the responsibility of individual scrum teams. When faced with performance expectations to ship more features, scrum teams inevitably choose to allocate developer time to new features over instrumentation for existing features. These circumstances had unknowingly created the impression to executives that the UX research team could not provide the insights they wanted most.

This created a conundrum for the research change-agents: how might we use the methods and data available to us to improve products in a way executives understood and valued? We believed that broadening our stakeholders' definition of UX research would require our team to demonstrate value at higher stages of design maturity. Again, we turned

the tools of research on ourselves to create a shared conceptual model of the team's process and typical types of contribution.

Team Card Sorting: Contextualizing Our Work in Product Development – The next step in the excavation stage was to provide an opportunity for the research team to build shared language and mental models for a full range of research. For example, different researchers often used the same term differently. Additionally, some methods are better suited to different stages in the research process. Further, not all researchers wanted to work in all stages of the Salesforce research process. That is not a problem. It is perfectly normal for researchers to choose to specialize in one stage or another. The challenge is communicating to stakeholders that the team as a whole operates across the stages. Contextualizing these differences and creating a shared meaning for a single term was required in order to define the types of research we wanted to do more of in the future.

Several members of the team planned a team offsite to facilitate conversations and exercises to build shared mental models of research. One of the key activities was a research highlight reel. Each researcher put together 4-5 examples of excellent research work, with one example per slide. We printed all of the examples, then, as a team, performed a card sorting exercise to categorize our research work across the product development process. Our map revealed the scope of existing UX research at Salesforce (Figure 4). The analysis of the exercise results included recognizing that the same skills and mindsets that are valued at one stage of a project are counterproductive at other stages. For example, in an ideation mindset, many of the best practices of brainstorming apply, such as withholding judgment and valuing quantity above quality or feasibility. But in an optimization mindset, introducing new ideas is counterproductive and distracting.



Figure 4. Where UX research fits into product development at Salesforce.

We found that most of our team's research activities fell into the spectrum from ideation to development and implementation, but that the distinctions between those categories were blurry in the purpose and reach of the work. We found significantly fewer contributions

problem framing, which was consistent with our internal assessment of the need to create more generative work. And we found very little work in evaluation, largely due to a lack of usage data. Figure 5 illustrates these gaps.

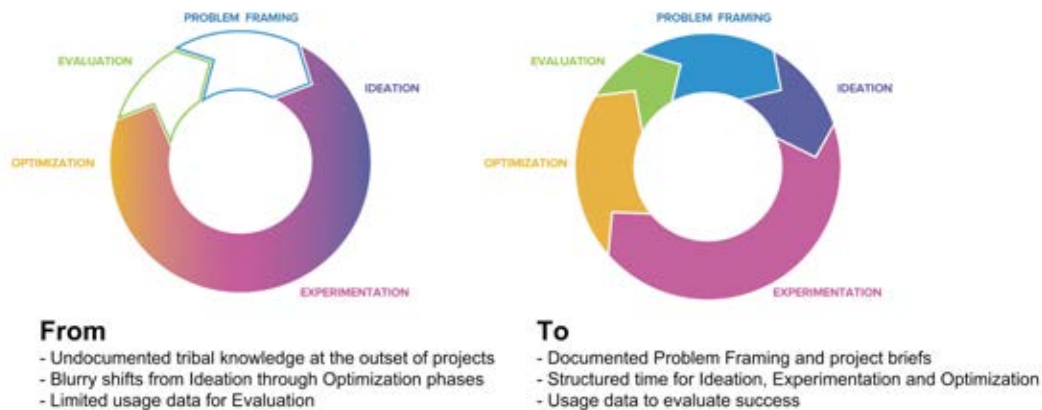


Figure 5. Gap analysis of UX research vis-à-vis product development at Salesforce.

The research practice we wanted to build included a portfolio of work across the five stages of problem framing, ideation, development, implementation, and evaluation. This would require:

- a shift in thinking about the timing of research in the product development process,
- an illustration of how and why problem framing can help non-research stakeholders,
- structured and distinct time blocks for ideation, development, and implementation, and
- usage data and clear success metrics for evaluation.

In spite of the current gaps and individual preferences, and the research team needed to present a unified view of research to external stakeholders, and doing so would have been impossible without this model.

It was from this point of excavation, with a clear understanding of the history of the team's identity, a new understanding of expectations from stakeholders, and a shared model of the team's scope of responsibility and process that we were ready to move to the next phase of our change model to build the foundations to enable long-term success.

Foundation: Proofs of Concept and Expanded Scope

In the foundation stage, research teams create systems to address product teams' usability needs while opening up time for other kinds of research and introduce the idea of "the right tool for the job" by showing—not telling—stakeholders how researchers can assist with a wide variety of product needs using a broader methods toolkit.

The team's change agents began the foundation phase by identifying a single project that multiple team members could contribute to that would contribute to product strategy in new ways. In our case, this was the segmentation survey we referenced in the introduction—the same segmentation survey that our colleague Mabel Chan highlighted in her EPIC 2015 blog post (Chan 2015). The survey deliverable was a product of qualitative and quantitative analysis, visual presentation, and collaboration across a wide variety of UX roles. Further, we built the organizational readiness to receive such work by finding an executive to provide early stage feedback on tone and content and promote the work once released. With researchers, designers, product managers, and executives all involved in creating the deliverable, we had achieved significant buy-in across the organization even before shipping the report. That worked: everyone who contributed to the report spread it through their professional networks within the company, and the report went viral. It got the attention of Salesforce executives attention and built credibility for the research team.

We would be lying if we said we didn't encounter any resistance along the way. As in any company, some stakeholders are quicker to trust than others. In the case of the segmentation survey, we built trust by showing what a multidisciplinary, engaged team can do when all the team members engage their networks.

That said, change is possible even with smaller teams and smaller studies. Proof of concept studies go a long way in building stakeholder trust. As just one example, many companies struggle with how to bring new users into a system. In the UX literature regarding onboarding, many articles discuss labels, empty states for forms, and guidelines for helpful text. But research can do more. The problem framing approach makes it part of the researcher's responsibility to help determine what goals a user should accomplish in the first few interactions with a product, over and above how to efficiently accomplish those goals. At Salesforce, we used to consider people done with onboarding when they had imported their contacts and accounts. But research revealed that people didn't consider themselves all set up at that point. In fact, users felt finally at home with Salesforce after they had run sales reports from their system. Because of our organizational chart, it was difficult for the onboarding team and the reporting team to work together to find a solution. They had different cost centers, different delivery schedules, and different reporting structures.

Yet we did it. Even though it was uncommon at Salesforce for a researcher to define the sequence of interactions with our product, one of our researchers did it anyway (Figure 6).

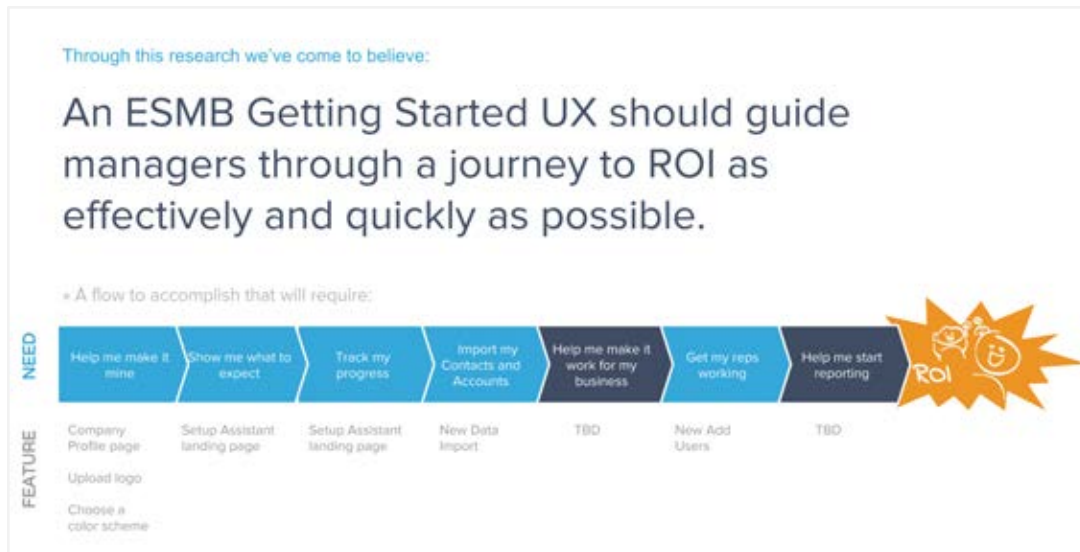


Figure 6. Visualization of sequential user goals in a feature.

This visualization provided evidence for the product manager to make the case that reporting needed to be part of his feature—a case in direct conflict with our existing organizational structure. But because the product manager and the researcher came to that conclusion together, and included prior research in their decision, they were able to make a case that made it possible for not only their team but other teams in similar areas to bring user needs together in a productive way.

Construction: Strengthening and Expanding All Types of Research

In the construction stage, research teams build on the foundation of the right tool for the job by creating a full portfolio of research designed to help create and maintain multiple businesses across multiple touch points of the end user experience.

At Salesforce, the major challenge for creating a full portfolio of research was that from 2012-2015, no one owned the research process. We had come together as a research team to illustrate the different stages of research, and the different methods associated with those stages, but we didn't have an executive advocate to explain the functional role of research and help build bridges with executives. Researchers and their managers had done as much bridge building as they could on their own. Building out a full, robust portfolio of research required a formal hire of a research director. Building the organizational readiness to hire a research director in the first place took two years and hundreds of conversations with stakeholders across the organization.

Our research director started in June 2015. It would not have been possible to hire a research director without the sustained interaction between and among executives, researchers, and managers about what behaviors and values we wanted to emphasize. In other words: it is organizational becoming, in the Tsoukas and Chia sense, in which organizational change is a product of endless interactions between human actors in which values and beliefs change gradually. The process took two years of discussing, documenting

and subtly shaping executives' values regarding research to build alignment about what the skillset and role of the UX Research Director should be.

Those conversations have already shifted the development culture to be more inclusive of research. Even at this stage of change, stakeholders now lead presentations with research, which historically would have been perceived as wordy or controversial and hidden in footnotes or an appendix. Research is starting conversations, and that is a good thing.

DISCUSSION: REFLECTIONS OF THE FUTURE OF UX RESEARCH

In our work, we've seen Salesforce move from a fixing bugs mindset toward a building businesses mindset. We've been through the excavation and foundation phases, and Salesforce researchers are constructing a broader portfolio of research as we write this. That said, our path leaves open several questions for the future of UX research as a field. In this section, we address two of them: the purpose of ethnographic praxis and the tension between broadening research efforts and respecting user privacy.

Let's start with the purpose of ethnographic praxis. When the Salesforce UX research team began conducting ethnographic studies, product managers and other stakeholders loved the color and attention to detail that ethnographic observations can provide. To this day, our researchers are still getting requests for day in the life studies and details about how, when, and where our users do their work. However, these requests emphasize bits and pieces of information to the exclusion of broader understandings of our users and product implications of those understandings. In other words, they are requests for raw data rather than ethnographic synthesis. So we have built only the beginning of ethnographic praxis—because, as Sam Ladner (2014) says, ethnographic data is useless in practical terms without theory, which helps ethnographers and their stakeholders make sense of the data in terms that matter for the organization.

Next, in our organization, we have noticed a tension between broadening research efforts and respecting user privacy. We know from lean methodology that rigorous testing through innovation accounting can provide valuable feedback loops about whether a team is moving in the right direction. That rigor is sometimes at odds with end user privacy. This is a particular concern at Salesforce, where we are a bank of banks. We hold sensitive user data for financial and health institutions, among others, and we take our user privacy very seriously. Hence we have very superficial ways of understanding cohorts of users. New hires from other companies are often incredulous when they ask, "What industries (or skill levels of users) use that feature?" and hear, "That isn't instrumented—it's a privacy issue" in response.

CONCLUSION: BUILDING THE FOUNDATIONAL BRIDGE

Bridges allow organizations to become, at least in Tsoukas and Chia's sense. If organizations are emergent properties of dynamic interactions between people, each of those dyadic relationships can be seen as a mini-bridge. Further, the road between any organizational starting point and ending point can be seen as a suspension bridge. The mini-bridges of stakeholder management give rise to the suspension bridge that takes an organization from a fixing bugs research mindset to a building businesses research mindset. Values and beliefs

change in mini-bridges, in individual conversations and interactions between pairs or small groups of actors. But those value and belief changes cannot take hold until there is a top-down directive from executives integrating the new values and beliefs—and providing guidance on how those translate into behaviors. Google used to emphasize minimalism, simplicity, and good code at the expense of design. Later on, after hundreds if not thousands of interactions between employees on the topic, Larry Page emphasized that Google also values design and good user experience, which might sometimes mean animation and cohesive color schemes. The next step in Salesforce’s organizational becoming is for our most senior executives to similarly define how we value design in our organization as a means of approving of and solidifying grassroots change efforts. The recently released Lightning style guide, for example, defines design excellence at the style level and at the form, feature, and function level company-wide. The style guide eliminates the need for many usability studies, which frees researchers to move up the design maturity stage levels to problem framing and beyond.

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NOTES

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Enabling Ethnography in Small Budget Economies

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Empathy

This paper discusses a collaborative research model, referred to as 'The Art of Empathy'. This is a model developed to integrate ethnographic practices in small budget economies. The paper aims to contribute to the variety of working approaches to ethnography in business, exploring the work to be done in straddling the delicate balance between growing and enabling ethnographic thinking without contributing to its de-enrichment and commoditization. Key words: client collaboration, capability building, and design research.

INTRODUCTION

It is a reality of working in a business environment that we have to shape the way we do ethnography to fit the business context. Our aim is to do this in a way we are comfortable with. We want to leave our clients, their people of interest and the field in a better place than if we didn't do the work. In our particular context we are confronted by big desires but small budgets. This paper presents a model by which we can operate successfully, ensuring we are comfortable with the short-term quality outcome and the long-term value and contribution to the field.

CONTEXT

In our role as consultants and researchers, we have noted the tendency in New Zealand to look at international business trends with keen interest.

It is common for New Zealand organizations to observe continuing trends abroad, see them work in that particular context and want to take them on board for themselves. Over the last eight years, two trends of particular relevance to us as a business design firm have captured New Zealanders' interest: design thinking and design research¹. Organizations have started to grasp the value in understanding and being close to those they are providing solutions for. This has been reflected across both the private and public sector.

We get asked to help them bring these trends on board. However, most organizations do not have the budget to support these types of projects. There are two reasons for this.

First, New Zealand is a small budget economy. This is largely due to the size of businesses located here. Small businesses – those with fewer than 20 employees – represent 97% of its industry (Ministry of Business, Innovation and Employment, 2014). Even those classified as large enterprises in New Zealand are likely to feel small relative to international standards. Characteristic to this context are small budgets and limited resources.

Second, these methodologies are new and unproven to New Zealand companies. Our clients are interested in taking them on board, but without being assured of their positive

impact they shy away from any significant financial commitments to them. So they are only willing to make a small budget available.

As such, our working context is such that people are asking for the services we provide as business designers and design researchers, but cannot afford it. They have heard of design thinking and ethnographic or design research and believe in those approaches at a conceptual level. They believe that it could be valuable but they have little understanding of what working like this actually entails and the impact or value it provides. They are taken aback by the cost.

Clients often either ask we do the work at about a quarter of the budget, suggest we train them so they can do it themselves, or determine without evidence that following an ethnographic approach is not a good return on investment. We are not comfortable with any of these options. This places us in an interesting position as researchers, as advocates for this type of work, and as a company seeking to add value to our clients. As Hanover (2014) suggests, it is our job to prioritise what is impactful and important for business.

We needed to find a way to enable organizations with small budgets to engage with design research and the ethnographic mindset. It is important to us that we do this in a way that leaves our clients, their people of interest, and our discipline in a better place than if we did not do the work.

OUR IDEA

We strongly believe in the value of conducting design research. It is a main component of our design projects and frequently a project in its own right. We see ethnographic mindsets as key to this approach.

To enable our clients to commission design research in projects, we thought about how we might work within constrained budgets. The challenge was to find a way to reduce project costs without impacting on project quality or the fields of ethnography and design.

As a result we came up with a model underpinned by the following elements:

- The client and we both contribute project team resources and share the workload. We work with our clients to do the project, rather than acting as independent, external consultants. We ‘co-do’ rather than ‘go do’.
- The client and we do different roles on the project. We lead, guide and do critical parts of the process while they contribute people resources and business context knowledge to each phase.
- We train the client’s resources in fieldwork, with a focus on ethnographic principles.
- We emphasize mindsets – the design mindset and the ethnographic mindset - throughout the phases of the project.

We recognize that we’re not the only people advocating client collaboration within design research or ethnographic projects. For example, ReD Associates (Schwarz, Holme and Englund 2009), Jump Associates (Howard and Mortensen 2009) and AnswerLab (Ulaby 2010) state they use similar approaches. We are also aware of a range of voices that discuss involving clients and bringing them into the field (de Waal Malefyt and Morais 2012, Gordon 2011, Ladner 2014, Santee 2013.). However, we hope that our model can add to both the practice of assigning roles and the discussion about the associated impacts.

We see both risks and benefits to this approach for our clients, the project, and the fields of design thinking and ethnographic research.

THE RISKS OF JOINT PROJECT TEAMS

The approach detailed above enables us to work within small budgets. But there are risks in collaborating with clients in this way. The risks fall under five overlapping categories, as described below.

Reduced quality of research for the project

Often, our clients have no or very little ethnographic training or experience. By involving untrained, inexperienced people in ethnographic and design research, we risk the quality of the insights being reduced and our process being compromised.

If this occurred it would be bad for our clients as it can result in them acquiring misleading insights. Equally, it would be bad for us if the project does not provide good insights or point our client in the right direction. This risks our reputation when it impacts our ability to add value. Ultimately, it could also result in larger expenditure to resources and costs and to our efficiency as we go back to get us where we need to be. This would be bad for our client and difficult for us to manage.

Over-confidence

By training and up-skilling people to feel confident going out into the field to conduct research, we risk them thinking they have a greater level of expertise than they actually possess.

People often grasp at specific tools or methodologies and lose sight of the ethnographic principles that lead to quality. They do not know what they do not know. They cannot see their gaps in their process or findings and the shortfall in their skills. They do not recognize when something is not good or true, when they have taken a comment at face value rather than digging deeper for true meaning. Their design research findings lack depth and reflection. Additionally, their lack of experience means they are not able to adjust their approach to suit their appropriate context.

In that way, a little knowledge is a dangerous thing. There's a serious risk for the company and the project if they go down the wrong path. It can also lull them into a false sense of security, where they believe they understand their people of interest's needs and are not able to see what they don't know. Ultimately, it can lead to unsuccessful design research projects. These come at a great cost to the company, and reflect poorly on ethnographic practice in industry.

De-valuing expert ethnographers' contributions

By enabling people to take part in and contribute to design research we run the risk of lessening the importance and role of ethnographers and design researchers.

There is potential for our approach to be interpreted as suggesting one does not need to be an experienced researcher to run and conduct research phases or projects. That diminishes the perceived value of our role, and the demand for what we do. These effects are also noted by Lombardi (2009).

Commoditizing the ethnographic research field and market

As more people become skilled at ethnography through our training and other methods, and as more people believe they are sufficiently skilled, more people will be providing ethnographic services. When the role becomes commonplace and perceived as easy to do, its perceived market value will diminish. Our role within the production of ethnographic research will likely be de-skilled (Lombardi 2009). In that way, ethnography will become commoditized, and ethnographers will not be able to command the fees of a rare specialist.

Over-simplifying the principles

As a field is popularized, messages and principles often get simplified. This can lead to a simplistic understanding of the field, which can be misconstrued or misleading. We have seen this begin to occur to other fields, such as design thinking. As things become popularized, the rigor and robustness, quality and effectiveness are often lost. As these things are lost people lose faith in the value of the approach and turn to dismissing it as a viable strategy.

We have been aware of these risks as we work with clients. Our model for collaborative working has provided mitigation.

THE MODEL

Over several projects, we created a model for collaboration in ethnographic research as part of design thinking or customer insight projects. As noted above, our model involves:

- Project teams comprised of client resources and our own
- Taking different roles on different tasks or in different phases of the project
- Training client team members in ethnographic fieldwork principles and techniques
- The emphasis of mindsets – the design mindset and the ethnographic mindset - throughout the phases of the project.

Through our model, we become facilitators of our client's involvement in the project as well as project team members. As we have progressed with our model, we've come to realize which aspects are 'not negotiable' if we are to achieve a good project outcome. We also know which are flexible, and can be changed depending on our client's capability, resources or, the project and its context².

Below we discuss how the model works through different phases of a design research project.

Phase 1: Research plan

We lead collaborative working sessions with the client to formulate a research plan. Both sides of the project team bring something valuable to the table. Our clients bring expertise in their business problem and some knowledge of their customers. We bring expertise in how to find the information we need from their people of interest to inform and inspire designs.

Once the client's existing knowledge is on the table, we drive the creation of the research plan, including main purpose, research question and objectives, methods, participant types, participant spread, participant numbers, timings, and costs. Through this phase our clients are not heavy contributors. They are in the room learning from our discussion and gaining an understanding of both our process and our reasoning. We discuss openly, 'thinking aloud' to explain our rationale and the considerations. We seek their input along the way, but rely on our experience to shape and structure the research project, in a way that provides them with a demonstration of research planning.

We are not flexible about our role in this phase. If we are to ensure a good research plan, we need to be leading and driving its creation.

This phase does not necessarily save our client any cost because of our heavy involvement. However, it is important for the rigor of the research, and brings other benefits as discussed later in this paper.

Phase 2: Training in ethnographic field techniques and principles

We train our clients to enable them to follow our design research approach and techniques as we work together. This is necessary to allow for trusted collaboration through the fieldwork phase.

Through this training phase we rely on three core elements: theory, demonstration, and practice. We use these to introduce ethnographic research methods such as participation, observation, contextual enquiry, and in-depth conversations. As business designers we also heavily rely on a design mindset, and so take a 'learn by doing' attitude. For instance, we set up field environments during the training, so our clients can practice and develop their research skills; they engage with real participants in a safe environment without concern to impacting on project outcomes.

This training fulfills the purpose of preparing our clients to gather information from the field and gain valuable insights alongside us. We communicate key ethnographic principles and enable people to try ways of bringing those principles to life. Our training is not intended as a substitute for research training or experience. We are not training people to become ethnographers. Instead, we are helping them come to an understanding of what is involved in this practice and identify elements they might use to enhance their work. (We like Hasbrouck's (2015) idea that ethnographic thinking has more value to contribute than just the practice of ethnographic research.) The training process becomes about embracing the opportunity to think as ethnographers and design researchers.

As an outcome of these initial training sessions we co-create field guides, and prepare to go into the field. Through this period we take on the role of coaches as we work with them to shape their technique and encourage self-reflection.

We are not flexible about this phase, or our role within it. We lead the training and preparation, as experts.

Phase 3: Fieldwork

Both the client's people and we do fieldwork. Team members from our company and team members from the client's side all have engagements with participants with the purpose of gaining insight into their lives.

We are careful to conduct enough fieldwork ourselves to feel comfortable in producing our analysis. It is key that we have enough insight that we reach a point we can use as a springboard for our recommendations for direction to the business.

This has become a fixed element to our approach and one of our learnings as we have developed this model for collaboration with clients. In two projects last year, we relented in our assertion that we share the fieldwork with our client. The results of both of those projects were not satisfactory for us, the client, or the fields of ethnography and design³. As a result, we are no longer flexible on the issue of conducting some of the fieldwork ourselves.

However, we have also gained empathy with how it feels to be brought information without having been involved in the process. It has reinforced our belief that our clients should be involved in the fieldwork, as they are the ones that need to understand the topic at hand the most.

To further ensure the quality of the research conducted by our clients, their training continues during the fieldwork. We follow two main methods. How we apply these is a flexible element depending on our client's level of experience and ease in the field.

Shadowing and handover – Their first experience in the field engaging with participants is usually an in-depth conversation in the participant's own context. For this engagement our client team member primarily observes, 'shadowing' as we lead the conversation with the participant.

For their second experience, we allow them to lead the conversation but accompany them and act in a support role. Finally, they conduct the remainder of the conversations independently.

We use the same shadowing-handover approach for other research methods i.e., contextual enquiry, observations and prototype testing.

Debriefing and coaching – As our client team members conduct their fieldwork we have debrief sessions with them. This allows us to transfer knowledge from them to us, and to enable them to reflect on their learnings. Most importantly, it gives us the opportunity to review how it went. We coach them to improve their technique and become more aware of themselves and their approach.

We believe reflection through this process is key. We see it as core to an ethnographic mindset and have also found it's a characteristic that distinguishes those that most improve their skills and technique. To reinforce the value of reflection, we discuss areas where they are doing well and the elements they need to continue to develop.

This becomes a part of us facilitating them through the research experience in such a way that allows them to cement their understanding of the ethnographic mindset, design research, and the value those things bring. In working with clients we are mindful of both the value to their business, and that they have a positive experience of the process.

Phase 4: Analysis and definition

After conducting fieldwork we all continue to work together to understand and derive meaning from what we found. We use design thinking techniques to uncover learnings and facilitate a team through analysis; a stage of the research process that can often feel messy and disconcerting to even experienced practitioners.

We do our analysis and definition of the research in several back-to-back, intensive, and immersive sessions.

As a fixed element, we always unpack our stories and learnings together. Usually, someone shares an experience in the field to the rest of the group while the rest capture different types of information from the story they are hearing (e.g., what people said, thought, did, felt, where the tensions lie, the contradictions we heard, etc.).

A more flexible element, often dependent on client availability, is whether or not we continue through our analysis of these findings as a group or carry on ourselves. In the instances where we work together we facilitate the sessions and model behavior for our clients. For example, we make sure to be clear about when we are using an emic or etic perspective, and help them to stay honest about seeing things from their participants' lens.

Phase 5: Storytelling

An output of any piece of research is how it is shared and distributed. We have learnt that it is best to do this together, or on behalf of the client.

Often, clients have expected they will be able to share the outcomes of their work independently from us, as they have been wholly involved through the research project. However, past projects have shown us that not having done this type of research before they need our support to shape and structure their storytelling. This is an area where clients underestimate the importance of our role, but consistently grow to value our contribution enormously. Without us, clients succumb to common pitfalls. We have often been given additional budget at the end of a project to help with storytelling when clients realize they need help. We're grateful when that happens, as ending a good project with bad storytelling is frustrating and dangerous – for the client's project, for our reputation, and for the fields of ethnography and design.

As a result, we have learnt to co-do storytelling as a project team. Our side of the team ensures the quality of our findings, the insight generated, and the value and relevance to the project. We then rely on our clients to help us understand the context of their organization and the people we will be sharing our output with. Together we discuss how best to communicate and engage with the relevant people. We then use our experience to help shape a compelling story that will engage and gain buy-in from people in their organization.

Later phases

As we reach the final points of our first design research phase the project may continue in different forms.

Some of our clients come to us exclusively to learn more about their customers. However, a majority approaches us with a design moment, a business challenge or opportunity. We use the approach laid out above as we work through other aspects of the design process, such as prototyping and testing our prototypes with potential customers. We continue to co-do through and follow the same principles of our design research collaboration model.

THE MODEL IN PRACTICE

The mindful mix of fixed and flexible aspects of our model means we can accommodate different client and project needs. Here are two examples to illustrate this model in practice.

New Zealand Customs – Improving the international airport departure experience

New Zealand Customs approached us to discuss passengers' experience through the departures process at Auckland airport. They were interested in this as part of a wider move towards continuous improvement across the organization. Specifically, they were looking to make changes in the departures area at Auckland airport. They wanted someone to help them better understand people's current experience of the area and to help them design the changes to this area with their audience in mind. This would be the first of several projects to implement similar changes.

The challenge – We had a specific brief and short timelines to enable change in the departures area before peak travel times. Our challenge was to design the ideal experience through the departures process. We also had a wider brief to learn as much as we could about the passenger experience so as to shape and inform future projects. Our co-do approach was a significant factor in us winning the work. The client wanted to be involved in the ground level of the project, and build the capability of staff along the way.

The team – This project saw us working alongside different Customs staff through the various phases. The project's business owners were involved in the research plan phase, along with people who work on the ground at the airport and people who analyze passenger data. People involved in continuous improvement within the organization became our colleagues for the fieldwork, and were trained accordingly. Those people were also involved in analysis and definition.

Research plan – In line with our fixed approach to this phase, we lead the creation of a research plan. In this instance, a two-hour workshop was held wherein the client contributed business knowledge and we discussed options for methods, focus people of interest, times of fieldwork and more. We then took the knowledge and perspectives away, and created a draft research plan for comment.

Training – Given our client-side team members had some experience in gaining empathy with customers, we conducted a day workshop to discuss our research methods and approach. With their previous experience in different qualitative methods, we made special effort to distinguish our approach from market research, surveys and interviewing. During this session we ran through observation exercises, highlighted the importance of putting their own experience of the space aside, demonstrated the importance of digging deep, and brought in recent travellers to participate in a conversation (informal interview) with our client team members.

Fieldwork – Field activities included joining participants through their departures experience (which we called 'tag-alongs'), conversations about departures with participants before and after the process, and observations through different parts of the process. Our client team members joined us on our first 'tag-along' while we modeled behavior for them. From then

on we all conducted field activities individually or in pairs. Pairing up allowed us to keep track of the team's performance and created great coaching opportunities. At the end of each day we held a team debrief. These allowed us to keep track of our research objectives, set out the plan for the following day, provide coaching, and gather the team's findings.

Analysis and definition – With restricted timelines we opted for an agile approach to fieldwork and, analysis and definition. One week into the fieldwork we began to analyze our findings and make meaning. We were able to map the current passenger experience, use it to identify gaps in our knowledge and shape our objectives for further fieldwork. In this instance we collected our client team members' findings during our debrief sessions and conducted the rest of the analysis work internally. The joint project team then went back into the field and continued the same approach as above. On returning from the field our internal team continued to un-pack these new findings and began shaping the ideal customer experience.

Storytelling – Using our fieldwork findings we designed an ideal customer experience through the departures process. This was documented to enable our client to share our design and design notes. From there we continued to work with our client in a workshop to help them determine what and how to implement this new experience.

The outcome – New layouts, signage and enhancements to technology will be trialed in the departures zone. The project team who is implementing the redesigned experience has a greater understanding of customers, so is better able to make decisions that positively impact their customers and their business.

GMI/Kiwibank – Savings and wealth-building products and services

Kiwibank is one of New Zealand's four main banks. GMI is their partner for wealth-building products. They approached us to help them increase their market share in accounts related to retirement savings and wealth-building. We were engaged to help shape what the offering could be so that it truly adds value to their customers and they re-engage with their finances. We set out to gain customer understanding as part of the wider design project.

The team – In this instance there were three parties involved in the project: our design partners, our client, and us. All three parties came together to form a project team of seven people.

The research plan – The essence of the research plan was largely created as we worked with the client to scope the project for the sake of providing a cost and proposal. From there, we leveraged our clients' business expertise and built on their business inkling to detail a research plan.

Training – Both our clients and our partners needed up-skilling to conduct fieldwork. We held two full day sessions back-to-back to prepare them for going out into the field. Training continued through the fieldwork, with our part of the team available on hand to provide

coaching and support to the rest of the team, often by phone before or after engaging with a participant.

Fieldwork – Fieldwork comprised of conversations with participants and spending time with them in their own homes observing and participating in their daily lives. All project team members conducted at least six participant engagements individually. Our people conducted over a third of the engagements.

Analysis and definition – To enable key business decisions and the beginning of solution design by a certain date, we conducted an analysis session halfway through the fieldwork. During this session we all got together to share stories from the field and make meaning from what we found. This also became a coaching opportunity where we shared how we analyze our learnings and use them to define our perspective. We then fed into business decisions and iterated our field guide based on some of the areas we wanted to explore further and the findings we wanted to continue to test. At the end of the fieldwork period we conducted a second session to analyze and define our findings where all the project team contributed.

Storytelling – We did the storytelling on behalf of our client. We documented the design research findings and suggested solution direction, and presented to a wider group from our client's organization. This customer insight is now being used to inform the following stages of the project as we work to create a portfolio of offerings that are truly customer focused.

The outcome – New products are being championed through the business, and we have been engaged for more work on different products and experiences.

DISCUSSION

Collaboration is becoming a more prevalent element to how we as researchers work with our clients and others⁴. Effective collaboration with clients on a design research project requires measures for quality assurance. We want to leave our clients, their people of interest and the field in a better place than if we didn't do the work.

We think our model lets us do that. It allows us to mitigate some of the risks and has lead to some imagined and unexpected benefits. Below we will discuss these in detail.

Risk reality

Earlier we presented some of the risks we anticipate in following this approach to research. Here we discuss what we have found so far with our model.

Reduced quality of research for the project – Collaborating on the research plan and storytelling actually improve the quality of the research. Doing this together, and taking different roles, means we account for business context and design research expertise. This brings a better outcome than if we were planning or storytelling alone.

The risk to reduced quality in our learnings from the field is still present. However, we currently compensate by shouldering enough of the fieldwork ourselves. Furthermore, we

continue to work with them as they engage with participants in the field to help shape their approach and identify areas of improvement. This helps us to maintain a certain level of quality in the field, and gives us a chance to judge people's practice before relying on their findings.

Over-confidence – A little bit of knowledge actually goes a long way, provided people are aware of where their knowledge ends or their limitation lies. To that end, we are careful to respectfully acknowledge their limitations and humbly showcase our expertise. For example:

- We are careful to say, “you were great at this, next time you need to...” so that they are aware they have not got to the end of their learning.
- We explain the dangers of making assumptions, not gaining enough context, and not digging deep enough along the way. E.g., “You didn’t ask them why they do that or how they feel. If you don’t ask why, you make assumptions ... and we don’t get to true insights.”
- We rigorously debate various intricacies of the research plan or field insights in front of them. This way they can follow our decision-making. It also means that they see how much specialist knowledge and thinking is involved.
- We are careful in our positioning of the training. We never call our training a ‘masterclass’, which many in the industry do. We are clear to say this is a basic introduction to the mindsets and practices. We talk about next steps on their learning curve.

So far, where we have worked with our clients in this way, they have not then assumed they are fully prepared to practice design research independently. In fact, our model has served to set us apart as experts.

De-valuing the expert ethnographers’ contribution – As suggested above, the model often results in us standing out as experts, and our contribution is more valued. Working alongside our clients is an opportunity to showcase the value we add, our expertise in tackling complex challenges, and the impact our work can make to their business. In fact, additions to project scopes – to do additional fieldwork, to do additional storytelling, to do additional rounds of research – suggest that our value is newly appreciated.

Our focus on the ethnographic mindset helps in this area. We’re not de-skilling or dumbing down ethnography, just making it more accessible. We retain the specialness and value of our expertise while adding scale, engagement, and a way of implementing research with our clients.

That said, we do have some trouble advocating the value of different types of ethnographic methods, such as participant observation. Clients still struggle with the idea that their small budget will be spent on less people, since those methods are more time-intensive and harder for their team to grasp and do. In that way, our expert contribution is valued but not commissioned.

Commoditizing the ethnographic research field and market – We believe we walk a delicate balance in this regard. While we are still regarded as experts, clients are now much more aware of the components of ethnography and design research. Further, the more that we work with a particular client, the more mainstream the field seems. That’s a good thing, in

that clients do not feel they're going out on a limb in commissioning our work. But it also means that the field is naturally being commoditized over time.

Over-simplifying the principles – We strongly believe in increasing the understanding of our field with others, particularly our clients. We are against protecting knowledge for 'the experts' and ultimately see this strategy as counterproductive to the health of our field. If we cannot create lucidity for others, then where is the value in our understanding of complexity? (Hylland Eriksen 2006).

On the other hand, we worry that our message could become diluted. If not with our clients, with the next person they share our approach with, or the person after that. We think it is when this message becomes diluted, and tools and methods are used out of context, that our approach becomes less effective. When people believe they are using design research methods but not wielding the desired outcomes, that is when we believe we risk the field's reputation.

So far, we have learnt that those involved understand and value design research more, and are more likely to champion it with seniors and to commission it.

Strengths to our model

Rather than risking the field, client projects, and our businesses, we believe our model to be beneficial to those things.

Customer knowledge is held in the client's organization - We believe our clients should be the ones to know and understand their customers, their staff, their people. This model brings them close to these people and allows them to gain empathy with them. The client's people are in the field, sharing and hearing stories during analysis and definition, and sharing within their business the insights gained. As a consequence, nuanced knowledge about the customer is held within the organization, not by an external party, and can be more quickly and correctly used to their benefit (Howard and Mortensen 2009, Ladner 2014).

Engagement – Our model builds engagement in several ways. We have found that our clients are:

- More engaged in the research process, since we involve them and value their business content knowledge as we create research plans, follow hunches about customer-based opportunities and more
- More engaged in the resulting customer knowledge and more likely to see it as important, since they have engaged with 'real people' and have a visceral appreciation of the learnings, and since we have demonstrated our expertise and proven our credibility (similar to the assertions of Howard and Mortensen 2009, Schwarz et al. 2009)
- More engaged in other aspects of their role, as they have reconnected with the people they're here to serve.

Recognition of specialist knowledge and skills – There's nothing quite like being involved through a complete research process for a client to gain perspective on the specialist knowledge and skills required.

As opposed to claiming our work is black magic that happens behind closed doors working alongside clients offers a transparency and frankness that illuminates the skills we bring to the table in a genuine way (Schwarz et al. 2009). We show them what we do, not tell them what we do. This means our clients are more realistic about the effort and skills required. They are more willing to get external help, which means we are often offered bigger roles the next time around.

Recognition of value – Beyond recognizing our skill set, having to work alongside our clients means they can see the value created by the research and the project. This is good for both parties. We want to deliver in a way that truly adds value to our clients. When they understand more about how we work, they also understand more about the value generated. It is good for them because they can see the value we are creating and know they are not being duped. They also know a bit more about how to recognize good practice for the future, whether they're working with us or someone else (Santee 2013).

More commissions – We are proud that the majority of our projects lead to more commissions from that client. While people may become advocates of our findings and our approach, and a bit more skilled, they do not then have the resources or time to continue this work independently. Our clients are incredibly busy, and as we have already discussed our environment is resource poor. They are looking to be able to engage in these types of projects for their organization, but need external help to make that happen.

Better commissions – Former client team members become champions of design research, which leads to more and better market opportunities.

As our clients gain experience with our research style and the range of purposes it can serve we see these opportunities expand. Their better understanding of the mindsets and value means they are more likely to commission. Specifically, it means they are more able to articulate what they need. This leads to improved commissions and better briefs, which sets us all up with better projects.

CONCLUSION

Collaboration sits highly amongst our company values. We are excited that this model allows us to work with our clients not only bringing them alongside us but also engaging them as active researchers and teammates. It is important to us that the model we use be one that enables us to manage the risks we have identified in following this shared fieldwork approach. We believe we are now working with a model that not only mitigates some of those risks but also truly contributes additional value.

Our model emerges as a combination of eight years experience in this business context, the increasing demand for our type of work, and the constrictions in budget that the local business ecosystem sustains.

The majority of clients have been excited by our approach. By contributing project resources, they incur a smaller cost that they can afford. The training and coaching builds

capability. By getting their people into the field and involved in analysis and definition, they build engagement in role and purpose. With us leading research planning, conducting fieldwork, leading analysis and definition, and being involved in storytelling, they gain confidence that we're assuring quality.

The four core elements are important in mitigating risks associated with client collaboration on design research. Ensuring we're involved in each phase helps retain our position as experts, the important mindsets and principles of the field, and the quality of findings. By taking different roles in different phases, we can keep a tight hold when required and a loose hold when there is more room to grow others or when our expertise is not the most critical. Training and coaching for the field gives us more assurance of the quality of findings, and the way we do it helps to gently reinforce that the client's learning curve is not complete. The emphasis on mindsets – the design mindset and the ethnographic mindset - throughout the phases of the project enables us to underscore the most important aspects of our craft. The combination of fixed and flexible elements allow us to adapt to different client and project needs as well as, mitigate the various risks working with clients and inexperienced researchers offers a project.

We remain mindful of what this approach means for the discipline. We note that whilst our immediate risks are being well managed, the greater impact to the discipline has to be explored further. We continue to adopt a mindful 'learning by doing' approach to the model itself.

As part of that, we are curious about how others are collaborating with their clients through design research projects or phases. In particular, whether they're taking specific roles or approaches in different aspects of collaboration, and what the outcomes of those roles and approaches are. It's important that those of us working in design research are aware of the impact that these models might bring for clients, people of interest, and the discipline.

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NOTES

1. We distinguish between ethnographic research and design research. Ethnographic research is undertaken primarily for the purpose of understanding a people, whereas design research is undertaken primarily for the purpose of designing something for those people. For us, ethnography and the ethnographic mindset is key to good design research.

² started using the terminology and framework of ‘fixed’ and ‘flexible’ elements after we had developed a model that essentially already worked this way. We heard the framework and terms in David Butler’s speech at the Better by Design CEO Summit 2015 and adopted it when we realized it was a useful way to refer to our adaptable approach.

³ For example, concepts that had emerged as a result of their fieldwork had not been explored in enough depth, and the team had difficulty separating their fears about management’s reaction with what they were learning from staff. We needed to do further work to create the necessary insights and confidence. The projects went over budget and time, and still did not achieve solid design direction.

⁴ This reflects our perspective of ethnographic research in industry. We acknowledge ethnographic research has a long tradition of collaboration.

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From Inspiring Change to Directing Change: How Ethnographic Praxis Can Move beyond Research

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This paper reflects on the evolving nature of ethnographic praxis in industry and argues that we must move beyond research and towards strategy in order to elevate our praxis, and to deliver real impact and value for our clients. Although this conversation is not new for the EPIC community, there has been a lack of models and examples – even in its tenth year – for how to do so. Taking a project with a medical device company that manufacturers voice prostheses for laryngectomees as a case study, we show how a team of social scientists used “Sensemaking” to determine a new commercial direction for innovation and to design a five-year portfolio strategy for our client. In doing so, we illustrate how our praxis can do more than deliver research insights or design, but also act as the core foundation that defines business processes and strategy.

INTRODUCTION: THE CHALLENGE WITH OUR PRAXIS TODAY

Over the last decade, ethnographic research has become an established and well-used methodology in the corporate world (Cefkin, 2009; Morais and Malefyt, 2010; Mack and Squires, 2011). Many companies routinely hire anthropologists to provide insights into their consumers, while others have set up their own in-house consumer insights divisions. Traditional management consultancies are increasingly acquiring or partnering with research and design firms¹, and business schools have even begun to teach ethnography as a research methodology (Jordan, 2010; Squires et al., 2014; Gebhardt, 2015). The need to prove the value of ethnographic research in the business world has long diminished, and our industry practitioners can be found working in all industries and business units. As Christian Madsbjerg noted in his 2014 EPIC Keynote, “the skeptical conversations about our methodology are over. We won.” So what’s the problem?

While ethnographic praxis in industry has grown tremendously over the years, the depth at which it penetrates a company’s overall direction and strategy has been relatively minimal. One consequence of putting our focus on proving the value of ethnographic research in the early years is that we’ve inadvertently defined the boundaries of our practice around consumer research. Despite the push to move into strategy, many of our practitioners today still have little role in implementation or execution, and rarely see the final results. Many practitioners only work with marketing or research and development divisions, with little engagement with executive management or strategy teams. This is especially true for practitioners who work in consulting firms, or independently and are unaffiliated with any one company.

One reason why we’ve been so far removed from strategic decision-making is that businesses don’t fully trust us – we are perceived to be experts in people, but novices in business (Morais, 2014). Businesses are cautious to allow us to make big decisions that may impact their top-line for years to come, especially if they feel that we lack knowledge of how

their industry or corporation works.

The other reason, however, is that our industry as a whole has yet to move beyond research. Over the years, we've positioned ourselves as user researchers, design thinkers, and even as "storytellers," but one consequence of doing so is that clients are inclined to see the value of our praxis only in its ability to provide research insights. Today, clients come to us primarily when they're looking for an ethnography, which as Sunderland and Denny (2013) describe, has been rendered a three to four hour at-home interview with a pre-recruited individual. This particular type of ethnographic research has become a commodity (Baba, 2014; Morais, 2014), just another item on the corporate "to-do list" that businesses outsource to market researchers, innovation consultants, designers or academics in order to keep up with industry norms and stay relevant in an ever-changing globalized world. But therein lies the challenge – partaking in only this type of work fuels the "de-skilling" (Lombardi, 2009) of our industry practitioners, reducing anthropologists and sociologists to laborers who can only conduct piecemeal tasks for clients.

It has been a challenge to elevate our praxis when it is perceived to be a commodity. However, moving beyond research and into strategy may be key to reversing this commodification, allowing us to position ourselves at the higher end of the services market to become more valued and trusted advisors to our clients (Baba, 2014). While we recognize that there has been a new breed of consultancies that bridge research with strategy, and a growth in business anthropologists who inform strategy and organizational change (Squires et al., 2014), the challenge still lies in elevating our praxis as a collective whole to the realm of strategy. If we fail to respond to this commodification of our praxis, we run the risk of becoming irrelevant even as ethnographic researchers. What if our praxis is reduced to the selling and writing of fieldwork guides to clients, who then carry out research themselves?

This year's theme, Building Bridges, invites us to explore the ways our praxis can move beyond research and towards strategy in order to build stronger, more meaningful bridges to our clients and their companies. This conversation is not new for the EPIC community: Bezaitis and Anderson (2011) wrote about the need to claim responsibility for translating insights and for getting companies to act on them; Hasbrouck (2015) discussed applying ethnographic thinking to various stakeholders in order to move "beyond the toolbox"; Morais (2014) wrote about the need for anthropologists to take an active part in strategy codification; and at the end of his 2014 keynote, Christian Madsbjerg asked our community to "grow up" and to take our work more seriously by focusing on larger, more strategic problems.

While there has been a wealth of discussions for why we should move our praxis into strategy, there has also been a lack of models and examples for how to do so. The purpose of this paper is to provide a case study, based on a project we conducted with a small medical device company that manufactures voice prostheses for laryngectomees, to show how our team of social scientists used "Sensemaking" to deliver strategic and cultural change at a company-wide level. We discuss how our team became the pivot of the company, working in close collaboration with marketing, engineering, sales, and executive management (both respectively and collectively) to set a new commercial direction and process for innovation. This new direction became the foundation for building an overarching portfolio strategy for the company for the next five years.

In addition, we show how our team played a fundamental role in re-energizing and re-motivating the company's employees after years of rote practice by bringing about a cultural

shift in thinking and attitude towards laryngectomy. In doing so, we illustrate how our praxis can do more than simply deliver research insights or design; it can also act as the core foundation that defines business processes and strategy.

BACKGROUND: SETTING A NEW DIRECTION FOR LARYNGECTOMY

In 2014, a small medical device company approached our firm with one big problem: the company was looking to grow its position in the market with new product and service offerings, but they lacked the direction for innovation. The company (subsequently referred to as “MedCo”) produced medical devices for people suffering from ear, nose, and throat medical conditions – with one core customer group being laryngectomees.

Laryngectomees are people who have had their larynx (i.e. voice box) removed, often as a result of cancer, and breathe through a stoma on their neck. Laryngectomees typically rely on three medical products in their everyday lives: voice prostheses, which allow them to speak; filters, which add humidification and act as a protective covering for the stoma; and housings, which provide an adhesive base for the filter to click into.

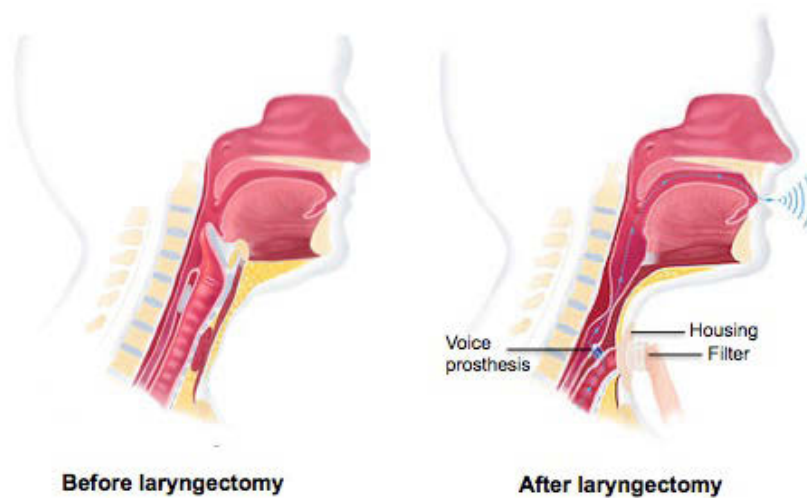


Figure 1: Before and after a total laryngectomy

MedCo was renowned in the medical community for their superiorly engineered voice prostheses; in a number of countries, they also had the majority market share. In short, the company was doing well from an outside perspective. However, with patents soon expiring and new competitors emerging, MedCo was faced with increasing pressures to establish a new product portfolio that could differentiate themselves in the market in the years to come.

MedCo had a strong team in research and development, and while there were many ideas floating around, they lacked the grander perspective that could guide and drive their new innovation agenda. MedCo saw the need to shift from an engineering-driven to a

customer-driven innovation process, and approached our firm to provide them with a new commercial direction using our outside-in “Sensemaking” approach. Sensemaking is a five-phase non-linear process for how our team at ReD Associates tackles business problems:

- Phase 1: Frame the problem as a phenomenon
- Phase 2: Collect the data
- Phase 3: Look for patterns
- Phase 4: Create the key insights
- Phase 5: Build the business impact

To guide our approach for this project, we first reframed the business problem into a phenomenon that could be studied in the field (Phase 1 of Sensemaking). For MedCo, this meant reframing the question from “What is our new commercial direction and strategy for laryngectomy?” to “What is good laryngectomy care?” This phenomenon would allow us understand the success criteria for good care, both in the hospital and back at home, from the perspectives of patients, caregivers, and healthcare professionals.

The goal of this project was two-fold: first, to develop a new commercial direction for innovation and product development based on a deep customer understanding of the phenomenon; and second, to design an overarching portfolio strategy to be carried out in the company for the next five years.

BECOMING TRUSTED ADVISORS: CLIENT UNDERSTANDING AS CORE

Our firm typically works with Fortune 500 companies that employ thousands of people. As a result, many of our projects are conducted in partnership with one business unit, such as engineering or marketing. This project with MedCo was unique for us in that it is one of the smallest companies we’ve ever worked with. However, this allowed us a larger than usual degree of immersion within the organization, where we were able to work in close collaboration with senior management, engineering, marketing, and sales teams throughout the project. The ability to work so closely with different stakeholders at MedCo allowed our team to identify the cultural and organizational barriers that could impact the success of this project, and thus the company’s future.

Before heading to the field, our team spent the first two weeks devoted to understanding the world MedCo operated in (Phase 2 of Sensemaking) by conducting an ethnography of their business. In order to deliver real impact and value for MedCo, we had to first understand how their company operated and what business problem they were trying to solve. This required their organization to be “actively and aggressively dissected, from its strategic imperatives to its financial metrics, its leverageable assets to its operational capabilities, its brand equities to its competitive landscape” (Payne, 2014). Only with a deep understanding of their business model, and what business problem was at hand, would be able to ensure our insights and recommendations were relevant to their needs and capabilities.

Using a “Five Lenses” framework to understand the client (MedCo), the industry (medical devices), people (patients and professionals), marginal practices (e.g. artificial larynxes), and emerging technology (e.g. synthetic voices), our team rigorously sifted through

client and competitor reports, read patient blogs and medical books, procured treatment guidelines for laryngectomy surgery and post-surgical care, learned about changes in ordering and reimbursement policies, and identified companies using new and relevant materials.

However, understanding MedCo's company and culture itself was equally important as understanding the world they operated in. Thus, our team spent a great deal of time at their headquarters, visiting the production site, research and development lab, and observing employees doing their job in-situ. Our observations spanned across formal meetings and workshops, as well as informal social gatherings and lunch breaks. By investing a significant amount of time at the beginning of the project into client understanding, we were able to demonstrate our level of expertise in MedCo's business and industry, which had tremendous impact for how we built trust and authority with the company early-on.

By taking a deep dive into their world, one thing was made clear: MedCo was an introverted company that had challenges in making decisions. This insight, which had implications for the company's future, and also for how our team decided to work with an introverted and consensus-based company, was something we'd never have been able to gather from an annual report alone. With a grasp of their company culture, we tailored our approach for working with MedCo to ensure we "consulted with care." For example, we realized that an introverted company needed us to take more of a leadership role and to facilitate an environment where employees felt safe to speak. Because we cared for the employees and wanted them to succeed, on multiple occasions we disinvited executive management from workshops in order to create a space where employees could voice their opinion without fear of backlash. Albeit a bold move on our end, it proved to be a success as taciturn engineers began to open up and share their thoughts on what direction innovation should move in.

A month into the project, we found that something had fundamentally changed in our relationship with the client team. We had become the pivot of the company – the constant core that unified the disparate worlds of engineering, clinical affairs, marketing, and management together. Our role had evolved from outsourced help who could provide the human angle, to trusted advisors of the MedCo team. The reason we were able to evolve into this role was because we had earned MedCo's trust on a company-wide level. Through client ethnography and rapport building, we proved we could speak the language of engineering, marketing, sales, and management, and showed that we recognized what was important to each business unit, and that we cared about the success of each.

Today, many ethnographic researchers see their job as representing the voice of the user. They prioritize gaining a deep and holistic understanding of their participants to the extent where client understanding often falls by the wayside. Although many anthropologists understand the business context of their projects, they rarely have the time, budget, or desire to also take a deep dive into the world of their clients and the industries they're working in. But as Bezatis and Anderson (2011) have discussed, "The job of ethnographers and social researchers is to act as generative intermediaries between businesses and the social world." By having the same curiosity and empathy for MedCo as we did for laryngectomees, we became much more aware and sensitive to their needs, which in turn allowed us to make more valuable and strategic contributions to their business in the latter half of the project.

If we wish to elevate the standards of our praxis and to expand the role and responsibilities of our practitioners to become trusted advisors, it is imperative we prove to clients that we understand their business just as well as their users – chiefly because many of

our practitioners lack the credentials, such as an MBA, that often provide immediate authority and credibility. Without a deep understanding of our clients' business problem, strategic goals, organizational capabilities, or company culture, our ability to partake in and lead meaningful strategic engagement is impossible (Morais, 2014). Making client understanding core to our praxis is key to advancing our industry, as only then will management trust us to work with the highest levels of business decision-making.

LIFE AS A LARYNGECTOMEE

In preparing for fieldwork, our team was confronted with one big challenge: How do you conduct ethnographic research with people who can't speak or speak well? How would we carry out six-hour long conversations without exhausting participants? What would we do if we couldn't understand what they were saying? And how would we broach a highly stigmatized and sensitive topic – the smoker's disease – without embarrassing or offending the people we planned to meet?

The research was conducted in four countries, Spain, US, Germany, and Sweden, with laryngectomees, caregivers, speech language pathologists, and otolaryngologists (Phase 2 of Sensemaking). Our goal was to gain a holistic and multi-faceted perspective of "good laryngectomy care" with an ecological research approach. Many laryngectomees we planned to meet had not yet regained their voice or had trouble voicing, and in these cases, we asked for a caregiver to be present to help translate. For those who could speak, we created a fieldwork guide centered on mapping exercises and activities that offered patients regular breaks from speaking, and also gave them the option to communicate through drawing or writing.

In our meetings with laryngectomees, we were surprised by how talkative and open they were. Although a sensitive area to discuss, they revealed the most intimate moments of their lives: the day they found out they had cancer, the first time they heard themselves speak with a new voice, the moment they realized they couldn't cry or laugh anymore. We learned about their life as a laryngectomee, the social stigma they faced as a visibly recognizable cancer patient, and their daily struggles and frustrations living as a laryngectomee. As one patient told us: "I was afraid what my voice would sound like after surgery. But the biggest thing I was afraid of was losing my identity – it was tied to my voice. I still don't feel like it's me when I hear my voice on the answering machine."



Figure 2: Photo of a laryngectomee we met, Ellen, showing her new “voice box”

With healthcare professionals, we attended tumor board meetings to see how otolaryngologists decided which patients were fit for a laryngectomy procedure, observed speech language pathologists troubleshooting with patients, and accompanied surgeons around the clinic as they checked in on their patients. We even observed a total laryngectomy² being performed in the operating room. Meeting with healthcare professionals gave us insight into the clinical definition of good laryngectomy care, which we found often went against patients’ definition of good laryngectomy care.

For example, many speech language pathologists considered patients to have “graduated from their care” once they were able to voice again. But for patients, being able to voice was not enough. They wanted to communicate with others by being able to change their pitch and volume, feminize their voice, and to express themselves through crying and laughter. As one recently laryngectomized patient told us: “I have one tone and one tone only. I am neither loud nor quiet. This is difficult for me to come to terms with because prior to surgery I had a loud booming voice. I feel like I blend in where I normally stand out.” With an ecological research approach, we were able to identify a tremendous disconnect between patients’ and professionals’ definition of success when it came to voice rehabilitation.

As many consultancies already do, we invited employees from MedCo to join us in the field. But rather than have them be passive observers, we asked them to play the part of ethnographer. For an introverted company, this was something many felt uncomfortable doing. It required them to travel to a new city, spend upwards of eight hours with laryngectomees in their homes, and watch their products being used (and often discarded) in-situ. Some had never met a “real-life” laryngectomee before, or had only met them in the

controlled environments of MedCo's campus. Thus, we saw it as our responsibility to help them better understand and gain an appreciation for the people they were creating new solutions and services for.

Prior to each session, we met with MedCo employees to go through the fieldwork guide and research practicalities. We gave them tips on how to build rapport with participants, as well as how to formulate the questions they wanted answers to (e.g. "How do competitor products compare to ours?") in more ethnographically appropriate ways (e.g. "Can you tell me about the last time you tried another voice prosthesis?"). At the end of each session, we also gave MedCo employees the task of writing up short field notes they had to share with their colleagues. For an introverted company, these field notes played a large role in sparking conversations between people who typically work in disparate realms, and in breaking down MedCo's silo mentality.

By having our clients play the role of ethnographer in the field, we infused them in our own Sensemaking process, helping them see laryngectomees as people with real unmet needs they could solve, rather than just as consumers. Many MedCo employees told us they felt re-energized and re-motivated about their jobs, especially those who had been there for many years, and reported that they found a new sense of purpose after joining us in the field.

Research findings from the field

Sensemaking requires the ability to lead open-ended discovery, but to be able to connect the dots to find patterns in often conflicting data (Madsbjerg and Rasmussen, 2014). From our research findings across four countries and with five different stakeholder groups, we identified many new patterns and insights (Phase 3 and 4 of Sensemaking). One key insight we found, which had profound implications for the future of MedCo's business, was that people's stomas come in all shapes and sizes.

The fact that people's bodies are different is no ground-breaking insight, but the insight is magnified when it's compared with the fact that most medical devices for laryngectomees don't cater to this reality. Our team was confronted with the fact that housings and filters across the industry were made only to fit "perfect stomas" – perfectly flat, perfectly circular, and perfectly small. Across the participants we met, many had "imperfect stomas" and thus needed to deal with ill-fitting products that would not fully cover their stomas, which caused air leakage and made it impossible to speak. Many laryngectomees had to change their housing as frequently as eight times a day, causing a huge time-consuming burden in their daily lives. For healthcare professionals, ill-fitting products required them to repeatedly troubleshoot with patients, which cut into little time typically allocated for other speech related disease areas.

The prevailing logic in the industry was that surgeons should be educated on how to make "perfect stomas." Thus, sales reps across the different medical devices companies were regularly sent to hospitals to demonstrate to surgeons how to make the best incision. However, the reality is that surgeons' primary concern is removing cancer, and creating the perfect stoma falls low on their list of priorities. Because surgeons typically handover the patient's care to speech language pathologists soon after surgery, few are even aware the impact "imperfect" stomas have on a patient's quality of life. Our team discovered a great need for solutions that catered to the reality of patients' bodies and stomas in order to deliver "good laryngectomy care," not for a change in the treatment paradigm.

DIRECTING CHANGE: BUILDING THE BUSINESS IMPACT

The challenge for many of our practitioners today is that we have little room to partake in decision-making, implementation, or execution beyond the research phase. For many, our role still typically begins and ends with research: we conduct fieldwork, come up with key insights, and provide high-level recommendations. These recommendations are then handed over to management to put into action if deemed relevant. Our job has primarily been to provide the research results and inspirational ideas for our clients. However, ideas don't mean much if we can't marry them with implications for a company's strategy, finances, marketing, or research and development efforts.

Being absent in the process of strategy formulation not only curtails the power and influence of our contributions (Morais, 2014), but it also has negative consequences for the businesses we work with. What we've seen over the years, including in our own first-hand experience with MedCo, is that businesses find it challenging to translate research findings because they are still so far-removed from their customers. As a result, senior management execute on the wrong strategic direction and continually "get people wrong."

For example, MedCo previously conducted a quantitative survey and learned that laryngectomees are particularly concerned with the aesthetics of their filters. They interpreted this to mean that they should turn filters into a fashion accessory with bold patterns and bright colors, and subsequently hired a design agency to mock up patterns for a new generation of filters. While it is true that laryngectomees care about aesthetics, they desire filters to be as discreet as possible, and many go out of their way to camouflage it to their skin. One laryngectomee we met went as far as to paint his filters with nude nail polish each night, believing it reduced the number of people who stared at him and his stoma.

In order to help businesses truly "get people right," the next wave of practitioners must take an active role in the writing and directing of strategy. In doing so, they can pave the way forward for management and ensure they execute the right strategic direction to drive top-line growth.

Although ethnographic research was key to the success of this project, it was used as a means to an end, not an end in itself. "Businesses in transition don't want research or insights. They want answers, compelling ones, capable of motivating points of view and change," argue Bezaitis and Anderson (2011). The post-research phase is the beginning of the most critical work: building the business impact (Phase 5 of Sensemaking). For MedCo, this meant providing them with a new commercial direction and portfolio strategy to be carried out over the next five years. A commercial direction, as we define it, refers to the value proposition of a company – what the company uniquely offers to stakeholders – that can guide engineering and marketing innovation efforts. A strategy refers to a clear and concrete plan of action that delivers on the agreed-upon commercial direction.

Setting a new commercial direction for MedCo

Our insight around "imperfect stomas" led MedCo to see their business, customers, and products in a completely new light. In fact, it sparked a company-wide shift in thinking and attitude towards laryngectomy; MedCo saw a new need to design medical solutions that fit

patients' individual bodies, rather than designing one superiorly engineered product fit for all. This shift in thinking became the foundation for MedCo's new direction for innovation, a direction concentrated on personalized solutions.

A focus on personalized solutions meant engineering products that fit the reality of patients' bodies, which required MedCo to move away from standard mass-made products for "perfect stomas" to products tailored for diverse stoma profiles. In addition, personalized solutions meant designing products tailored to patients' lifestyles and their various usage situations, such as for sleeping (where comfort and healing was most important), working out (where ease of air flow and strong hold was most important) and going out (where discreteness and reliability was most important), rather than focusing on engineering one filter that worked across all situations.

Our team argued that personalized solutions would allow MedCo to tackle the most important and unmet needs in the market, both for patients and professionals, by addressing the reality of "imperfect" stomas. Solutions for "imperfect stomas" would give a larger degree of confidence and control around laryngectomy care, reducing mistakes, hassles, and daily inconveniences for patients back at home and professionals working in the clinic. Personalized solutions had a strong promise to improve the quality of life for patients and professionals alike.

Establishing a new portfolio strategy for MedCo

With the ambition to deliver on personalized solutions, MedCo had to rethink its product pipeline and portfolio strategy for the next five years. However, they needed guidance in realizing this new generation of solutions. As Massot (2015) argues, many businesses need to be guided through the strategic and tactical reality required to execute on a new commercial direction. Using our knowledge and experience in the field, we identified the unmet needs of patients and professionals and translated them into a number of new growth opportunities that MedCo could potentially pursue, or as we called them: Innovation Challenges.

Innovation Challenges described a clear and concrete product or service that a) addressed a white space in the market in relation to personalized solutions, b) represented a significant business opportunity to grow the company, c) was in line with the company's abilities and expertise, and d) was technically and logistically feasible. To ensure that these Innovation Challenges could drive MedCo's top-line, we backed each of them with the financial implications as well as a business case for monetization. In addition to identifying new Innovation Challenges, we reviewed MedCo's current pipeline and evaluated each of their prototypes on their ability to deliver on personalized solutions. By doing so we were able to identify the gaps and redundancies in their portfolio to create a unified portfolio strategy.

Once MedCo decided on the Innovation Challenges to pursue, we were responsible for the building and writing of an Action Plan that could turn these Innovation Challenges into internal projects to be launched in the market. In our Action Plan, we created a framework that outlined key considerations for each Challenge, for example:

- Innovation Challenge Solution Description – "What is it and what does it solve?"
- Target Group and Proposed Usage Situation – "Who and when is this relevant for?"
- Potential Marketing Claims – "What is the value proposition and its benefits?"

- Proposed Product Name – “How will we position this to customers?”
- Feasibility Based on Required Competencies – “How will we achieve this?”
- Potential Partnerships – “Who can support us in making this a reality?”
- Business Logic and Market Potential – “Where’s the money?”
- Launch Markets and Launch Sequence – “Which market do we start in?”
- Go-to-Market Initiatives – “How do we ensure uptake in each market?”
- Regulatory Considerations, e.g. reimbursements – “What are the roadblocks?”
- Key Performance Indicators – “What will this be measured on?”
- ...

In building these Action Plans, we provided MedCo with an overarching portfolio strategy for its laryngectomy business for the next five years, as well as the tactical considerations required to bring these Innovation Challenges to market. As of August 2015, MedCo had registered for patents and developed multiple prototypes that arose from these Action Plans.

However, the real value of our work is in its sustained impact for MedCo’s company culture and their approach to innovation. As Cotton (2014) posits: “The promise and value of anthropology and business ultimately depends on the ability of our work to have a sustaining impact.” The framework outlined in the Action Plan would continually force MedCo to think about innovation from a customer perspective (e.g. what needs should we solve for, what are the benefits we need to deliver to customers), rather than from an engineering-perspective (e.g. what are the best materials and products) that has traditionally dominated in the company.

For our team, this project with MedCo was deemed a success because we were able to claim an active role in the writing and directing of their strategy, building the bridge between their commercial direction and their pipeline. With Sensemaking, we were able to create a red thread that connected our research to our insights, our insights to a direction, a direction to a portfolio strategy, and a portfolio strategy to a pipeline filled with real solutions for both MedCo and their customers. Our Sensemaking approach became the core foundation that defined MedCo’s business process and strategy

CONCLUSION: REDEFINING OUR VALUE PROPOSITION

As many have argued before us, ethnography is not just a research methodology, but also a way of thinking, a way of doing, what some might call a creative process. The power of ethnography is not in its methods, but in the way it can shape clients’ perceptions of people and their business in the world – as it did for MedCo’s laryngectomy business.

In order to reverse the commodification of our praxis and the “de-skilling” of our practitioners, and in turn become trusted and valuable advisors to our clients, our praxis as a collective whole must be elevated to the realm of strategy. To do so requires us to reposition ourselves and our offering. Strategy can and should be part of our professional offering and core to our value proposition.

From our own experience, we see an opportunity for anthropologists and ethnographers who have traditionally been relegated to researchers to actively take on more strategic roles. How? One approach is choosing the right companies to partner with – such as working with

a small company undergoing great transition. Another approach is building authority and credibility with our clients early on through client ethnography. Positioning ourselves as experts and advisors from the beginning, rather than as researchers, can pave the way for us to partake in business decision-making when it comes to implementation and execution. Finally, one or one's company can create a framework for how to tackle strategic business problems – such as ReD's Sensemaking approach or Fahrenheit 212's Magic and Money equation. At ReD, Sensemaking acts as the red thread that connects our research to our recommendations, giving our clients greater confidence and security when we advise them on their business strategy. While these three approaches do not encompass the many ways in which our practitioners can claim a role in strategy, they are tools we can begin to add to our arsenal in order to move ourselves and our offering beyond research. In doing so, anthropologists and ethnographers can play a more pivotal role for businesses and clients than they typically occupy in most cases at present.

In presenting this case study, we show the possibilities for redefining the boundaries of ethnographic praxis beyond research and into the larger realm of the overall strategic process. Our praxis can and should serve as the foundation that defines business processes and strategy, because that the evolution of anthropologist as a researcher to anthropologist as a strategy driver can literally be life-changing for people and businesses alike.

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NOTES

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1. For example, McKinsey recently acquired LUNAR, a design agency, in May 2015.
2. Total laryngectomies are done when cancer is advanced (e.g. T3 or T4) and the entire larynx is removed. Partial laryngectomies are done when cancer is limited to one spot (e.g. T1 or T2) and only the area with the tumor is removed. Patients who undergo partial laryngectomies are often able to retain their natural voices.

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Redefining the Ivorian Smallholder Cocoa Farmer's Role in Qualitative Research: From Passive Contributions to Passionate Participation

HANNAH PICK CALDERÓN
LANDRY NIAVA
INSITUM

Provider and researchers from the University of Cocody in Abidjan were faced with the challenge of adapting a user-centered approach to qualitative research endeavors in Côte d'Ivoire. Our cross-cultural team with expertise from multiple disciplines developed a novel approach for the cocoa sector. In observations, interviews, and co-creation groups with cocoa farmers, we explored concepts of success, productivity, and profitability both orally and visually. The resulting quality and level of farmer participation was enhanced, therefore improving research results.

This case study is based on our experiences conducting ethnographic research and co-creation sessions in several rural Ivorian communities.

In February 2015 in a small village in the Southwest of Côte d'Ivoire, INSITUM global research lead Hannah Calderón and Marie Bai, her translator, sat among a small circle of Ivorian cocoa farmers and their friends, listening to one very frustrated farmer talk about the responsibility big chocolate manufacturers and exporters had to him and the community.

Hannah understood French and could even communicate to some extent, but after her last trip to Côte d'Ivoire, she knew that she would need a translator to help her navigate country-specific slang and overcome the racial and cultural distances she felt between herself and the farmers and their communities. This time, she had found the perfect person for the job. Marie was a student of economics at a local university in Chicago, but she grew up in Côte d'Ivoire.

Earlier that morning, Hannah and Marie had met with Dr. Landry Niava and his team of local researchers to review the plan for the day. Landry and two others would go to one village, while Hannah and Marie would go with the other three local researchers to a village about 45 minutes further down the road. Hannah reassured the team that she was not there to supervise their work, but that she and Marie would be “floating,” so they could observe what was being said and also so the interviewees wouldn't be too inhibited by Hannah's presence. She reminded them of how a young girl they had interviewed the summer before for another project had been reserved and had even begun to cry. Finally, the team had realized that the girl was afraid that Hannah, *la blanche* (“the white woman”), wanted to get her father in trouble for letting her work on the farm. Some of the participants could be wary of her presence and the minute Hannah sensed this, she and Marie would have to remove themselves. They might go observe another interview or intercept some people hanging around the village for a less formal conversation instead.

As they sat alongside Landry, who was interviewing a participant who cared for the cocoa farm with her eldest son and several sharecroppers, Hannah sensed a familiar shyness

in the woman. She noticed that the woman was avoiding eye contact with her specifically, so she motioned to Marie that it was time to leave. They found their driver and headed back up the road to the other village. The other researchers had already gone off with their interviewees to their houses and farms, so Hannah and Marie walked around the village intercepting whomever was available and comfortable speaking with them.

Around 3:30 p.m., they headed over to the tree in the village where the younger farmers and their friends often met up to drink and talk. Marie asked politely if they could join the group and soon they were part of the conversation asking questions and responding to the farmers' curious inquiries about their long trip from the United States to their village.

"Hannah wants to know why cocoa farming is not as profitable as it used to be," Marie asked the group after a few farmers had voiced this opinion.

"The price is not as good anymore and the Swollen Shoot disease is ravaging our crops," one farmer said.

"What are farmers doing to counteract Swollen Shoot?" Marie asked for Hannah.

"Nothing. There's nothing we can do. It comes and it kills all the plants and it's expensive to replant them. There's no cure for Swollen Shoot. We need money if you white people want to keep eating chocolate," the same frustrated farmer from earlier exclaimed. He then looked at Hannah for a response.

"Hannah doesn't work for the chocolate companies," Marie explained. "They've hired her to come understand what it's like here and to understand your thoughts and opinions."

"Well, tell her to tell the companies then. Anyway, the companies need us and they are running out of chocolate. If we wait until all the cocoa runs out, they will give us the money we need to replant our farms," he retorted.

Hannah frowned. She hoped the co-creation group they had planned for later that week would be productive. If all of the farmers were so discouraged they couldn't even fathom solutions, the session might not work as well as they had anticipated. She and the team would need to regroup later that evening to make sure their approach would yield the results they were looking for.

INSITUM Company History

INSITUM is a global strategic research and innovation consultancy. The company was in 2002 by two Mexican designers who graduated from the master's program at IIT's Institute of Design in Chicago. Over the years, they were able to establish offices across the United States and Latin America. With its foundation in human-centered design, INSITUM quickly became known to its clients for robust research capabilities that lead to impactful services, products, brands and experiences grounded in people's actual needs and behaviors.

Today Insitum's Chicago-based U.S. office is contracted by clients across a wide variety of industries to conduct everything from human-centered research to strategic workshops to prototyping and design. Insitum's U.S. office primarily serves multinational Fortune 500 companies. More recently, it has been engaged to work in the agricultural development sector in rural Latin America and Africa.

Research and Service Design in the Cocoa Sector

For over half a decade, West Africa has been the primary producer of cocoa. Farmers in Côte d'Ivoire and Ghana currently produce more than 70% of the global cocoa supply. The majority are smallholder farmers. With less than 10 hectares of land, they are extremely susceptible to a variety of threats, resulting in low yields and low profit from cocoa farming. This reality, in combination with land shortage, mass migration to cities and other global trends, is making cocoa farming much less attractive and feasible as a profitable livelihood for West Africans.

Recently, multiple constituents in the cocoa sector have publicly recognized that the world is running out of cocoa. Despite countless attempts by philanthropic institutions and individual companies to affect scalable change in cocoa farming communities, a cocoa shortage still remains imminent. The theory of change is often used in the cocoa sector to gauge progress towards combatting this reality. Impact is measured by conducting a baseline community study to establish existing conditions. An intervention is then introduced to part of this community and changes are monitored over time to determine impact. The majority of the data collected for both baseline and monitoring purposes is quantitative. Generally, there is a small qualitative data collection portion. In the past, the qualitative research has involved traditional focus groups resulting in lengthy research papers. While the findings of these qualitative studies may often be highly detailed and descriptive, they do not always translate easily into actionable next steps or insights that inform new solutions. INSITUM was contracted by a consortium of companies looking to remedy this issue. The company adapted its human-centered research approach to design two studies involving cocoa farmers in Côte d'Ivoire in 2014 and 2015. This case study focuses on the second of these studies conducted for the World Cocoa Foundation, a non-profit focused on cocoa sustainability from three perspectives – people, profit and planet. The World Cocoa Foundation brings together over 110 private sector companies active in the cocoa and chocolate value chain. Their membership includes large, medium and small chocolate makers and cocoa exporter/process companies. This particular study was commissioned on behalf of the World Cocoa Foundation's pre-eminent strategy for cocoa sustainability called CocoaAction, "a commitment by participating cocoa and chocolate companies and producing country governments to work together toward a truly sustainable cocoa industry" (World Cocoa Foundation, 2014).

Local Partners

To conduct the research most effectively, INSITUM recognized the need for a local partner. It forged a relationship with a group of sociologists from the University of Cocody led by Dr. Landry Niava. In the cocoa sector, research vendors like INSITUM are often contracted in the country where the cocoa is manufactured. Rather than traveling to the country of origin, these research institutions often utilize local teams on the ground in West Africa to collect the raw data. These vendors, who have not been involved in the fieldwork and do not have extensive local knowledge, then attempt to conduct the analysis and reporting themselves. With this approach, the nuances and intuitions of those actually interacting with the interviewees and observing environments can get lost. To avoid these pitfalls, INSITUM developed a blended-team approach. Insitum's U.S. team members and local research partners worked hand-in-hand — from research design all the way through to analysis and report delivery. This approach helped bridge cultural gaps and incorporate both global and

local perspectives into the research findings in way that was still easily digestible and relevant for its clients.

Insitum's Dilemma

Landry and his team were instrumental in providing a nuanced understanding of the research fatigue plaguing Ivorian cocoa farmers. These farmers have been asked to share information about themselves in study after study (both quantitative and qualitative). They have received team after team into their communities and shared their opinions, but when a new program or service is rolled out, it is difficult for them to observe any direct positive link between their research contributions and the program designs. Many guidelines introduced by certification and other programs are at direct odds with farmers' traditions and beliefs (e.g., anti-child labor campaigns and cutting down old cocoa trees). This has resulted in farmers feeling betrayed, marginalized and even patronized after sharing their daily lives with researchers.

Developing a Culturally-Relevant Approach

To address this, Hannah, Landry and team used their collective cross-cultural knowledge and expertise from multiple disciplines. They incorporated participatory rural appraisal (PRA) and co-creation, as well as past experience to design their methodology. Similar to co-creation methods used in the business world, PRA approaches give rural communities the agency to conduct their own appraisal, analysis and action (Chambers, 1994). According to Prahalad and Ramaswamy (2004), customers who participate in co-designing a product or service feel more ownership and connection to that product or service. Companies and their customers and/or stakeholders can create value together, making user experiences more relevant to customers. INSITUM often uses co-creation with its Fortune 500 clients and their customers. Activities in these sessions generally require participants to read and complete worksheets in small groups or follow along as participants and/or facilitators scribble notes onto a whiteboard and/or Post-it Notes. Conducting similar activities with rural smallholder farmers, most of whom are unable to read or write presented a new conundrum.

The INSITUM team had decided that purpose of these sessions was not simply to understand farmers' current situations, but also to work together with them to imagine new interventions. It wanted to paint a picture of a better future from their point of view. So, Hannah, Landry and the other researchers discussed options for how to produce this outcome. The local team had extensive experience conducting focus groups with farmers and community members, but they had not gone beyond the descriptive to actually generating solutions with their participants. Hannah had experience conducting co-creation sessions and knew that the generative nature of these lengthy sessions would make it difficult for farmers to follow along and build off of each other's ideas.

Inspired by a strategic facilitation workshop she had just attended, Hannah had an idea. What if they were to use completely visual mind maps and other visual facilitation techniques on a board during the session? Everything would have to be depicted in pictures rather than words. Landry and his team were taken aback by this idea, as they had never done this before. But they were also excited and this stimulated new ideas for the individual interviews they were planning to conduct, as well. They came up with the idea of creating

cards of different farming imagery to use as an icebreaker and stimulus for an activity during the individual interviews. As a team, the group began practicing and honing its visual facilitation skills. Academically trained in sociology, Landry and his team were nervous that their artistic skills would cause the farmers to think they were not qualified to be conducting research, but Hannah urged them to do their best and test it out. The most important thing was to communicate an idea to the group and have a visual symbol that could act as a collective reference for everyone present when people referred back to the idea later in the session.

During the debrief meeting after the first day of research, Hannah and Marie told the group about their encounter with the frustrated farmers. Hannah was worried that farmers with negative feelings might derail the conversation in the co-creation groups if they were not careful. Landry and the team reassured her that they had not encountered this during the individual interviews, but they were worried that it might be problematic during times when the farmers would be divided for small group work. They suggested having the director of the local cooperative present for the small group work to help them navigate any issues that might arise.

“Ok, let’s test it out and see how it goes. We can always make adjustments for the next co-creation groups if things don’t go to our liking,” Hannah told the team.

Landry looked confident as he prepared to facilitate the first co-creation group. Hannah and Marie took a seat behind the circle of chairs they had laid out for the farmers. As the farmers walked into the room, Marie nudged Hannah. She had noticed the same farmer they had encountered the day before who told them that it was the companies’ responsibility to fund the rehabilitation of his cocoa farm. He was already asking Landry how long this session would take and he was not pleased with the response. He sat down, peering down at his phone and closing off his body to the rest of the group. This did not bode well, Hannah thought. Landry went around the room having each farmer introduce himself or herself and, as they had practiced, he had the farmers talk about their favorite traditional meals, as well. The farmers began to smile shyly as they talked about their favorite meats and sauces, but the vocal farmer remained checked out.

“Let’s talk about what it means to be a successful cocoa farmer. I’m going to draw everything you say up on the board here for you to see,” Landry addressed the group.

The farmers began suggesting symbols of success. As they talked, Landry repeated their contributions and explained what he was drawing on the board.

Ok, so you said that a successful farmer has a lot of food to provide for the family, so I’m going to draw a big fish, because my ethnicity likes fish.”

The farmers began to laugh as they began contributing more openly.

“Ok, so now let’s talk about the problems that farmers who can’t quite reach success are facing,” Landry said.

The farmers were laughing and building off each other’s answers now and the frustrated farmer Hannah and Marie had recognized was laughing and looking very interested in the conversation. He began making more productive contributions, eager to see how the doctor would interpret his responses through drawings.

“Ok, so you said that a less successful farmer uses all his money drinking and has no food for his family, so I’ll draw a drunk farmer. And remember how we said that a successful farmer has a lot of food for his family? So now for this farmer with no food, I’ll draw a very, very, very tiny fish. And you said he has to share it with his many, many family members so

I'll draw them as well and we can see how this farmer has to divide this tiny little fish among his entire family.”

As Landry divided the farmers into groups to envision solutions to the some of the key problems they had outlined, Hannah was pleasantly surprised by the quality of responses they were getting. She was no longer worried, but rather giddy with excitement to see what kinds of solutions the frustrated farmer she had encountered the day before would propose to combat his problems with Swollen Shoot.

Project Outcomes

Observations, individual interviews, farm tours and co-creation groups were conducted in six villages across three different regions in Côte d'Ivoire. Insitum's Ivorian research team became more comfortable with the co-creation method as the work progressed. With each group came more positive results. In one community, the cooperative members became so excited by the farmers' ideas that they pledged to begin work on some of them on their own without the help of CocoaAction.

Research findings, initial ideas developed by farmers and recommendations for next steps were presented to the World Cocoa Foundation and the CocoaAction company members in June of 2015. Several members were impressed with the results, recognizing the uniqueness of the findings compared with past studies. One member noted that some of the ideas and recommendations were completely “new thinking” for the industry. The World Cocoa Foundation is currently working to identify opportunities to further develop some of the farmers' ideas to help refine existing programs and services and design and test new ones for the future. They are also working on incorporating more co-creation with farmers into future service design initiatives.

Hannah Pick Calderón is a Project Lead at INSITUM. Her background in sociolinguistics gives her the unique ability to develop insights that are critical in forging opportunities and business strategies for clients. She holds a master's degree in sociolinguistics and a bachelor's degree in linguistics and cognitive science.

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Radical Insights: Towards a Critical Hermeneutic

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In this paper, I will use an ethnographic research project to develop a set of foundational personas to work through the process of formulating insights that challenged the core epistemological assumptions of our stakeholders. Drawing on a rich body of discourse within postcolonial theory, I will highlight the concept of critical hermeneutics that emphasizes thinking about the conditions under which knowledge is produced over the “facticity” of the research artifacts, shifting the focus from “how objective is the information” to “what assumptions are driving research.” Put simply, critical hermeneutics can be seen as a method that uses reflexivity to explain how meaning is not absolute or empirical, but rather emerges from active interpretation that is informed by context. With this theoretical framework in mind, I will describe the methods used to include our stakeholders in the process of engaging with research data and ultimately derive the epistemological cores of the new persona set. The final section of the paper will critically evaluate the project in terms its overall impact and open up a broader discussion about the relationship of critical hermeneutics to ethnographic research.

INTRODUCTION

“In coming to India, they unknowingly and unwittingly invaded and conquered not only a territory but an epistemological space as well.” (Cohn, 1998:4)

In 2013, I had the opportunity to work on ethnographic research to augment the main persona set of a large financial institution. Personas are a well-established design tool that are typically based on some form of qualitative research to produce archetypes, or characters, as representations of end-user need states. In this particular case, the design brief came with a significant challenge—unlike Alan Cooper’s conceptualization of personas as tools for pre-determined, focused problems (Cooper, 1999), the persona set would be used as a starting point for the full array of retail products and services offered. The idea of a base persona set is not entirely new—Atlassian Design, for example, has posted their entire set of persona templates online along with their design principles. But even as the use of base persona sets gains popularity, the epistemological assumptions that inform and drive research are largely ignored. To define a key term, building on the notion of epistemology as the study of knowledge, an epistemological assumption can be thought of as the structural underpinning that frames the knowledge produced. For example, a hypothesis on the part of our stakeholders was that research would potentially reveal trends, similar to data analytics, related to product use that would serve as the organizing basis of the personas. In particular, the alignment between technology use, financial behavior and customer segments would yield patterns and insights such as: *younger segments tend to complete financial transactions extensively on their phones and have the following core set of needs and expectations from a mobile experience*. To their credit, though our stakeholders were open to research challenging their thinking, the assumption deeply informed our research objectives (how do technology preferences effect a

financial relationship?) and participants. So while the task of developing the persona set serves as the narrative scaffolding of this paper, the emphasis of my argument is on unpacking the entanglement between epistemological assumptions and the insights developed using the notion of a critical hermeneutic. The overall goal is to use a theoretical lens to understand how the unique insider-outsider position of the researcher can be used to “reframe priorities, values, and even relationships within...landscapes of production” (Flynn 2010:48).

Structurally, this paper is divided into two parts: in the first section, I will provide a brief outline of a theoretical framework rooted in postcolonial and feminist theory to develop the concept of a critical hermeneutic or interpretive model. The second half of the paper will focus on the research and use the framework to critically evaluate the methods, processes and key insights.

POSTCOLONIAL FOUNDATIONS

The entanglement between power and knowledge has been widely acknowledged to have lingering epistemological and material effects. As a wide-ranging set of theoretical interventions that emerged in response to colonial forms of knowledge, postcolonial theory offers strategic lessons on recuperating vernacular histories and subject positions. It bears merit then to re-visit specific debates and refresh our understanding of seminal critiques of the colonial encounter. While acknowledging that it would be impossible to fully summarize the many ongoing discussions in the field, for the purpose of this paper, I will focus on two interrelated proposals—the concept of “epistemic violence” proposed by anthropologist Bernard Cohn and Said’s analysis of colonialism that provides a crucial pivot point for this project in particular.

Ethnography and “Epistemic” Violence

In *Notes on the History of the Study of Indian Society and Culture* (1968), anthropologist Bernard Cohn anticipated both the arguments of Michel Foucault and Edward Said in his work on representations of Indian society during the colonial era—that the vast body of knowledge produced about India was in fact integral to the military triumphs and economic conquests of the British (Lal, 2004). Cohn describes in vivid detail the many mis-translations that occurred as knowledge was gathered, ordered, classified and circulated in published reports, statistical returns and histories. Crucially, Cohn revealed how the investigative procedures deployed in part by colonial anthropologists, tried to make sense of Indian society and culture using a “British” understanding of the world. For example, when attempting to grasp the many belief systems in India, the British looked for canonical texts such as the *shastras*, in an attempt to construct a parallel of their own experience of religion. From this textual view, the British produced a description of Indian society that was “static, timeless and spaceless...(with) no questioning of the relationship between prescriptive normative statements derived from the texts and the actual behaviour of individuals or groups” (Cohn, 1968:8). Expanding on this argument in a later book using a Foucauldian framework, Cohn refers to this production of knowledge as a form of “epistemic violence” that dominated vernacular ways of understanding, knowing and living (1996). This notion of “epistemic violence,” is arguably the ‘ground floor’ upon which a rich body of critical discourse within

postcolonial theory has been built (Nandy, 1983; Spivak, 1988).

The impact of these critiques can be seen in the many debates surrounding the role of the ethnographer as “translator.” The research practitioner is not a neutral observer but an active agent, mediating between cultural frameworks. Further, forms of representation are never naïve or innocent, but emerge from specific historical contexts (Philip, 2015). Within anthropology, there is a significant body of work that has deeply considered the many kinds of translations that occur as part of a research encounter—from the impact of tools, methodologies and interview protocols on the data gathered (Smagorinsky, 1994); to the subjective judgment of the ethnographer as an interpretive agent (Clifford, 1986); to the affordance of different mediums such as film and written text in terms of communicating experiential knowledge (Crawford & Turton, 1992; Loizos, 1993). A central question posed is – “Whose story is it, what is it being used for, what does it promise, and at whose expense?” (quoted in Schrock; Shuman, online).

Inverting the Frame

To return to historian Vinay Lal’s capitulation of Cohn’s legacy, there is a flip side to the research encounter—colonial forms of knowledge also had a tremendous effect on shaping the cultural psyche of the colonizers and their conception of modernity (Mitchell, 2000).

Pace Lal on literary theorist Edward Said,

“(the) Europeans created an entire body of knowledge which enabled them to represent the Orient; such representations, moreover, far from having any necessary relationship to the Orient, reveal more about Europeans than they do about the ‘natives’ and their social institutions, cultural practices, and the like.” (2004, online)

This line of thinking shifts the focus entirely from questions of “objectivity,” to deciphering the culture responsible for the production of knowledge. In *Orientalism* (1978), for example, Said exerts much of his attention on the British, paying little to no attention to Indian history. Similarly, Ashis Nandy’s reading of Rudyard Kipling’s work and life is less about the production of India as a literary space in his novels, and more about the cultural dissociation that Kipling felt as an Anglo-Indian (1988). Nandy’s work in particular raises the interesting point of “hybridity”—that colonial identities are not pure, discrete units, but co-constituted in relation to their perception of the “Other” in a mutually recursive fashion. When applied to ethnographic practice, this insight makes the case that organizations have much to learn about themselves from their interpretation and understanding of cultures that are the subject of inquiry. This counter-intuitively gives research participants a form of agency in that they are able to affect the identity of partner institutions. Even as we consider this notion, it is important to heed feminist scholar Mrinalini Sinha’s note of caution, where such theoretical explorations need to be returned eventually to the “uneven organization of power.” In real world terms, it is ultimately the financial institution that sets up and manages the policies, procedures and products for its customers.

Towards a Critical Hermeneutic

Hermeneutics is a system of interpretation by which we derive meaning from a text. As a field, hermeneutics emerged from the exegesis of religious texts and can be thought of as a series of rules or principles that govern meaning. For example, a hermeneutic principle might state that the meaning of a passage is linked to another passage in which an important

phrase or word appears. The field has widened significantly over time to encompass different kinds of interpretive positions and reading strategies, where the meaning of the text changes in relation to the approach. Aesop's fable about the fox and the crow, for example, can be read literally as an encounter between an animal and a bird (which makes little sense), or more commonly using a moral hermeneutic that highlights the lesson learned from the encounter. Within market research, a similar hermeneutical approach has been applied by researchers such as Thompson and Haytko to analyze the meanings that consumers use to interpret their "experiences and conceptions of lived experience" (1997).

In contrast to literary hermeneutics outlined above, where the attention is placed on textual interpretation, critical hermeneutics focuses on a critique of the rules and principles that are used for interpretation. It argues that "uncritical acceptance of [pre-]understanding could perpetuate the exclusion of past suppressed interests" (Arnold and Fischer, 1994: 56). Simply put, hermeneutics stops at the point of applying rules and saying that knowledge and understanding is historically and socially produced. Critical hermeneutics focuses on uncovering and articulating the social and historical conditions and structures that produce meaning. The implication is that language itself is not a value neutral container—the goal is to expose power relations that produce meaning as opposed to pure interpretation (Radford, 1991).

But how does this concept apply to ethnographic research? To return to a post-colonial framework, if the reflexivity gained from the concept of "epistemic violence" alerts us to the fact that forms and representations of knowledge are never naïve or innocent, the Saidian framework provides a counter-intuitive lens to read knowledge systems as extensions of institutional epistemologies. Personas, mental models and user journeys are artifacts that signal an institution's structure of interpretation. They also represent an idealized relationship with a particular user base—who are we building this product for, how will they use it and what kind of relationship between institution and end use will the product foster. In producing research artifacts, the researcher as "interlocutor" performs two types of interventions: firstly, in the field, the researcher recognizes the subjective voice of participants as collaborators in defining problems and co-designing outcomes, while acknowledging the asymmetrical power dynamic of the relationship. And secondly, the researcher is able to provide a critical intervention that shifts the burden of ethnographic engagements from constructing an objective description of the world, to helping institutions come to terms with their own structures of interpretation that can be adjusted. It is by putting both parts together that we arrive at a critical hermeneutic.

CONNECTING THEORY TO PRACTICE

Institutional Myths

The start of a client engagement is a crucial time for a project, from building a rapport with internal teams, to getting a deeper understanding (and sometimes even modifying) core objectives, to parsing the specific interests of individual stakeholders. From the perspective of developing a critical hermeneutic, it is an opportunity to surface the epistemological assumptions that are driving research. Drawing on the work of sociologist Michel Callon and anthropologist Michael Silverstein, Rita Denny's work on the relationship between theory and practice makes the important point that assumptions are embedded within an

institution's linguistic practices where "terms reflect the theoretical stances of those involved" (2013:142). As Denny illustrates with her cases studies, the inability to fully grasp the linguistic practices of an institution or discipline, can have catastrophic results. Her point is not to regard language as a proxy for the world, but to critically examine the interplay between terminology and practice. To return to our case study, the financial institution's existing personas were a valuable starting point to learn about the institution's assumptions through their vocabulary.

Shared Value System – The personas were organized based on demographic segmentation, but on a more abstract level, were largely aligned to a common financial value system (e.g., savings is important, managing my money in the present will pay off in the future). In effect, the financial institution was projecting a value system across the persona set that supported institutionally approved goals. Just as in the case of Barthes' conception of a "myth," the inherent value system of the personas had become naturalized to the extent that some of our clients were only marginally aware of the embedded ideology.

Data Driven Behavior – The primary mechanism for learning about each persona was a brief introductory paragraph that comprised a few biographical background details. A majority of the content was dedicated to data-driven lists: financial products that the persona either currently had or would potentially be interested in (e.g., loans/credit cards) and technology/devices used for transactions (e.g., computer vs. mobile). These data modules were interspersed with call-outs for opportunities to provide advice and guidance related to specific life events, e.g., a student loan.

The dangers of data-driven personas in terms of caricaturing and over-simplifying the idiosyncratic behaviors and needs of people has been well established (Rode, Baur & Cox, 2009). But it is John Sherry's critique that pinpoints our most pressing concern with the data modules, where collapsing personas and market segments results in the representation of "consumer(s) whose only dimension of real interest is their relationship to our brand" (2007:22). Sherry's observation intersects with Bernard Cohn's insight regarding a crucial epistemological assumption on the part of the British: that Indian society could be known and represented as a series of facts and administrative power stemmed from the efficient use of these facts (Cohn, 1996). A simple substitution of key terms reveals the persistence of the same epistemological assumption on the part of our stakeholders: that culture can ultimately be represented as "data," which in turn can be leveraged to ensure marketability and profitability.

The problem with this particular conception of data is that it severely impairs the scope of questions that internal teams can ask when developing a product/interface. There is no need to understand or dive deeper into user motivations, because all action can be represented as a decision tree that typically targets the most profitable segments and behaviors. The presence of "data" exerts an "objective" frame that precludes the act of thinking about and truly connecting with the experience of end users. In a very practical sense, this means missed opportunities both in terms of developing a better product for unanticipated needs as well as missing segments that do not neatly fit the quantified criteria. In a highly competitive and crowded domain, the cost of getting things wrong could very well be catastrophic. My point is not that quantitative data is inherently bad. Rather, quantitative data should supplement a deeper understanding of customer behavior, not detract from it by focusing exclusively on profitability. Despite the many shortcomings that

have been identified in personas, from the tendency to focus on individuals over collectives (Sherry, 2007; Flynn 2009), fetishize consumers (Arnould & Cayla, 2013) and their inability to develop new approaches (Regan & Revels, 2007), as design tools, personas can help product teams to gain insight into why people think, feel and behave in different ways.

Our challenge in developing the new foundational persona set would be threefold: firstly, to test the institutional financial value system; secondly, to potentially develop an epistemological core that would serve as the basis of the new persona set; and finally, to produce richer, more complicated representations that require a deeper engagement with end-users as people (instead of data points).

Designing the Research

The study was conducted with participants who were customers of the financial institution across 3 geographic markets. The participant criteria were defined as part of a workshop and spanned several financial behaviors, channel usage, account and other product related characteristics and a broad demographic mix in terms of age, gender, occupation and education. The study was completed in multiple phases:

Phase I – Diarists used a paper/mobile diary to report their financial activities over the course of a month. In addition to capturing their financial moments, the diarists also completed a workbook with exercises that explored key dimensions of their financial lives. The research team scheduled weekly calls with the participants to reduce the risk of attrition over the course of the month. These calls had the benefit of building rapport and trust with the cohort over time—we gradually became intimately involved with details of our participant’s lives beyond just their finances.

Phase II – A third of the diarists were selected for the next round of research comprising a 2-hour contextual interview at a location that was most relevant to their financial lives. We met most of the participants at their homes, but several interviews were conducted at their work place. The research interviews were divided between two teams, each led by a researcher with two accompanying stakeholders. This level of involvement in the research interviews was a key determinant in terms of the acceptance of the insights as stakeholders were able to narrate user stories from firsthand experience. As part of the interviews, we encouraged our stakeholders to ask open-ended questions to make the process more inclusive. The interviews were conducted using a semi-structured protocol that explored aspects of the workbook that were not covered during the weekly research calls. In addition to discussing their habits and routines, the interviews also included:

- A long history of each participant’s financial life, where they described a narrative arc of financial events or milestones that changed their behavior or outlook. Although this exercise was peripheral to the client’s objectives, the goal was to arrive at a historical and contextual understanding of difference around financial behaviors.
- A co-creation exercise where participants mapped out their financial ecosystem including accounts, institutions, people and technologies.

Disrupting Myths, Building “Empathy”

After each field visit we conducted a daylong workshop with our stakeholders to share research data and insights. As an agency, much to the credit of the internal researchers, we were fortunate to have a range of participants across roles and positions across the organization's hierarchy. The workshops also served as interim milestones for iterations of the personas and allowed us to test epistemological groupings across markets. One of the main objectives during this time was to build "empathy" by both exposing and disrupting the embedded mythology of the existing foundational personas. Empathy is generally understood as "a holistic understanding about the users" (quoted in Loi, 2009; Mattelmäki 2003) or the "capacity to understand and represent the fuller complexity of human beings" (Burton, Henry & McColgin, 2012). The ability to understand or feel the end user's condition leads to the development of more meaningful experiences and products. As Sohrab Vossoughi, the President and Founder of the design agency Ziba, puts it:

"(W)hat makes a design good is not a beautiful image or an intricate model, but the ability to put yourself in the shoes of the person who's going to use it, and the organization that's going to produce it...Handling the technical details of design is now relatively easy, but delivering an integrated, meaningful experience is exceptionally hard." (online, 2014)

The emphasis on the end user experience is a step in the right direction, but to think about "empathy" within the framework of critical hermeneutics changes the conception of the term considerably. Rather than focus exclusively outwards on the end user, empathy is an opportunity for self-awareness and reflexivity in terms of better understanding our own epistemological moorings (and those of the stakeholder). The "humanizing" process works both ways—an encounter with difference ultimately reveals our own biases and motivations.

Research Data Walls – Using large foam core boards, we designed a science fair approach to prominently display participant data (workbooks, images, quotes, etc.) throughout the day. At the start of each workshop, stakeholders were given dialectical prompts to explore the boards, for example, which participant were you most like, growing up? which one would you like to be in the future? The prompts were extremely effective in terms of motivating and synchronizing the focus of our stakeholders, while producing a moment of suture and identification with the research participants. At the start of each workshop, attendees would take turns to respond to the prompts with the names of two participants the reason why they chose them. The process was both confessional and therapeutic with some uncomfortable moments as stakeholders began to narrate financial values that were clearly not aligned with institutional expectations. The end effect was the humanizing of both our research participants as well as the workshop participants who were able to step outside of their roles and "see" the institutional value systems that they were embedded within. The surfacing of these values was arguably a pivotal step towards recognizing different financial outlooks.

Participant Deep Dives – To deepen the connection with the research subjects and expose the epistemological assumptions embedded in the old personas, we spent a considerable amount of time on "deep dives" of individual participants. These were strategically chosen after each round of research to expose the group to the broadest variety of financial circumstances and behaviors possible. For each deep dive, we began with a long history of the participant's financial history using video clips to convey specific life events or behaviors that were particularly poignant, often calling on stakeholders to tell part of the story. In

addition to photographic and video documentation, we also represented a core financial characteristic of each participant as a visual model.

The “immersive” first-hand encounter with the data produced similar effect on our client’s as described by Cotton (2012), with an emotional arc that gradually moved from discomfort to self-reflection as the research data eroded the logic of the previous model. Language played an important role as we began to introduce key insights that directly challenges the epistemic beliefs of our clients using their own vocabulary as a set up to our alternative framework. But it was the experience of having the conversations off-site in a space that was not their regular work environment that aided with the free-flowing dialog and epiphanies. A unifying characteristic across all of our stakeholders regardless of their role was the high level of financial knowledge that comes with the domain of working at a financial institution. Because our research emphasized on the long history of each participant’s financial lives, stakeholders began to pick up and discuss the detailed narratives that clearly illustrated the impact of socio-economics and other factors such as role models in terms of shaping an individual’s financial outlook and knowledge. It was unequivocally clear from participant ecosystem maps that there were no clear patterns in terms of technology preferences. Even though this insight directly contradicted the initial hypothesis of our stakeholders, it the widespread visibility of multiple media forms across presentations became a pivotal point of discussion. Even as we led the workshop and framed the research data, the space for conversation between participants was crucial in terms of both surfacing and working through epistemological assumptions.

(Re)Building the Personas

Having disrupted initial assumptions about the structural basis of the new personas, the research team turned to the materials collected during field research to identify other dimensions that might serve as epistemic cores. We began by first making a list of financial attributes and dimensions that were expressed within the existing persona set. This was followed by parsing the research data to validate the dimensions from the existing persona set, while adding other dimensions that emerged from research. As part of the process of building and vetting the list, we experimented with several clusters to see if any patterns emerged in terms of grouping participants together.

Beyond developing the epistemological cores, much of the latter stage of our engagement was dedicated to creating representations of each persona that would effectively communicate the internal value system while avoiding the trappings of reification. Instead of using a data driven model that validated the overall demand for a particular device/product, our goal was to give teams enough information to understand how a persona might use a product if they chose to. By “complicating” the representation of data, our objective was to turn questions of marketability (is this a segment we should be building this product for?) into a space for speculation and exploration (what need would this product solve?).

CONCLUSION

Our work on the project ended after the final personas and other research artifacts were produced—a typical end-point for most client-agency engagements, which makes it difficult to speak directly about the overall efficacy of the artifacts. As part of the process, we were

fortunate to conduct a mini-working session with in-house designers and apply the personas towards solving actual design problems. The experience was invaluable in terms of adjusting how we communicated the new paradigm and represented critical information. The new persona framework was more useful in terms of helping the teams engage more deeply with end user needs and motivations and moved them away from a formulaic, data-driven reading of their customers. While the critical reflexivity towards the institutional values gained during the workshops was not fully conveyed by the artifacts, the personas themselves complicated the notion of “financial advice.” This partial success raises the other kinds of questions about the institutionalization of research and serves as a mandate for developing strategic interventions that have a deeper impact on what Laura Flynn terms “discourses of production” (2007:56).

In many ways the lessons learned from this conceptualization of critical hermeneutics are not entirely new. As Elizabeth Anne Kinsella points out, the interpretive act of understanding is the foundation of qualitative inquiry (2006). Further, the notion of challenging and reframing the epistemological assumptions of a client aligns itself strongly with the role of researcher. However, it is by arriving at an understanding of critical hermeneutics through postcolonial theory that we are reminded of the fact that research encounters are always framed by epistemological assumptions. These assumptions always circumscribe the research and shape the forms of knowledge produced. A truly “radical insight” then is one that disrupts the illusion of the objective production of knowledge and effectively “breaks the episteme.” The site of intervention is not in the field, but in the linguistic practices of the institution that generate an understanding of itself in relation to the world. Even as we acknowledge the fact that research needs to tie in to deeper institutional processes, speaking aspirationally, artifacts such as personas have the potential to serve as what Bateson famously defined information as “a difference that makes a difference.”

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NOTES

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The Media Landscape under Threat: Navigating the Need for Change by Applying an Anthropological Approach

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While newspaper subscriptions are plummeting and advertising revenues move from content providers to search engines, media houses struggle to adapt and to build new capabilities in order to adapt to emerging consumer practices. Drawing on an on-going research with regional media houses and with news-consuming young families with kids in the countryside of Denmark, I investigate the perception of local media within the broader spectrum of news consumption. How is the term 'news' understood? How does materiality play into this understanding? And how is the newspaper production reproducing contested meanings of "news"?

INTRODUCTION

The newspaper industry in Denmark is in a revolutionary stage of change. The production and consumption of news is changing and with it the cultural meaning of it. While news consumption by young people in Denmark has been taken over by television and the Internet¹, the role of the print media as an historic agent in promoting civic values must be considered in any discussion of current and future practices. When investigating shifting patterns in consumption of news, it is necessary to understand Danish news production and consumption as a product of a *Democratic Corporatist* media system, with the goal to enlighten its citizens. This historic position has not only influenced the media house's development as a social institution, but also the perception of the media as a democratic entity of the state.

Within this context, regional media houses are a particular segment and the focus of this paper. I will discuss the changing perception of what news is, in both form and content and how news fit into the lives of young families.

Let me illustrate the need for a deeper understanding of this changing perception of news and its consumption with an empirical example from the ethnographic research:

One of my first home visits was with Maja,² a teaching mum of two kids and her husband Erik, outside of a Jutland town of 7500 inhabitants on the mainland of Denmark. It is Wednesday, which means they received their local newspapers. In their town they have delivered two free versions, but only one local newspaper makes it over the doorstep, the other one goes straight to the trash bin. Even though one newspaper makes it into the house, she starts our conversation by telling me that she doesn't know if she really can help me at all, as she "*doesn't really consume news*". This was particularly intriguing as while she said this I could hear the news coming on from the radio in the open kitchen area.

During our two and a half hour talk her awareness of being a consumer changed from being a non-consumer/user of news products to being a mixed consumer/user, gaining news from various channels. She not only consumes news from the radio when she drives the car (which is quite often as she is living in the countryside), or from the local weekly free newspaper, that she claims not really to read but only has a "*quick look in it*", or from her

husband, who is consuming news more actively than she does, for example on their iPad while Maja is watching TV, after the kids have gone to bed.

Maja is not alone in the discrepancy between what she says and does surrounding the news. While quantitative research within media can help forecasting general trends, I am arguing for an anthropological approach, elucidating news practices that can only be understood by linking field structures, individual practices and human ways of thinking.

THE PROJECT

In the fall/winter of 2014, the *Danish School of Media and Journalism* started a project in collaboration with seven Danish regional media houses³ and the *Danish Agency for Culture* with the purpose of obtaining nuanced qualitative knowledge about regional media houses' role, significance and relation to families with children. In a further process these insights shall contribute to develop and test new or improve existing media concepts and solutions that strengthen the media houses' local presence and relevance to families who have chosen to stay in the region. The project is an on-going one. So far we have conducted a pilot research with young families around Denmark, a fieldtrip over several weeks in one specific village and fieldwork in a regional media house. Overall, we have conducted 18 interviews with young families and various stakeholders of regional media houses, which shall contribute to a holistic perception of the changing media landscape in Denmark. The project is due to be completed in the beginning of 2016, where we will be presenting user insights gained through ethnography, design anthropological methods and various prototypes. In this paper I am presenting preliminary findings of an on-going project, which should be read through these eyes.

SITUATING MEDIA WITHIN DENMARK

When exploring news consumption practices it is inevitable to embed the research within the existing media system. Hallin and Mancini (2004) have established three media models, which set a frame to analyse differences and similarities in relationships between the media and politics. While the American media system is based on a *Liberal Model*, characterized amongst other things by domination of market mechanisms and with it a distinct commercial press, Denmark has been based on a *Democratic Corporatist* media system, which is characterised among other things by a high level of political parallelism and the coexistence of journalistic professionalism (ibid: 190f). This coexistence, and with it the institutionalization of the journalistic profession, is also responsible for a high level of consensus on standards of practice of both the social organisation and journalistic profession. There is an accepted understanding among journalists of the role they place in adhering to a certain journalistic code – as watchdogs for society in relation to the state. They work to produce content that is enlightening for their readers and thus good for society.

The strong relation and partnership between the media house as a social institution and the state also being responsible for it, seems to set the Nordic countries apart from other Democratic Corporatist countries, such as Germany, Belgium or the Netherlands (ibid: 193). This is seen in the form of a strong public broadcasting and press subsidy systems, protecting the freedom of press (ibid: 191). The historical development of governmental

involvement, and with it the process of consensus-seeking discussion with political authorities of oppositional views, grounds how the news media in Nordic countries is understood, namely as subject and object (or medium) for creating and forming a democratic opinion.

In Denmark the first publications, which can hardly be compared to what one perceives as newspapers nowadays, mark however the starting point of the press in the time of absolute autocracy until the middle of the nineteenth century (Jensen 2003). From then on every larger provincial town had four newspapers, corresponding to the four major political parties: the *Liberals*, *Social Democrats*, *Conservatives* and *Radicals* (Schultz 2007: 6), which is why it was also called the four-party-paper system (Hallin & Mancini 2004: 159).

After the interwar period this changed and shifted towards an Omnibus Press: a press for everyone. Søllinge argues that this is explained by newspaper houses not being able to expand their audiences any longer, as they were limited to the partisan interests of a particular political party (in Hallin & Mancini 2004: 159).

One of the major changes in the shift from the four-party-paper system to the Omnibus Press according to Schultz⁴, is what the Danish media researcher refers to as the *ideological ownership* - where a newspaper advocated a certain political stance – and this had several consequences (2007:7). The shifting relation of ownership mainly during the second half of the 18th century, from unions to privately owned media houses, also caused changes in ideologies: from a partisan ideology towards a predominantly public ideology – what is good for society and the greater good – rating commerciality secondly (ibid.). This transformation came hand in hand with further structural changes such as the changing image and role of newspaper editors, the changing format of newspapers, competition of the newspaper market, and the changing role of the journalistic profession, all having an essential role in understanding newspaper production and consumption in a Danish context.⁵ While those characteristics are incorporated in today's journalism and the production of news, Schultz points towards a newly emerging press system – the *Segmentation Press* (2007: 5), a newspaper for “*some*”, and not to “*all*” (ibid: 20)

Despite this development, the practice of media houses and the profession of journalism needs to be seen in the light of this historical development, which makes several Scandinavian media researchers (Brink Lund, Nord and Roppen 2009) including Schultz, argue against Hallin and Mancini's argument that all media systems will move over time toward a Liberal Model (2004: 301).

HOW REGIONAL MEDIA HOUSES CONSTRUCT THEIR BUSINESS

The term regional⁶ media house in a Danish context refers to one media house covering several (local) municipalities, however not necessarily covering all the municipalities of a particular region. When regional media houses talk about their own products they distinguish between daily and the weekly local newspapers. While the daily news covers a municipal area and needs to be subscribed for in exchange for money, weekly newspapers cover a hyper local area, are delivered for free, and they are financed by advertisement revenues.

With larger history as context, regional media houses in this project saw themselves as contributing and maintaining the local community, as being part of the public interest. While some of the regional media houses have been taken over by national media houses⁷, the project's participating media houses are mainly foundation-funded companies. They see this

as an important role to give part of their profit back to the local society or as Adam (57) the administrative director of one of the regional media houses in Denmark said:

We are owned by a fund. (...) We keep of course part of the profit for development (...) however we also distribute our profit back to the local communities. Tomorrow we will share 100.000 DK out to four people of the region, who have had a significant impact on the local community [voluntarily]. We do this to say thank you, but we do it also to say: "Here is a role model (...) worth following as an example". (...) So we are not just working here, like in those large corporations, where news is only there to maximize profit.

In addition to the historical background that has been shaping media houses and the journalistic profession in Denmark, the regional media houses' self-perceived role is particularly one that works towards contributing to and maintaining the local community. Despite the newspapers' goal of reaching the fully geographical segmentation, which inherently describes a plurality and diversity of potential consumers tied together by one criteria - geography - there seems to be a challenge in reaching the younger citizens with kids, a part of the local community, which makes a nuanced investigation of this particular demographic segmentation relevant.

Local News Just For Some?

From a media studies point of view, local newspapers are already a segment in itself, as this particular niche newspapers transfers' news to a geographically segmented group (Jensen 2003: 135). The local segment however extends itself again as it covers various people and is thus hard to target. As Adam said, "While for us locals we have geography as a foundation, we [media house] need to consider that there is also a huge plurality within the local society. (...) While geography was once enough, I can see that nowadays a lot is built around a community of interests." He is well aware, that his primary audience is older, or as he said "we use various medias in our lifecycle. (...) it is not unnatural to see that I have an older audience to print the newspaper for". While in practice it seems that the audience is perceived as something given, Ien Ang (1991) discusses the audience from a broadcast television point of view and points out that the audience is not a static category, but rather dynamic and socially constructed. Schudson (2003) makes a similar argument that *news media do not find and respond to an existing audience; they create one* (in Willig 2010: 95). This argument contradicts with the self-understanding of the Danish journalistic profession, where audiences rather „are” than „are constructed” and where journalists take over an objective role of information mediation rather than also contribute to construct the information that is communicated. This also calls for a more critical reflection upon the profession of journalism in Denmark.

When visiting young families with kids, one of the first associations' they would comment on would be the local newspaper's way of being "*old-fashioned*". This comment was not really about the materiality (that it is physical) but quite the contrary, more about content and form. Freja (42), a creative employee at an elderly care centre, and mother of two children, would like to see a more nuanced representation and selection of articles in her local newspaper:

I would like to see our local newspaper to be more involved. How is it to be a child

in our town? How it is to be young in our town? How it is to be old in our town? It could be great to have a campaign about this. What happens to the old in our town and our neighbours' town, but also what happens to young people, what happens to the families with kids?

Instead, she is experiencing “*a lot of chaos*” and a lot of things that are not relevant to her. Her husband Frederik (44) agrees and continues that their city is about much more than what comes into the local newspaper and that it lacks subjects that concern the younger generation.

Even though the journalistic profession in Denmark is based on *objective journalism* (Schultz 2007: 10), I refer to Willig (2010) and Gans (1979) who argue that there is a high probability that journalists construct audience images. Gans (1979) further writes that this imagined audience does not necessarily mesh with reality but as Pool and Shulman wrote in 1959, the image a *journalist holds of the reader has an effect on the way the story is written* (in Willig 2010: 96). While it seems that local newspapers have become the image and embodiment of an elderly audience, this research provides a foundation to recreate this imagined audience for younger people and their interests and attract this audience while retaining the existing audience. It furthermore provides media house employees with a nuanced understanding about young families with kids' needs and their desires for a local newspaper. This could also contribute to create a more realistic picture for journalist's audience image or potential audience, without threatening their journalistic integrity, which is grounded in the journalistic self-perception, based on the historical development what media and journalists should be and contribute.

Advertisement and Content

The use of advertisement is a necessity to partially finance the production of journalistic work. This is not to say that sales departments would influence what will be written in the newspaper but, as a journalist explained to me, it contributes to journalists' being able to do their work freely according to their journalistic profession. This is nothing new: according to sociologists Leiss, Kline and Jhally (1990) selling advertisement space in newspapers has been part of media house income since the 19th century (in Puustinen 2006: 2). While not all of the regional media houses have established marketing departments, they all are in possession of a sales department, trying to boost advertisement space. While this is a well-known practice within the media, the promotion and maintenance of local business is an additional motivation for regional media houses, “It is our most important task as a local media house to ensure that local businesses are alive. Also in five years so I think it will be even more important than before, to have a close cooperation with customers [local businesses] (Klaus – newly hired Commercial Director of a local media house).

The regional newspapers' role to contribute to the local community and to preserve local livelihood, are thus legitimizing the use of marketing in the field of media. Klaus further elaborates that he views local companies as the quintessence for local livelihood and the maintenance of it. In this context it is worth mentioning that everything outside of the two biggest cities of Denmark, namely Copenhagen and Århus, are labelled in the public discourse as “*Uden for hovedstadsregionen*”, the periphery of Denmark, which has been heavily discussed not least during the recent elections in Denmark.

While a media house is on the one hand financially forced to include a large amount of advertisement, particularly in the free addition but also in the subscribed ones, the practice contributes in creating a negative spiral, generating a negative perception of local newspapers.

I do not read our local newspaper from the beginning to the end. Half of it is just listings - it's actually the majority - and the rest is all about handball. They need to get hold of the young citizens and write about some exciting things. They are not so good at that. (Frederik, 44, work-seeking teacher)

Like others, Frederik points out that advertisements have been taking over news content in the free newspapers, even though he is well aware that advertisements are a necessary requirement in order to ensure local newspapers' free availability. Nevertheless, I can see a pattern that there needs to be a balance between the content and ads in order to be valuable enough for local young citizens to read local newspapers and create a feeling of added value. The overkill with ads is creating a loss of credibility and damages the newspaper's image.

Beyond the overabundance of advertisement, Frederik addresses an additional frustration, namely content for young families. The value loss is thus also connected to what topics are communicated.

HOW CONSUMERS CONSTRUCT NEWS – DECODING

When we were starting the project one of the areas we were interested in exploring was the media's role in creating a local and regional identity and affiliation. Some of our informants grew up around the area they were living in but most of them we talked to had moved to a particular area mainly due their spouses' affiliation to the area. This diverse mix however gave us a good opportunity to understand people's perception of local newspapers as they shifted from newcomer to residents.

In my mind, I was probably thinking about Benedict Anderson's *Imagined Communities* (1986), where he argues that capitalism and print technology caused nations to adopt a national language to communicate to the masses in order to foster the modern state, which is what he called an "imagined community". While I generally agree with Anderson's argument, I observed that particularly newcomers to a local area seem to lack interest in reading the local newspaper. Karen (38), a newspaper subscriber of a mainly physical national newspaper, but also local and regional newspapers, explained her initial lack of interest when she moved from Copenhagen to the countryside of Zealand. With a lack of shared knowledge she said, "I did not read the local newspaper in the beginning when I moved here. I was not integrated into the local community. I did not feel I had any common references. It is only when I knew what I had to read after that I start reading it." The perceived function of a local newspaper is thus not to create an entrance to the local community, but rather one must first become a part of the community before local newspaper become relevant to everyday live. In this sense the audience is not consuming news as a reflection of reality, but as a symbolic text (Bird & Dardenne 1988: 71), that ascribes ideas about the community those people live in. The local news consists therefore of its own symbolic codes that need to be recognized and decoded by its audience and correlates thus with Anderson's concept of the imagined community.

But the decoding process is not only related to the degree of local integration, it is also contingent on relating to the printed stories. Local stories that one could relate to, were also

the stories informants would stop and pay attention to when “*quickly having a look*”, as I heard so many times. Even though all of the informants would state it does not all have to be about kids related topics, or as one informant put it “*Yes, I am more than just a mum*”, promotion of the local area, subjects of local business and local politics were equally important to be informed about.

Birte (38), who does not consume news on a daily basis but subscribes to a printed weekend newspaper, highlights the interest in recognizing people and things she can relate to through pictures.

National newspapers don't touch me the same way. It is not local, like the image of my neighbour's kids, or even better my own. (...) If there is someone you know, who has been involved, then it's super interesting and relevant. It's nice to have a picture to the article, so I can look if there are there is anyone that I know.

While pictures of past events contribute to the decoding process of symbolic text, the local newspaper's role is not only there to inform of past events and happenings, it should also be about present and future occurrences.

News! News Must be New!?

A news story is news. (...) It is purportedly a true story; that is, a story about something that happened. (Michael Schudson 2005: 121)

The word *news* comes itself from the plurality of new but in times of technological change the meaning of news has changed in itself. News has become a collective term for many different kind of information. Think of *Breaking News*, a symbol for the newest information, to newspapers that cover two-page-long articles, such as the Danish newspaper *Weekendavisen* a newspaper that comes only once a weekend, over to following a newspaper on twitter, receiving a line of updates or some of the new news features at *Snapchat*.

Lenard (58), self-employed and father of two sons, was one of the few informants who saw value in keeping the local newspaper for several days.

I check Børsen [national newspaper] on my computer but we have it also in paper, which I look at sometimes. Then we have the two local newspapers coming and they just lay at home as a foundation for everything what is happening locally. And they are always there. They stay in the house until they are out-dated 3, 4, 5 days after. But it is that we throw it out the same day, because it has a lot. I always see it through and I also can go back to certain topics.

He elaborates further that he particularly likes to see what is going to happen in the local area, which might explain the action of some of the other informants, who would get rid of their local newspaper immediately or soon after a quick look. Both Alice (38) and Birte (38) would wait for their husbands to have a quick look but would throw it out the same day or the next. “Sometimes, I wait until he has time during the weekend” says Birte, but only because she knows he likes to have a look at it.

Like those two, there is also Uffe (41), who is not particularly interested in local newspapers, but orientates himself more towards online national news updates several times a day and subscribes to a printed national newspaper for the weekend. He mentions,

however, that he would like the local newspaper to present more activities and events that he and his kids can attend. Even though pictures of previous events are desired, the possibility of engaging with the local community is equally important, or as to say it in Birte's words "*it can be frustrating to see only the events you missed out on and not get any new suggestions what is actually happening locally*".

In addition addressing the future could also positively promote the local area, which all the informants indicated as one of the newspaper's objectives. In this sense local newspapers have great potential to cross the lines between past events, helping to maintain and strengthen a platform for common reference, and simultaneously create a platform that makes local citizens aware of what is and will be going on.

A 'Real' Newspaper

"The little newspaper" is a term I was introduced to, when conducting fieldwork in a small town in Jutland. It is a nickname for the free local newspaper, which Alice discovered over time, once she moved there due to her spouse. Besides, *quickly looking through the local newspaper to see if something interesting is in there*, she was one of the informants who pointed out a particular *guest journalist*, a scientist that sometimes writes articles in the free local newspaper, that she "*always stops reading for*".

There is typically a big picture of an animal, than I know it's Morten and I wonder what he came up with now again. And I actually read it from the start to the end, because he communicates well. Usually it's also a longer story [1/2 -1 pager], it's a bit funny and he usually has a couple of interesting angles.

She also continued by telling me that the way he writes reminds her more of a "*real*" article in national newspapers. Birte (38) made similar statements about the weekly local newspaper. Like Alice, she also started out the interview by stating that she might have a "*quick look*" at the local newspaper but she "*doesn't really read it*". However "this newspaper [the daily paid subscription local newspaper] is more like a real newspaper. You can feel the articles are longer and more is made out of them. That makes them obviously also more exciting, so you read more than just the headlines. It's [the daily paid subscription local newspaper] still not at the newspaper level as Weekendavisen [a national Danish weekly newspaper that she subscribes to], but closer.

While Birte is reading the daily local newspaper once in a while as it is available at work, she also tried a free subscription trial for a month so she could read it at home. She has still two more weeks left, and she is surprised how much she actually likes it.

"I have tried to keep Berlingske, and Børsen, I have tried to keep a lot different ones. But those daily paid subscription local newspaper [physical daily newspaper], I simply do not get read. They just pile up and it is just so frustrating when I don't get around to reading them. Compared to a real [physical] daily newspaper like Weekendavisen is adequate as it comes only once a week."

Readers assign varying values to the newspapers based on their type, their frequency, their costs and what they contain, which has an influence whether they are perceived to be a real newspaper or not. Free local newspapers do not carry the same metaphorical 'weight' as their 'bigger brothers' – like the local paid subscription and national newspapers like

Weekendavisen that Birte mentions. In various ways they are considered the 'little newspaper' in comparison to these 'real' newspapers.

Materiality

When investigating news consumption, materiality is nearly impossible to avoid. All of the informants were to some extent consuming digital newspapers whether it was through newspaper apps or checking out online newspaper platforms. There was however still a common support for physical newspapers, which offered an additional value to their news consumption. For example Uffe (41), father of three kids:

I get Politiken [a national newspaper] during the weekend. This is when I actually have time to read it, but sometimes I don't get it done on a weekend. I still get it because it is a great newspaper. I am on their homepage daily and sometime several times. But there is something different about unpacking a newspaper, the physical element in it, the smell and the silence in it. Whereas the Internet version is often about more and more and more and about quick and on to the next, it [physical newspaper] is all about to finding quietness in it. It is a luxury hour to sit with a physical newspaper. It usually sits and waits for me until I take it and have a look at it. I use it almost as a weekly newspaper. Also particularly because the news content I get covered by the Internet.

While Uffe consumes his daily news content online, he prefers to read the physical newspaper on weekends as it creates additional value in form of intellectual '*luxury*'. While this perception can be related to the print media's historic role as a civic voice, an authorised voice telling the reader what they should know about, the experience of the newspaper as 'luxury' is simultaneously related to the revitalisation of newspaper as a niche product consumed to physically experience that someone has put in a special effort. Uffe further elaborates that he once had a daily physical newspaper, which he also did not manage to read at all. It was frustrating and gave him a bad conscience when he had to throw out a pile of unread newspapers.

The frustration of throwing out unread newspaper is however a very physical reminder of what has not been achieved, which does not become as visible on a digital platform for example. Besides the missing nudge, an online offering has also a different kind of logic in its consumption. In line with Raymond Williams (1974) I am thus arguing that technology is having an influence on the cultural understanding of news.

The underlying logic of online newspaper consumption is a different kind of logic than the one of physical newspaper. Alice (38) a self-employed consultant and mother of three kids, and a newspaper subscriber and enthusiast of both online and physical newspapers is rather tempted to click on populist content online than on a physical edition.

Often I am reading a different kind of content online, compared to the physical newspaper. I have a rather populist taste online, or I orientate myself on the "most seen" articles, but typically something with celebrities, or sex or something like that. I don't think so much over it, but I get kind of irritated if it is in my newspaper [physical]. Then I don't care about David Beckham - I really don't want to read that in my newspaper [physical].

While Alice is not only reading tabloid material when she is scrolling through her online newspaper, she is ascribing the physical newspaper with a much less populist newspaper

content. Moreover for her the physical newspapers have a much more authorial vibe around them. She even gets angry with herself when she is clicking on populist content that she would normally not read.

As material goods carry social meanings (Douglas 1979: 59), I see a tendency among my informants to follow populist content in their online reading. Online reading is characterized by quick and new rather than static and immersive. Uffe (41), who is less enthusiastic than Alice but still subscribes to *Politiken* a national weekend newspaper states:

Once in a while I go on Ekstra Bladet⁸, but mostly because I think it is extremely funny. When I look, it is only online - I would never buy it. The difference is that if I would be sitting with a physical newspaper of Ekstra Bladet then it doesn't have the same volatility as online. I would not sit down with it [physical newspaper] and immerse myself in it.

Readers perceive the physical newspapers as static, without the constantly updated and new content, and yet with the potential for intellectual luxury. Local newspapers are seen as static but not perceived as providing content that can be immersive, such as those that informants label 'real' newspapers like national newspapers and the daily paid subscription local newspapers.

CONCLUSION

Based on the preliminary field research I have conducted, I have described a trend towards a changing media landscape in Denmark. I have described how the practice of regional media houses is influencing users' perception of local newspapers images, which can both be useful in a commercial advertisement sense, but also in recreating some of the audience images journalists have, such as the one of an older audience to a more diverse one. In particular, the latter calls for a more critical reflection by the journalistic profession on how journalists are contributing in the construction of the audience.

In a further prospect I have shown different perceptions of what is understood as news. Whether informants would "*not really consume news*" or "*just quickly have a look*" or "*read it from the start to the end*" is grounded in technological changes, but also in the articles' content, which seem to have a mutual influence. In the case of local newspapers, there seems to be a missing link between the print media's historic role and current consumption practices. By reflecting upon the gained user insights it seems natural to also reflect upon the current news production, including aesthetics, layout, content and media channel.

The insights provided thus far enliven a debate about the role that local newspapers can play in the communities they serve and within those communities the audiences they hope to attract. Informants expressed a multitude of desires about what they wished local newspapers provided and expressed their perception of their value in terms of contrasting what other 'real' newspapers - which they consumer both in print and digitally - offered. It appears that each type of newspaper offers something different to readers. Local newspapers can put this knowledge into practice, in how their marketing departments and journalists serve their current and potential audience, how they choose to present themselves or, even, work to be perceived as 'real' and the content and mode in which they engage their audience.

This research opens up for further investigations how news is consumed, how content and form are interacting with each other and what materiality does with our news

perception. The on-going project will delve further into these questions with an aim towards understanding how the implications of these perceptions and changing media consumption practices have for the future of regional media houses.

Finally the argument is made that an anthropological approach towards consumption can provide a nuanced understanding of changing media consumption habits and with it new ways for regional media houses to expand their audience and grow business opportunities. Combined with an anthropological perspective towards consumption, ethnographic research can contribute to get regional media houses in touch with their customers in ways they have not before. For example Maja's discrepancy between what she says and does surrounding the news. It follows the old adage that it is just as important what people say as what they do. It is in investigating the contradiction between both that anthropology and ethnography can demonstrate its value in uncovering the meaning and implications of changing consumption practices.

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NOTES

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¹ Rasmus Kleis Nielsen and Kim Schrøder have been undertaking a study in 2013, where they have investigated the media consumption of Danish citizens. https://www.ruc.dk/fileadmin/assets/cbit/MMK/Danskernes_brug_af_nyhedsmedier_2013.pdf On page 21 they elaborate on the different kind of age groups and what kind of channels they use consuming news.

² All the names of my informants have been anonymised.

³ The seven media houses include:
 NORDJYSKE Medier: <http://www.nordjyskemedier.dk>
 Midtjyske Medier: <http://www.midtjyskemedier.dk>
 Fynske Medier: <http://www.fynskemedier.dk>
 Jyske Medier A/S: <http://jyskemedier.dk>
 Mediehuset Herning Folkeblad: <http://mediehusetherningfolkeblad.dk>
 Syddanske Medier: <http://www.sdm.dk>
 Sjællandske Medier: <http://sn.dk>

⁴ Ida Schultz is a Professor at RUC University in Denmark. She married and changed her name Willig, which is why I quote her sometimes Schultz and sometimes Willig, depending on when the article was written.

⁵ Table 1. Ida Schultz's model of historically significant press development in Denmark (2007:12) translated to English

	Partisan Press	Omnibus Press
Ownership Ideology	Party-political/ Journalistic	Public/ commercial
Editors Role	Political	Journalistic
Material selection	Small range	Wide range

Technology	Printed media /Plump print	Rotary press/Offset printing
Reader imagination	Voters	Citizens
Journalism	Partisan	Sought objective
Competition	Four-party-paper system	One-paper system
Advertisement market	New/weak	Established/strong

⁶. While the biggest region in Denmark, which is simultaneously also the capital, covers around 1.7 million inhabitants, the smallest covers around 580.000 inhabitants ¹. Size wise regions cover in Denmark much less people compared to other countries like for example the US, and must thus also be understood in these proportions.

⁷. *Berlingske Lokale Medier* have bought for example *Mediehuset Holstebro*.

⁸. *Ekstra bladet* is a contradicted newspaper of Denmark that has elements of a tabloid.

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How to Create Value via Object Circulation in Gift-Systems

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Gift-systems build relationships and create various types of value for the individuals who participate in them. Organizations may also reap the benefits of gift-systems when they understand, support, and foster practices of object circulation within these systems. We adopt a theoretical framework based on anthropological approaches to value-in-action to explain value creation for individuals in contemporary gift systems. We mobilize ethnographic and netnographic data on the circulation of small wooden chapels containing a statue of the Virgin Mary among Catholic households to develop a conceptual framework that illuminates value creation in gift systems and demonstrates how practices of circulation (setting, protecting, registering, retrieving, keeping, passing on, monitoring, interacting, and storytelling) can be used to generate value for organizations.

INTRODUCTION

Businesses and organizations are constantly on the lookout for new and more effective ways to generate value for their stakeholders. One way of optimizing value creation is through designing and offering better products and services to customers and capturing additional value through market exchange. However, organizations also have opportunities for creating greater value if they discover how support gift-systems and their potential to create value for the individuals who participate in them.

The concept of gift-system has been initially formulated by Mauss and refers to systems of social solidarity based on a structured set of gift exchanges. Research has shown that in gift-systems, objects circulate being transferred from one participant to the next and, in doing so, generate value for these participants (Mauss 1954, Komter 2005). As other consumer collectives, gift-systems tend to emerge organically and coordination tasks are usually distributed among participants, who enjoy contributing their skills and time to the system. Hence, organizational intervention is frequently unwelcomed in gift-systems, especially if participants suspect that an organization has the ulterior goal of appropriating value for profit (Pongsakornrungrasit and Schroeder 2011; Scaraboto 2015).

Nevertheless, because object circulation generates value through a process that does not depend on capital investment and profit, its value generating capacity can be quite useful for organizations with limited resources and for those whose organizational goals are aligned with those of a gift-systems' participants. Moreover, different types of value created within gift-systems may translate into other types of value as they move in and out of the market, for instance realizing economic value for participants that aim at generating economic resources or making profit. Therefore, a better understanding of the process of value creation through object circulation in gift-systems can be invaluable for those participants

who sit at the intersection between community and business (Kjaersgaard and Smith, 2014; Scaraboto 2015), and for organizations that operate through hybrids of gift-giving and market exchange, as those that have emerged with the popularization of the sharing economy (Botsman and Rogers 2010).

CONCEPTUAL BACKGROUND

Gift-systems

Research on gift-systems has shown their importance to the unfolding of morality and solidarity among participants (Bajde 2009; Giesler 2006; Weinberger and Wallendorf 2012), and for community expansion (Komter 2005) and stabilization (Berking 1999) among other outcomes (Leach and Leach 1983). In addition to fostering morality and solidarity, gift-systems have yet another outcome: they create and reproduce symbolic distinctions among participants (Godelier 1999). Symbolic distinctions among participants of a gift-system shape and are shaped by access to objects, moral obligations, and the roles associated with the circulation of gifts (Bourdieu 1998; Weiner 1992). Hence, symbolic distinctions, access to objects, and relationships are documented forms of value created by gift-systems (Radka and Margolis 2011, Dalal and Wall 2005). Our study examines whether other types of value can emerge from object circulation through the enactment of practices of circulation in gift-systems, and demonstrates how organizations that participate in these systems can facilitate or catalyze value creation.

A Value-In-Action Framework

The anthropological perspective of value-in-action explicitly focuses on the value creating potential of social actions, that is, of acts “falling under a particular and culturally standardized description—and iterated” (Lambek 2013, 145). To illuminate our understanding of gift-systems, we adopt three of the primary tenets of the value-in-action perspective:

Circulation: Munn (1986) explains that circulation is value-creating because it promotes spatiotemporal expansions and transformations. Similarly, Appadurai (1986) argues that by looking at circulation, we can understand how objects become valuable (i.e., how value is created) and are valued (i.e., how value outcomes are assessed). Graeber (2001) also notes that circulation has value-creating capacities; and Lambek (2013) considers the value creating capacity of ritual and performativity acts, including those involved in object-transferring. These understandings support our examination of circulation as central to the creation of value in consumer collectives.

Transvaluation: The value-in-action perspective also reasons that “there is a transvaluation from the activity to the object (Eiss and Pedersen 2002) and an objectification of value itself” (Lambek 2013, 142). That is, the value of actions is transferred and attached to objects, turning into objectified value. The process of transvaluation was discussed early by Marx (1909) and Malinowski (1922). Moreover, recent approaches note that “value is embodied in the commodities that are exchanged” (Appadurai 1986, 3) and that objects are not “fully or purely valuable in and of themselves,” but rather, store the value of actions and become signs of valuable actions (Lambek 2013, 155). This suggests that it is important to analyze

not only practices of circulation, but also circulating objects in order to understand value creation in gift-systems.

Co-constitution of Value and Value Systems: By focusing on the actions that create value, the value-in-action perspective recognizes the embeddedness of value creation in a micro-cultural value system (i.e. the group of social values that are important for a specific group) that influences value assessments within a collective and which is, in turn, shaped by value-creating actions (Heine 2012). This is consistent with the idea that value and values are interrelated and inseparable—they are essentially the same (Graeber 2001, 15), although expressed and conceptualized in different levels of abstraction. This tenet inspires us to examine the values of those participants involved in a gift-system, and to inquire into the influence of these values on value creation.

RESEARCH CONTEXT

The Small Chapels Movement

The circulation of small wooden chapels containing a statue of the Virgin Mary began in 1888, in Guayaquil, Ecuador (Kleina 2012). Canon José Maria Santistevan decided to foster the presence of Mary in households as a potential solution to difficulties faced by families, increased materialism among Catholics, and lack of faith among young people in Ecuador. The small chapel movement spread through Latin America, arriving in Brazil in 1914, during the First World War. Similar systems of “pilgrim” Virgin Mary statues that are regularly transferred among families within a neighborhood soon started to operate in Europe and the United States (Madlener 2012).

We investigated the circulation of small chapels in two different cities in Southern Brazil: Curitiba, a cultural, political, and economic urban center (1,760,500 habitants in 2010, density of 10,523 habitants/sq. mile), and Campos Novos, a small town of 32,800 habitants (44.4 habitants/sq. mile), whose economy is centered on agriculture and cattle and poultry farming. These two cities also differ regarding the circulation of the small chapels, and regarding the Church’s approach to value creation, allowing us to develop within-case comparisons. In Curitiba, a well-organized hierarchy of priests and lay volunteers coordinates the movement. The volunteers who supervise the circulation of each small chapel are known as “messengers,” and respond to a Director, who is subordinate to a designated priest. These volunteers assemble the chapels (combining a religious statue, a protective case, and decorative items at a cost of about US\$50), oversee their circulation, and also spread the Church’s message among Catholic households. As of December 2014, more than 10,000 small chapels were circulating in Curitiba. About 100 messengers convene in monthly meetings to discuss matters related to the movement and to define goals for the chapels. The Curitiba branch of the movement has a Facebook page and a blog, where messengers and other parochial members post and comment on news and updates about the movement. The small chapels are also an instrument for the Catholic Church to collect donations (inserted into the chapel cases through a slot or given during masses and other events promoted around the small chapel). In Curitiba, donations are used for sponsorship of new priests. As one of our informants explained during a member check meeting, custodians are able to estimate the amount of money collected by the small chapel during a month’s worth of transfers. With that information, they ensure that no money is being taken

from the chapel (i.e., stolen) during its circulation. Although precisely determining the amount collected through the circulation of small chapels is difficult, we estimate that at least US\$500,000 is donated annually to the Church in Curitiba alone via the chapels, indicating the potential of these gift systems to generate economic value.

In Campos Novos, lay volunteers in each neighborhood organize the circulation of chapels, following their understanding of the tradition yet respecting the mandates of the local priest, who oversees most of the groups of SCM operating in the town. There, the volunteers who organize the circulation of the chapels are known as “custodians” and play a role similar to, but less formalized than that played by messengers in Curitiba. No formal statistics are available regarding the movement in Campos Novos, but the custodians we interviewed affirm that the tradition has waned through the years, and that the lack of incentives for participation and the feeble support from the local clergy have made keeping the chapels in circulation a challenge. Meetings to discuss the circulation of the chapels are infrequent and poorly attended, and the Church provides no support to the custodians other than a small amount of money to acquire the statue and protective case needed to assemble a new chapel. Once a year, custodians are required to visit the families in their jurisdiction to collect donations of food and money for the Church’s party in honor of the parish’s patron saint. The little support-high demand approach adopted by the local Church has led to latent tension between custodians and the priest that coordinates the movement in the city. Independent groups have emerged that organize the circulation of small chapels to accomplish specific goals (e.g. to offer comfort and prayers to ailing neighbors).

In both cities, as in many others where the movement takes place, the small chapels circulate by being transferred from one neighbor to the other in an order predetermined by the custodian (or messenger) when the chapel is first released. Ideally, a small chapel will circulate among 30 households, remaining for 24 hours in each house before being transferred to the next one, but the numbers in each group vary as families join or leave the neighborhood. The transferring of the chapel usually happens at evening, when people are back home from work. Upon receiving it, a family follows a ritualized tradition to acknowledge the visit of the chapel to the household. As one of the authors recalls from her childhood experiences,

“Once a month, the neighbor from our right would bring the small chapel to our door. My mom used to place it on the dining table (which we rarely sat at), and lit a candle in front of it. We would all stand in front of the chapel to pray after dinner. We were to say a Holy Mary each, and to silently thank and ask for graces. Then my siblings and I would dispute the right to insert coins in the chapel slot. The chapel spent the next day there, quietly overseeing our home from over the tabletop. I remember spending some time checking its every detail, appreciating the white and blue vest of the image and the tiny fabric flowers of fading colors on its background. It looked so peaceful! I felt protected when the image was there. The next evening, mom would take the small chapel to the neighbor on our left. Sometimes, when she was too busy, mom would ask me to take the chapel to the neighbor. I remember the excitement of walking outside in the dark (streets were much safer at those times), but also the many feelings that went through my mind as I anticipated knocking at the neighbor’s door – they had a teenage boy and maybe he would be the one to answer the door.” (Introspection notes, DS)

Accordingly, the guidelines for organizing the circulation of the chapels in Curitiba read:

“Upon receiving the chapel, give it a place of honor. If possible, light a candle or a lamp and say the Prayer of Visitation. (...) During the night and the following day, the small chapel remains at the place of honor. There is no need to keep the light on all the time and, if needed, all family members can leave the house. There is a custom of leaving an offer to the small chapel. These offerings are destined to the formation of new priests and it befits that they are the result of small sacrifices (for instance, refraining from buying ice-cream, popcorn, soda, cigarettes, or others).” (Guidelines for the Small Chapels Movement, Curitiba).

In Campos Novos, rules for circulation are transmitted orally, as illustrated by the explanation offered by a custodian: “the correct timing to take [the chapel to the neighbor] is at 6pm, then it sleeps there and the next day you will take it at 6pm to the other family. And if everyone has time, you can all pray together when you take it to the other family.” (Deborah, Custodian, Campos Novos). Figures 1 and 2 illustrate the placement of a small chapel in a household, and the reinforcement of the rules for engaging with the chapel through notes affixed to the chapel itself.



Figure 1 – Small chapel placement at a household. Still shot from YouTube video “Capelinhas: Uma prova de amor e tradição” (https://www.youtube.com/watch?v=BjpEv_exvy0).



Figure 2 – Rules for receiving the small chapel affixed to the side of the object. Still shot from YouTube video “Capelinhas: Uma prova de amor e tradição” (https://www.youtube.com/watch?v=BipEv_exvy0).

RESEARCH METHOD

“Following the thing” is one of the appropriate techniques for conducting multi-sited ethnographies under the mobilities paradigm (Marcus 1995; Sheller and Urry 2006). Following the thing can be pursued in two ways: researchers can move alongside the moving object or they can use observation, interviews, and other ethnographic methods to trace and capture the complex mobilities of objects (Larsen, Axhausen, and Urry 2006; Hui 2012, Taylor and Horst, 2013). We take the second path to collect and analyze a variety of qualitative data on the mobilities of the small chapels that circulate among Catholic households. By following the circulation of small chapels, we are able to identify the practices involved in circulation as well as the types of value created by them.

Both authors have direct experience with the circulation of small chapels as they grew up in places where the practice is embedded in local culture. Moreover, in July 2013 and April 2014 one of the authors conducted week-long, intensive fieldwork at each of the two cities where the movement was investigated. In addition, participant observation on the Facebook page and blog for the Curitiba branch of the SCM was conducted by both authors for two years, starting in June 2013. Our final dataset includes field notes from online and offline participant observation, online archival data, in-depth and informal interviews, photographs, videos, artifacts, and media reports collected in both contexts. We also conducted member checks with members of both SOC.

FINDINGS

Iterating between our ethnographic data and extant theories of value creation, we have identified various types of value and demonstrated how they are created in gift-systems as objects (i.e. the chapels) circulate among participants. We present each type of value created in the SCM, and discuss how these types of value are created below.

Types of value

We observed that the movement of the small chapels from neighbor to neighbor generates several types of value beyond the expected spiritual value: emotional, epistemic, linking and reputational value. In formal and informal interviews, participants of the movement also refer to these benefits and outcomes they derive from engaging in the circulation of small chapels. We discuss each type of value below.

Emotional value – A small chapel is routinely received and transferred by the same person once a month if the movement’s rules are properly followed. Given this recurrent transferring, an individual may perform the same practices, for the same chapel, multiple times, increasing his or her number of interactions with it. Recurrent interaction promotes continuous emotional engagement with a circulating object, resembling the type of engagement that unfolds in long-term relationships (Fournier 1998; Curasi et al. 2004). Several of our informants refer to the small chapel that visits their household employing terms that denote their emotional engagement with the object. For example, in Curitiba, participants manifested strong emotional reactions to the replacement of a broken image in one of the small chapels, as recounted by a messenger:

“The small chapel fell, the image wasn’t properly fixed to it, and it broke. I went to a store in the neighborhood and bought another image like that, not exactly like it, because that one was already 12-years old. Then I said: — listen, we will need to replace the image, there is no way of repairing this gesso image and putting it back there. So we replaced it (...) and send a note along: ‘unfortunately, due to someone’s carelessness, the image of the chapel broke and we had to replace it.’ We had more than 10 phone calls from people who wanted to know what had happened, who had kept the old image, because they wanted to keep it for themselves. (...) It is there in my oratory, because I was the first Messenger for this small chapel. (...) it has no feet, but it is there, patched together. And it represents something like love, not love for the image, for Our Lady, but it is something you cherish. (Rejane, Messenger, Curitiba).

Similarly, in Campos Novos, we heard many descriptions of situations where emotional value was clearly at stake. As demonstrated by Garfinkel (1991), it is when things go wrong that group norms and values become most apparent. For instance, custodian Deborah explains what she felt when “her” chapel went missing:

“There was a time, it’s been some four years ago, that my small chapel disappeared! [exasperated] Disappeared, disappeared, and it is also my duty to take care of it.” [She brings the topic back a few minutes later to add:] “So then it disappeared, it disappeared, that one I had, and no one knew where it was, and I looked for it everywhere and no one said that they had it. So I told the Priest and he said: ‘arrange another one’. [sounding desolate]” (Deborah, Custodian, Campos Novos)

Epistemic value — Circulating objects physically change as members of a gift-system customize them. For example, small chapels are often enhanced by participants, who modify the objects as they enact the practices of activating, setting, protecting, and praying. Circulating objects also change as they circulate, becoming dirty, broken, or simply worn. In addition to physical alterations, circulating objects change as they acquire different meanings and understandings for the group. As one of the custodians in Campos Novos explains:

“You know, something interesting, people lift the protective glass and place things inside [the small chapel]...and it comes with Our Lady of Aparecida’s ribbons, it comes with requests for prayers... from time to time I open it and clean it. It comes with requests...once there was even a request for Stella’s son, for him to do well on a car race. People put prayers, requests, candles, rosaries inside the small chapel. There are some ribbons that give me the impression that people measure something with [these ribbons] and place them like this...” (Olga, Custodian, Campos Novos).

As this excerpt suggests, as circulating objects travel and keep interacting with members of a collective, they are constantly subject to change and modification, accumulating cues that indicate their trajectory. This unfolding nature of circulating objects seem to increase their epistemic value — that is, their capacity to promote curiosity and bring novelty to participants of a gift-system (Sheth, Newman, and Gross 1991). Our dataset suggests that, as the small chapels circulate, they become more complex, with layers of stories registered in them which reflect their trajectory and turn them into interesting (fascinating for some) objects that participants relate to progressively. For instance, after listening to custodian Olga description of how she finds objects inside the small chapel, a neighbor affirms: “I did say that that red peace lily that was inside the chapel [received by her mother-in-law. See Figure 3] wasn’t part of the decoration. Someone put it in there.” (Denize, Neighbor, Campos Novos), suggesting that other participants may also develop a similar curiosity about the unfolding nature of the circulating objects.



Figure 3 – Objects inserted in the small chapel. Photograph taken by author during fieldwork.

Linking value – As the priest responsible for the SCM in Curitiba explains, “The small chapel always agglutinates; it ends up forming a community of people that get together to celebrate their faith, and this keeps growing, forming [...] parochies, and rendering fruits. Really, this is their job, to agglutinate [people] and celebrate faith.” (Regis). We refer to the capacity of circulating objects to help individuals perceive and/or experience tribal connection as the linking value of the object (Cova et al. 2007).

As unveiled in our fieldwork, the circulation of small chapels promotes linking value through three mechanisms:

(a) Contamination, whereby the immaterial qualities or the essence of a person can be transferred to an object through physical contact (Newmann, Diesendruck and Bloom 2011, 217). Small chapels that have circulated multiple times tend to be perceived as more valuable because of all the connections to the ones who have helped move and host it. We suggest that this happens because moving practices create instances of contamination since they expose the object to different participants and places. Contamination also happens in relation to other valued objects. For example, when small chapels are placed next to the altar during special monthly masses or yearly assemblies, they are often seen as more desirable, because of their proximity to other sacred objects and images. This increases the small chapels’ value for participants in the movement who wish to connect with the Church, its priests, saints, and God [Figure 4].

(b) Totemization, whereby through rituals and pilgrimage objects can become further singularized, often acquiring a sacred aura (Belk, Wallendorf, and Sherry 1989; Kopytoff 1988) and becoming symbols of a group (Levi-Straus 1966). As affirmed by Regis in an earlier quote, these chapels often become a symbol of the whole group. In other words, the chapels are not only the objects that connect people in the group, but they become a representation of the group itself. We observed that many practices like storytelling or group meetings help the process of totemization of circulating objects by transforming individual experiences into collective ones and creating a symbolic role for the circulating object that is much more emblematic of the group than of any individual member. Hence, our data suggest that the circulating object acts as a vessel of meaning that stores and distributes the energy of the group, physically mediating relationships of belonging.



Figure 4 – Small chapels placed at the altar during mass celebration for the yearly assembly of the SCM in Curitiba. Photo by Tarcisio Cirino, Small Chapels Movement Curitiba.

(c) Fetishization, whereby possessions materialize members' magical thinking (Fernandez and Lastovicka 2011) and acquire a special aura connected to the object's magical powers. For example, custodians explained that there is a story that circulates among them about the glass of a small chapel breaking into pieces when the son of a SCM member came home after emerging from a coma. The custodians have attributed the glass incident to the magical powers of the chapels. This suggests that telling and sharing of this kind of extraordinary

stories make objects more powerful (and magic), and sharing this “secret” seems to bring participants closer together.

Reputational value — Reputational value reflects a group member’s social recognition, prestige, authority, respect, and legitimacy (Corneo and Jeanne 1997). We observed that when a neighbor competently performs practices in a gift-system (e.g., passing on the small chapel to the next person at the expected time), his/her reputation increases within the group. Recurrent interaction with circulating objects helps members to become more competent in their practices and reinforces the performance of other practices, hence generating reputational value for members of a gift-system. Public acknowledgement of performances can also be a powerful tool to create reputational value for a participant, especially for those who volunteer as messengers or custodians to the movement. The following messages posted to one of the online communication channels for the movement illustrate this: “Germano and Maria [volunteers working for the movement as communications director and Director of Messengers] made all the difference in our Small Chapels Movement in Curitiba this year, thank you very much...for everything...” (Rejane, November 25, 2013) and “The messengers made a great ‘acquisition’, this young man [Germano] organized one of the largest communication networks for us, combining missionary work and Church service” (Diego, November 30, 2013). Hence, social distinction through participation in a gift-system like SCM also makes the group more valuable to the individual, for it becomes a site for reputation acquisition and display.

THE PROCESS OF VALUE CREATION

To promote the circulation of small chapels within the gift-system, members of a gift system enact various interdependent practices aimed at continuously transferring objects among themselves. We organize practices of object circulation into three sets according to their purpose within a gift-system. (1) *Enabling practices* qualify an object for circulation among members of a group. They include *setting*, *protecting*, and *registering*. (2) *Moving practices* refer to the transfer of objects among members of a group. They include *retrieving*, *keeping*, and *passing on* a circulating object. (3) *Relational practices* enable sociality among group members involved in object circulation, and include *monitoring*, *interacting with object*, and *storytelling*. In addition to being linked by the material elements they share (Shove et al. 2012, 36), these practices are interconnected because the performance of one practice shapes the performance of other practices in the system (Schau et al. 2009). Because they are at the nexus of all practices in the system, these circulating objects (i.e. the small chapels) are the material elements that physically connect the different practices. Although some of these practices may exist independently of each other in other contexts, object circulation emerges only when enabling, moving, and relational practices operate together. Each one of these practices is capable of generating value to participants in the gift system.

For example, passing on the chapel to a neighbor (a practice referred to in quote that opens this section) creates an opportunity for interaction between participants, hence being capable of creating linking value. The enactment of passing on also allows the chapel to keep circulating; thereby promoting epistemic value; and the parting with the chapel may evidence certain emotions, potentially generating additional emotional value for the participant who is

passing it on, and to that who is receiving it. If passing on is properly enacted (that is, if the chapel is taken to the neighbor on time, with care), it may also generate reputational value.

Value Translations in Gift-Systems

In analyzing the creation of value in gift-systems, we observed how different types of value increase with object circulation. We found that, through performances of practices of object circulation, emotional, epistemic, linking, and reputational value are generated among participants. Moving beyond the understanding that certain collective practices create value (Schau et al. 2009; Arsel and Bean 2013), we specify the multiple forms of value created by practices of circulation within a gift-system.

Our findings also allows us to point to how emotional, epistemic, linking, and reputational value created within gift-systems may translate into a different regime of value (Arnould 2014; Appadurai 1986). Within our practice-based framework, value is a “contingent effect of interactions” (Arnould 2014, 2; Simmel 2004). Therefore, *value translation* occurs when value produced in one regime has the potential to be realized in another regime, for instance when exchange value produced by the market translates into social value produced by gift-systems and vice versa.

We have identified three instances of value translation stemming from circulation in gift-systems. First, value translations may be triggered by members of a gift-system for example, when members capitalize on their reputation to exert economic activities that yield profit, reputational value accumulated by these members may translate into exchange value. In the Curitiba branch of the SCM, for instance, one of the participants involved in the coordination of the movement took upon himself the manufacturing of new, standardized wood cases that were sold to the Church to be used in assembling new small chapels. Other participants cater to the events frequently promoted by the SCM, selling pastries and cakes to the organizing committee.

Second, value translations can be triggered by the activities of the system of practices themselves (and thus not by the object or members of a gift-system). For example, the, moving practices and the practices of praying and monitoring allow the Church to collect money from the donation drawers in the small chapels, translating emotional value into exchange value. When this donated money is used to pay for a priest’s education or to buy new chapels, it is once again translated into the system through market-based exchanges. In this case, the practices enacted in a gift-system increase the value of the system as a whole, facilitating the extraction of exchange value from it.

Third, translations may be triggered by the circulating object as it enters or leaves market exchange from a gift-system. When objects are acquired on the market and become circulating objects, they leave the realm of the commodity (Kopytoff 1988) to become a part of a system of practices where these objects’ emotional, epistemic, and linking value can potentially increase. The reverse process of translation occurs on the rare occasions when circulating objects are smuggled outside the gift-system and commercialized on the market. Due to the nature of our research context, and the taboo associated with the commercialization of religious or sacred objects, this translation was not evident in our fieldwork. However, research in other contexts of object circulation suggests that sometimes objects are removed from gift-systems and commercialized in the market. For instance, in the hobby of Geocaching (a global treasure hunting game), players promote the circulation

of trackable objects (called Travel Bugs in Geocaching lingo). Even though these objects are usually tokens of little value when they enter the gift-system (any object attached to a US\$ 5 tag makes for a Travel Bug), certain Travel Bugs that acquired emotional, social, and/or epistemic value through circulation went missing somewhere in between transfers. Later, these Travel Bugs were auctioned on eBay, selling for up to US\$80 each – a sale that promoted heated discussions among Geocaching players.

These three forms of translations help demonstrate how the emotional, epistemic, linking, and reputational value generated by a gift-system may yield exchange value, even though circulation in gift-systems and market-based exchange are commonly taken as different regimes of value (Myers 2001).

THE ROLES OF ORGANIZATIONS IN FOSTERING VALUE CREATION THROUGH GIFT SYSTEMS

After illuminating the types of value created in gift-systems, we will discuss how organizations can foster the process of value creation and benefit from collaborating with other participants in gift-systems. In the case we studied, the Catholic Church is the central organization involved in the system. Hence, table 1 describes the various roles of the Church in helping to create value in each stage of the identified value creation process. The within-case comparison makes it clear that the Church is much more pro-active and interested in supporting the value-creating process in Curitiba than in Campos Novos, which may explain why the circulation of chapels is much stronger in Curitiba than in Campos Novos. For example, the Church in Curitiba formally trains and mentors messengers about the best practices to help the circulation of chapels within groups [Figure 5]. Messengers then use this knowledge to make sure that neighbors enact circulation practices in a way that adds value to all participants. For example, messengers instruct neighbors on the multiple ways of dealing with the chapel (increasing the possibility of participants creating emotional value); disseminate information about efficient participants (increasing appreciation for reputation value), introduce neighbors to each other and register their participation in sheets of paper and books (increasing opportunities for the creation of linking value), and incentive neighbors to add personal items and stories to the Chapel (enhancing epistemic value).



Figure 5 – Training of New Messengers for the Small Chapels Movement in Curitiba.
Photo by Tarcisio Cirino, Small Chapels Movement Curitiba.

When we examine the activities of the church in Campos Novos, support and interference of the Church is much less expressive. The local Church gives some seed money and orientation to custodians upon request, and does recommends good practices. Yet, custodians are loosely coordinated and poorly instructed. They have good will and faith, but this is often not enough to create a structure that supports value creation.. To be clear, neighbors have an understanding of how their individual work with the chapel reinforce some of their shared values (e.g. receiving the chapel reinforces their religious beliefs and faith). However, it is more difficult for them to experience and understand how the circulation of objects and the SCM gift-system as a whole provides several types of value and reinforces the group. These informants have not directly reasoned, for instance, that the emotional and linking value of protecting and grooming the chapel are leveraged when these actions are collectively acknowledged and assessed, hence reinforcing participants' social values of solidarity and care.

Table 1. The role of the Church in fostering value creation in the small chapels movement

Role of the Church	
Curitiba	Campos Novos
• Supplying new small chapels • Publishing of a booklet with guidelines for the movement • Formally training/mentoring messengers • Hosting and attending celebration of birthdays and other special occasions • Promoting excursions to sacred places for Messengers • Placing stickers on the small chapels inviting participants to donate money • Posting online news, videos and photos about the circulation of small chapels and events associated with it • Adding decorative elements to the small chapels • Creating and sustaining a register of the people involved with the circulation of the Small Chapels. • Facilitating the sharing of stories and the reproduction of oral accounts when hosting meetings, celebrating birthdays and other special occasion • Commending good practices during masses and meetings • Publicly thanking volunteers and lay members who support the circulation of small chapels • Promoting regular meetings of messengers with an assigned priest • Publicizing to the wider audience and media the work of the church with SCM • Publishing of a booklet with guidelines for the movement • Training new messengers • Facilitating regular meetings with custodians to examine the work with small chapels, integrating new knowledge with their existing values.	• Oral guidance to custodians upon demand • Providing seed money to set a new small chapel
	• Individual expressions of appraisal made by the vicar or a priest to a custodian • Recommending good practices developed in one neighborhood to others

CONCLUSION

The paper provides important insights about how practices of object circulation support value creation in gift-system. First, we show that gift-systems can generate various types of value for its participants additional to those identified in prior research. Value creation within a gift-system can enhance the perceived benefit of being a member of this system, and this can be a desirable outcome for many organizations, especially those limited in resources, whose survival depends on engaged participation (Boo and Rogers 2010). The case of the Small Chapels Movement shows that, like the Church, by offering the structure for members to gain emotional, epistemic, linking and reputational value, organizations can increase the value participants perceive in the system, circulating objects, and other participants.

We show that the circulation of objects is a valid pathway to reinforcing the generation of various types of value for participants of gift-systems. In addition, acknowledging and inventorying the various types of value created in a specific gift system allows business, brands, and organizations to promote themselves as generators of these types of value. In the case of for-profit businesses, we speculate that this can be particularly effective with marketing communication and public relations campaigns. One recent commercial example is found in Coca-Cola's use of object circulation to strengthen their equity. In 2014, Coca-Cola partnered with FIFA to launch the FIFA World Cup™ Trophy Tour. During nine months in 2013, the trophy traveled over 92.000 km, circulating to over 90 countries (www.coca-cola.co.uk). The practices of object circulation have generated social, epistemic, and emotional value for this system. These types of value can then be capitalized and translated into exchange value (brand equity) by both Coca-Cola and FIFA. For these translations not to generate tension and conflict, they must be aligned with the values held by participants of the gift-system, and maintain certain elements and logics of gift-giving that characterize transactions as hybrids rather than purely commercial exchanges (Scaraboto 2015).

Second, we demonstrate that value creation happens through practices of circulation and that each practice has an important role in supporting value creation in a consumer collective. By understanding the function of each practice, business and organizations can create specific strategies to support the process of value creation within gift-systems. For example, an organization that supports carpooling or hitchhiking could create further ties between members by promoting the circulation of objects that could help to embody the spirit of the community. Further support could be given by making sure these objects' trajectories have been registered and shared among members through storytelling. One organization that effectively promotes circulation is Groundspeak.inc, a company who runs the Geocaching website. The website provides various options for players to register the traveling of objects and the actions of participants. It also provides a forum where assessment can be made and exchange, which further facilitates the generation of value in the gift system.

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Building Bridges between Management and the Workforce

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A Piece of Pie

This paper examines the sales force in a retail setting, considering how Business Anthropology can enlighten managerial practices as a means to defining organisational strategy. Specifically, we look at sales force engagement, motivation and reward – considering how to build bridges in the management-employee relationship and shed light on the sales force culture. We will look at anthropology's position in relation to key business activities using the service-dominant logic to understand how individual sensemaking and perception of power can influence internal and external relationships in the value creation and realisation process, examining engrained paradigms and using Corporate Ethnography to offer new insights and perceptions on organisational culture, power and hierarchies.

INTRODUCTION

In this paper, it is our aim to demonstrate how insight into corporate culture, employee mindset and drivers of behavior can be leveraged as resources for differentiation and competitive advantage within business. Using the case study of a recent project done by A Piece of Pie, we will examine the use of ethnography as a methodology to define business models and manage the culturally delicate process of business transformation. Furthermore, we will delve into the strengths and weaknesses of Corporate Ethnography, offering a detailed explanation of our methodology, to demonstrate how Anthropology can be used to solve complex business problems. In doing so, we will investigate uses of Corporate Ethnography and Business Anthropology, and offer our thoughts on how Business Anthropology can “one, do research that provides insights into corporate structure and process and two, provide real-world solutions to problems that arise in business and industry” (Jordan 2013).

A Piece of Pie is a Strategy Consultancy using Applied Anthropology to define Corporate Strategy and Business Innovation. This year, we were engaged by a leading Luxury Brand to undertake a global project for them, studying their retail (front-line) sales teams to uncover key insights and define a multi-country engagement program overseeing sales force training, career development and performance management. The client was yet to develop a consistent approach to managing their multi-country sales teams and, given that retail sales associates acted to promote the public-facing image of the company (and accounted for nearly 40% of the workforce and 80% of company sales), viewed this project as critical to successful implementation of their competitive strategy.

In many organisations, Salespeople are separate from other functional teams within the business – both physically and culturally – moving about independently with little interaction between supervisors and other employees within the business (Dubinsky et al. 1986). They are, however, a critical component in determining the commercial success of the business, representing their organization in front of customers and proactively driving revenues. This

makes understanding their culture and motivations – as a means to developing appropriate management processes, tools and incentives – a critical task. It is essential, therefore, that Culture be considered central to informing a Salesperson's behaviour as part of the strategy formulating process (Webster 1991).

In the corporate world, it is widely accepted that “the essence of strategy is choosing a unique and valuable position rooted in systems of activities that are much more difficult to match... choosing to perform activities differently than rivals do... deliberately choosing a set of activities to deliver a unique mix of value” (Porter, 1996). In the Service Dominant Logic, value-realisation (price-paid/revenue-earned) arises through a two-party process between company and customer. On one hand, the business operates a series of complementary services (procurement, operations, logistics, finance, HR, marketing, sales, etc.) that each contribute to value-creation or a final unit of output bought by the customer. On the other, value-perception, from the customer view-point, is created through the measurable benefits (time-saving, efficiency gain, cost reduction etc.), intangibles (brand, social connectedness, meaning etc.) and experiences offered by the company to the customer, who applies their own significance and meaning to criteria of importance before agreeing a price they are willing to pay for the final unit of output (Vargo and Lusch, 2004). By this process, Service Dominant Logic views all businesses as service companies (whether or not the final unit of output is a product or service) and determines that the value-realised results from a circular process combining the services that deliver a final unit of output with the transfer of significance, meaning and benefit that this offers. Hence, “S-D logic views service (a process) as the application of operant resources – dynamic resources such as competences (skills and knowledge) that are capable of acting and producing effects in other resources – for the benefit of another party” (Lusch, Vargo and O'Brien, 2007).

In the S-D logic, “human resources [like natural resources are] viewed as operant and acted upon [to extract] value from them. Thus, competition is about creating relative advantage through hoarding resources” (Lusch, Vargo and O'Brien, 2007). Herein, Anthropology is complementary to defining corporate strategy and new business models. For example, given the commercial pressures and changing responsibilities of a sales role, there is a strong likelihood for the incidence of job stress (Behrman and Perreault 1984). Within the Service Dominant Logic this could have several foreseeable results. The company could experience loss of productivity, at an individual level but with threat of contagion to neighbouring teams and the organisation as a whole. In addition, there could be negative effects on the quality of products, services and experiences customers receive. The final outcome being that declining productivity could increase the costs required to deliver an individual unit of output, whilst declining quality could reduce the price customers are willing to pay (and therefore reduce revenues earned by the company). Ultimately, both factors would conspire to reduce profits and damage the company's ability to compete effectively. Anthropology, therefore, can illuminate organizational culture to impact sales force productivity through initiatives that affect the socialization of new employees (Webster, 1991) and influence their perception of personal status within the organization (Weick, 1995).

In our case study, the client decided they needed to improve how they engaged their retail associates with the purpose of creating an engagement program to reduce staff turnover and increase productivity. Our project would set out to 1) deliver ethnographic insight into the work, mindset and motivations of retail associates (capturing latent knowledge lying in the minds of employees); 2) use these insights to break managerial

assumptions and ideate potential solutions and strategies that would form the basis of a global engagement program; 3) re-engage retail associates to ensure ideas were relevant and useful in the eyes of the people they were for; and 4) use our learnings to define a global engagement program, improving performance and staff retention. Through a process of Co-Creation (between A Piece of Pie and Senior Management) we would incorporate our findings into organizational thinking and use Ethnographic insight to define a comprehensive "engagement" strategy that would revolutionize the company's methods for working with retail associates – helping them to become the employer of choice for retail sales professionals in the Luxury sector. The program would consider the needs and motivations of retail associates, using Ethnography to examine the day-to-day world of the salesperson and understand how they make sense of what is around them (Dietz, Prus and Shaffir 1994) – enabling the capture of insight into what people infer from their environment and how this influences their behavior (Biggart 1989). In turn, we would use our learnings to break the conventional management structure and create a unique employee engagement program, providing a source of company differentiation to deliver competitive advantage.

This paper sets out to detail our methodology, as well as the strengths and weaknesses of Ethnography in a corporate setting, looking into the benefits Business Anthropology can have when addressing complex problems, strategic decisions and culturally sensitive business transformation – helping management to develop strategic initiatives that build bridges with the workforce.

ETHNOGRAPHIC FIELDWORK

Ethnography sets out to understand how individuals (or groups of individuals) interpret social circumstances, cultural symbols and the physical environment, therein offering insight into the tangible and intangible factors that shape behaviour (Dietz, Prus and Shaffir 1994). Our study would be an in-depth look into the client organization with the aim to understand sales force motivations as a means to boosting productivity and reducing staff turnover through greater engagement.

Aligning with top management

Traditional ethnography, as “an open-ended emergent learning process, and not a rigid investigator controlled experiment” (Whitehead 2005), implies that the researcher should be free of restrictive oversight to explore lines of inquiry both parallel and tangential to the initial research plan – using inductive methods to understand how people experience their circumstances and give meaning to a given setting (Denzin and Lincoln 1994). Whilst this may be possible for academic Ethnographers who study the business enterprise, in our case study the Business Anthropologist performs a dual purpose; employed both as Ethnographer performing a cultural study of the business enterprise, and Strategy Consultant working with Senior Management to leverage insights in ways that will be profitable for the business. For the Anthropologist at A Piece of Pie, the final outcome of a project is not the research learnings; it is an implementable strategy that will bring positive returns for the business.

In practice, this means we must perform Ethnographic research, not for academic enlightenment but to seek knowledge that will bring competitive advantage in a manner that is both cost-effective and recognizable for its value by the client. This adds a further layer of complexity to the job of the Ethnographer, who, on one hand, must remove biases insofar as is possible (Dieble 2008) but, on the other, must satisfy the expectations of Senior Management who may hold strong opinions, coloured by past experience. The challenge is further complicated should insight running contrary to established organizational truths be discovered, and, hence, the Business Anthropologist must find an equilibrium between the commercial restrictions imposed by profit-minded clients and the need to do an academically rigorous ethnographic study.

In light of this, communication and alignment with client expectations is key. Business Anthropologists, working as Strategy Consultants, must learn how to effectively report on progress, manage client expectations and deliver complex projects within set parameters (and budgets) within an environment that is “distributed around the world, across multiple boundaries, in a rapidly changing context, and where human interaction is mediated in technology” (Gluesing 2013).

To engage the client, facilitate knowledge share and align on key objectives, we began with interviews, engaging senior stakeholders and all key persons involved in the project (those with managerial responsibility for the implementation of strategy) – C-Suite Executives, Vice-Presidents, Directors and General Managers – to identify their strategic vision, objectives, concerns, capabilities and expectations of the project. These are high-level, discussions with broad and open-ended questions to engage management and create a unified vision for the project – offering understanding of the individual (or departmental) viewpoints and agendas that may lead to cultural skepticism and resistance to change when deploying new initiatives and business models.

During the early stages of a project kick-off, the Anthropologist must be wary of cultural standards and “needs to be alert to how they are gaining access into an organisation and what their position may entail” (Kraus-Jensen, 2013). With this in mind, introductions to top-line managers were done by a senior ranking person within the client company structure (the global project leader based out of company HQ) to help transmit a sense of importance for the project, and to share the strategic outcomes they hoped to achieve. Whilst this certainly made it easier for us to gain access to senior people, as observed by others, we still found that senior business people were often less accessible to traditional ethnographic methods than their junior counterparts (Davies and Spencer, 2010). Scheduling conflicts were frequent and availability often changed, and when we were finally able to meet often found our time with them limited, regulated and timed (Gusterson, 1997).

To facilitate interviews with top-line management, we needed to be flexible, adapting our work schedule to conduct interviews in the late evening or early morning. We also needed to be respectful in our line of questioning, not too forceful, but still seeking the information we needed. On numerous occasions, it was apparent that the client project lead had not properly communicated details of the project to interviewees, leading to an awkward situation where the person being interviewed was unsure what they could disclose and what was confidential. Finally, communication proved troublesome as there was no common language within the company, and, at times information was difficult to decipher when multiple terms were used to describe the same objects or processes.

As the project advanced, we realized that there were different views spread across the organisation, and that different departments had varying views on the effectiveness and how to manage the retail associates. Practices which worked well in some geographical groups were not shared with others, and ideas relating to training and compensation were not shared. At an organizational level the training, management and incentivisation of retail associates lacked standardization – a common issue in companies where culture and flows create a “radically reflexive environment market by power plays, different interests and hidden agendas” (Krause-Jensen, 2013). Our challenge was to be attentive to the different interests, needs and sensibilities of everyone involved in the study. Though we were working for one company, we had many clients and needed to be “politically sensitive” with regards to the various demands directed at us throughout the project – contrasting the roles of Business Anthropologists, who need to beware cultural landmines for commercial reasons, with that of the Academic Ethnographer who worries of being branded “insensitive” for fear of being culturally closed out of the business and unable to find informers willing to share openly their experiences for ethnographic purposes.

An Ethnography of Retail Associates

Our approach to understanding the retail associates began with interviews of top management, from where we gained an understanding of how retail associates were perceived by others, from the outside. The next step was to conduct an ethnography of the retail associates.

The core ethnography was based on participant observation and selected methods including interviews, card-sorting, mind-mapping, collages and shadowing – our aim being to observe retail associates in their work environment, at point-of-sale locations, using inductive reasoning to derive insight on their natural state (Garsten and Nyqvist, 2013). Through an in-depth study, we set-out to identify reasons explaining the motivation and behaviour of retail associates – beyond what is explicitly said – to define key levers that would enhance employee commitment and productivity as part of the engagement program to be co-defined alongside senior management. Key areas of interest included:

- Personal & Professional Context: Educational, Family & Societal backgrounds
- A day-in-the-life: Work barriers/facilitators and customer interactions
- Motivations, annoyances, priorities & aspirations
- Perception of self, the organisation and management hierarchy
- Perception of training, compensation & brand versus the competition
- Ideas on how to improve internal processes and communication

The benefit of Anthropology and the Ethnographic method, herein, is to search for knowledge (expressed and inherently understood) that explains how participants make sense of the world around them (the how and why of one’s positioning, actions and interactions) (Spradley, 1979) – ultimately, informing the definition of an engagement program based on unmet needs and behavioural insights that would build bridges between management and retail associates through greater depth of understanding.

We conducted a top-down study of the retail associates, meaning that recruitment of participants and their introduction to the study was managed by supervisors to whom they reported as part of the company structure. Whilst this offered benefits, there are constraints this method imposes that we should beware (Whitelaw, 2013). In our case study, the supervisors had already explained the purpose and expected outcomes of the project so that we were already known to retail associates prior to a personal introduction. The trade-off here is that, whilst it is usually easier to build a relationship with people when the ethnographer is introduced by someone they trust, in a corporate setting there is the risk that informants will view your presence as a threat, or consider your role that of an auditor – there to observe employees for performance appraisal and managerial control. For us, we found our introduction by managers aided the recruitment of participants and facilitated our insertion into the organisation, but created a hierarchy in our participation, with participants that could potentially lead to retail associates being more closed than they might have otherwise been.

Further limiting the openness of our dialogue with retail associates was the presence of top management at interviews, whom, despite our hopes to conceal their identity, were already known to staff who had been told senior management would be attending (probably by their supervisors). This, again, increased the level of pressure for the retail associates, adding the perception of management scrutiny – leading to answers that were clearly tailored to fit the expectations of management. In addition, a lack of financial incentives offered to retail associates removed extrinsic motivation to participate in the study, making it harder to establish rapport and encourage open dialogue. Whilst many researchers employed on this project were local (meaning we did not have to overcome cultural barriers), there was still a need to navigate the distrust and skepticism occurring from management's presence. In an attempt to fix this, we planned prolonged introductory telephone calls prior to interviews, going beyond the usual confirmation of time and attendance to develop rapport and improve the level of engagement between interviewers and retail associates. In some instances, however, our task was made even tougher due to national regulations restricting the asking of "personal" questions that can often help to establish rapport at the start of an interview.

Finally, during the course of the project, we discovered that management had recruited the "best" employees to participate in the study, meaning the people we spoke with were often those most satisfied with their job, making it harder to ascertain the "pain points" of disenfranchised and underperforming members of the organization. From an ethnographic perspective we, therefore, needed to be conscious of this limitation in our fieldwork when deriving our final conclusion – in the best-case scenario, we would have been able to interview a healthy mix of satisfied and disenfranchised, as well as excelling and underperforming employees, alas, time and resource constraints dictated by the need to deliver this project within a strict budget prevented us from re-engaging the business to find a broader mix of employees to meet with.

Ethnography around the world

To structure this multi-sited ethnography - and capture the language, values and perceptions of each business unit - we organized the project around our base team in Barcelona. From here, the client relationship was managed, streamlining communications and controlling the

project from a central location. On the client side, a core project team was set-up to collaborate with and inform A Piece of Pie's base team. Henceforth, all local, in-country researchers were managed by our base team in Barcelona – local researchers did not have direct contact with the client, except for the people they interviewed or shadowed.

As a result of this structure, there were a few challenges we had to overcome. It is always difficult coming into an organization as an “outsider”, where you must learn “what language to use, what political icebergs to avoid, and for how long our presentations [will] be endured” (Brun-Cottan, 2013), and a multi-sited project further compounds this difficulty owing to complexity and scale. One such concern was the need to manage the ever constant flow of information between the client's core project team, our base team in Barcelona and the local researchers in-country. Because local researchers were not present in meetings with the client's senior management, there was a constant need to update and involve them with the project's developments. However, these difficulties were counterbalanced by the advantages we gained by working with local researchers.

Local researchers helped us to understand particular nuances that are often hidden from non-natives. They enabled us to speak the language of local people (figuratively and literally), offering better insights into the perceptions and feelings of interviewees. Yet, certain cultural aspects are (in some cases) so deeply ingrained that local researchers can sometimes take them for granted – meaning we risk them not sharing everything should they assume something to be too obvious. One such insight we found difficult to uncover was the perception of luxury. Whilst in some geographies (e.g. Europe), luxury goods were considered relatively attainable for a large part of society, in others, they were a symbol of one's social status in society (e.g. Latin America). However, it is always a challenge communicating effectively with a client (many of whom speak with heavy use of industry jargon), and it becomes even more complicated when there are local differences in the terminology and language used between geographies and business units. To successfully complete a corporate ethnography, it is essential that researchers learn to talk and think like the company whilst maintaining their own identity and observational understanding (Denny, 2013; Sunderland, 2013), and, in this regard, local researchers proved a great asset to the project's success.

BREAKING THE ENGRAINED PARADIGMS

Anthropological methods can be used to derive insights and hypotheses (Fricke, 2003) that break engrained paradigms. In organizations, corporate ethnographers identify each piece of the puzzle, fit them together, and combine them to create new insights that answer complex business questions and “get to the heart of the matter” (Cefkin, 2009). It is in this way, ethnographers can benefit companies by dispelling underlying cultural assumptions, beliefs and values (Ensworth, 2013) to improve the way businesses operate. Through a deep understanding of the retail associates' motivations and how they interacted within the corporate ecosystem – their environment, relationships and influences – we discovered that three major beliefs guiding managerial decisions were not in line with the reality retail associates experienced.

Most significant of the engrained paradigms was the management belief that retail associates' motivation came from a perceived increase in personal status offered by employment in the luxury sector. Due to this belief, management believed they could

motivate retail associates with bonus compensation in the form of luxury gifts (designer bags, perfumes etc.) and, in doing so, reward effort and improve performance. Whilst luxury items do perform a status symbol function in Latin America (and to a lesser extent in Europe), and, for this reason, are often the reason for people wanting to join the company in the first instance, once we examined the drivers of ongoing motivation, we discovered retail associates' primary motivation was "growth" and that they had a strong desire for personal and professional development. When offered opportunities to develop skills and pursue a clearly defined career path (with established goals and objectives), retail associates became more competitive and felt greater appreciation from the company. Hence, we were able to change managerial perspectives and make them aware how presumed assumptions could affect the engagement of retail associates, limiting their motivation and affecting results.

The second paradigm we encountered was that supervisors (the people managing retail associates) of some countries overseeing retail associates performed an administrative, but not emotional or supportive role in daily activities. They were distant from the retail associates, interacting with them on a monthly, or even less frequent, basis to discuss targets and performance issues (low sales or poor inventory counts, etc.). A view shared by both retail associates, for whom supervisors performed a "controller" function, and the organisation, who assigned the supervisors increasingly large geographical areas. Through the Ethnographic fieldwork, we identified the significance of the role retail associates perform, seeing, as have others, that they exist in a hierarchical structure (Webster, 1983) where there is a large amount of pressure coming from quarterly targets and revenue goals (Oliver and Anderson, 1994). We identified that their supervisors were indispensable, acting as the retail associates' closest connection with management, with whom retail associates had little access, thereby transmitting the cultural values of the company to the front-line and, therefore, to the customer. For this reason, the character and performance of individual supervisors was critical to company success. Once this was identified, the company was able to reinforce support structures and develop processes to leverage the proximity of supervisors to improve managerial dialogue with retail associates.

Finally, we found further misconceptions, originating at Corporate Headquarters (HQ), to be a source of constraint limiting the development of policy that could improve the status of retail associates and reward them for their contribution to the company. In HQ, management and organizational structure was more rigid and hierarchical than in countries with smaller and more dynamic operations. Furthermore, the time of the study coincided with the European recession, meaning that in HQ, where the most retail associates were employed, there was a strong awareness of operating costs, for which retail associates were the most significant contributing factor. With executive management at Corporate HQ situated in a country where the recession became a crisis, a focus on costs overtook other priorities (such as engagement, motivation and retention) and this was transmitted from the top of the business to the periphery. As a result, it was common amongst management to focus on cost reduction (efficiency) and rather increasing sales through retail associates (productivity) – albeit, as discovered through interviews outside HQ, not all managers shared this view. The implication for the client being that a focus on cost-cutting had distracted managers from opportunities to increase productivity, with their current strategy having the reverse effect, demotivating employees and restricting growth. By HQ imposing upper limits on salaries and banning the recruitment of new retail associates, the company was

hindering their ability to compete under challenging market conditions by failing to effectively use a key resource.

Herein, we can observe the impact that shared organizational assumptions can have on company performance and how key values dictate decisions made at all levels of the business – heavily influencing critical decisions relating organizational structure, employee incentives and other corporate initiatives (Gordon, 1991). Furthermore, we see how a positive culture leads to high performance (Apasu, Ichikawa and Graham 1987) thanks to fluid management-employee communication and the employees' sense that management wants them to deliver the best possible performance (Bettinger, 1989). As Kotter and Heskett suggest, company performance is linked to corporate culture through goal alignment, effective incentivisation and managerial control without formal bureaucracy (1992).

DELIVERING INSIGHTS AND SOLUTIONS TO CREATE IMPACT

As Jordan (2013) remarks, results in Business Anthropology are a long way from their counterparts in scientific academia. The papers we publish typically take the form of “deliverables” – design blueprints, management workshops or Powerpoint presentations – and, hence, the first challenge is to “to reduce complexity and make findings on organizational culture concrete and easy to communicate so they [can] be shared” (Holme, 2010). In addition, when using Ethnography for strategy formulation, we must consider “what language to use, and what political icebergs to avoid (Brun-Cottan, 2013), taking into consideration individual relationships, differences in departmental goals and operational capabilities. Finally, we must ensure that our ideas are embraced by management and that they are implementable.

For this purpose, ethnographers must identify allies who have the power, strength, vision and voice to lead the successful implementation of their plan. Only with their collaboration will corporate change be a success (Holme, 2010). Our approach is to reveal Ethnographic insights in a visual format during workshops where we challenge assumptions and break engrained paradigms using the learnings from the study. Armed us with the company's HR objectives, we aligned our findings to their corporate goals, presenting our insights categorised into three groups – Attracting, Engaging and Retaining – and accompanied by a large number of on-location photos and direct quotes to personalise the presentation and help management get close to the employees who had participated in the study. Next, we divided client and consultancy participants into teams, each with a diverse mix of people, to ideate around what we had learned and co-create strategies and solutions. In our case study, each team had people with a mix of backgrounds from Innovation, Retail Sales, Marketing Communications, HR and Training. Through active participation, participants can better align with project, becoming more involved and embracing the solution through a process of shared contribution (Levin, 2013). At the end of which we help to build bridges and managerial understanding of the behaviour and motivations of retail associates, making sense of the new knowledge to co-create the final deliverable – an enhanced engagement program to reduce employee turnover and increase productivity.

By the end of these workshops, 80 ideas were generated, 17 of which were selected by the workshop participants to test with the retail associates themselves. The workshops were followed by a voting process, involving the worldwide participation of more than 500 retail associates as a means to get everybody “on board” and trial the reception of new ideas

before they were officially rolled out. Retail associates were given a brief introduction of each idea alongside an illustrative image, and asked to rank each initiative in order of relevance and attractiveness. Following the results, we were pleased to see the top 6 ideas selected (the ones that received the most votes) were common across all countries, with only their order changing.

Initiatives

The winning initiative was a kit designed to support the sales process – offering product samples, sales pitch materials, gifts and accessories etc. – and was sent to individual retail associates at crucial moments, such as low sales or new product launches, around 4 times a year. Informed by the Ethnographic process, the initiative was designed to meet a need for specialized training and tools to energise the workplace, motivating retail associates on an ongoing basis to achieve their targets and boost sales.

The second and third most popular solutions were both training related, consistent with our anthropological insights, showing the retail associates' desire for growth and professional development. The second was an educational initiative, offering customized training programs linked sales objectives and career plan, allowing retail associates to manage their training, opting into courses when they had acquired enough credits, with the aim increase competency and create employee loyalty through investment in their professional development. The third initiative awarded retail associates with a new job title upon completion of specific training, aiming to promote differentiation and engage shoppers with improved service and customer experience, grounded in a high level of salesperson training. Both initiatives ranked similarly in Argentina, Chile and Spain – where there was strong competition and retail associates often lacked higher education. By contrast, retail associates in the UK, where education levels were highest, showed the least interest in training and industry certification.

White Book

Five months after the project completion, our client asked for a WhiteBook – a bible of all the knowledge and best practices acquired through our study, detailing new initiatives and guidelines to maximize performance. We wrote the WhiteBook, covering three main areas of management: Organization and Compensation, Competency and Competitiveness, Motivation and Recognition. In the book we detailed the two initiatives that had been successfully implemented by the company after our three-month study.

At the start of the project, during interviews with top management we had witnessed a lack of fluid communication and alignment between business units. We had seen that “great minds do think alike” but are too often unaware of each other and the benefits that can be enjoyed through collaboration. Noticing how, on many occasions, business units were working on similar initiatives at the same time, whilst failing to communicate effectively, we used the WhiteBook to incorporate all the knowledge we had acquired with the aim of accelerating knowledge share and information transfer within the business.

CONCLUSIONS: ROLE OF ETHNOGRAPHY IN MARKETPLACES

As Garsten and Nyqvist (2013) note

Anthropological studies in and among complex organisations have reached a point of momentum: the impressive weight of decades of ethnographic inquiry combined with the more recent speed of the development of these forms of engagement paves the way for a smooth and powerful continuation ahead.

In this paper, we addressed how anthropology can be used in a business context, focusing on Business Anthropology as a means to generate insights to inform successful strategy formulation, managing business transformation and cultural change. Examining the sales force, we saw that key areas in business management lie in the domain of anthropology – notably motivation, incentivisation and corporate culture (Webster, 1991). We also saw that, in the S-D logic of business management, value perception and creation are a two-way process between company and customer, again, heavily influenced by cultural symbols, individual perceptions and community relationships (Vargo, Stephen & Lusch, 2004)– all areas where Anthropology can add value and understanding.

Anthropology, and its unique capacity to enlighten “understanding people and the system in which they live” (Mack and Squires 2011), was used in our case study to learn about organisational structures (the interpersonal relationships between management employees), personal motivation and the perceptions of both management and employees as a means to build bridges for the formulation of improved management-employee communication and engagement. Using ethnographic methods, we looked at the individual motivations and the cultural frameworks that govern corporate structures, the role they play in individual sensemaking (Weick, 1995) and how strategic initiatives can use Anthropological insight to identify areas for improvement and inform effective organisational change management – herein, contributing to business success through the identification of initiatives to improve employee productivity, reduce staff turnover and facilitate management-employee engagement (Gordon 1991). We saw how it was important to effectively socialise employees and allow their voices to be heard, that, by understanding the ways in which people think and the motivations behind their behaviour (Bettinger, 1989), Anthropology can help create strategies that achieve greater commercial success (Lusch, Vargo & O’Brien, 2007).

To conclude, we would like to highlight Anthropology’s power to break engrained paradigms and offer new insight into business management and organisation (Ensworth 2013). If Big Data and quantitative analytics are enable to show us “what” happens in the business context, seeking precise measurement and analysis, Ethnographic insights tell us the “why”, offering a deeper level or rich insight, helping us to understand the motivations of behaviour and the meanings behind actions (Miles & Huberman, 1994), ultimately allowing us to “provides insights into corporate structure and process and provide real-world solutions to problems that arise in business and industry” (Jordan 2013).

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Bridging Ethnography and Path-finding Business Opportunities

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While ethnography has been integrated into the design research, new product development and corporate strategy, it has been less well integrated into path-finding for new business opportunities. We've developed a model for path-finding research that has three core parts: creating a business opportunity hypothesis from social flux, testing and validating the hypothesis, and catalyzing opportunities for the corporation. We provide a case study of how we used the approach around The Data Economy. We highlight three important aspects of the approach: shift of research focus from context to ecosystem; robust action, rather than funnel development for concepts, and present a tool we created called the Business Opportunity Canvas to convey research findings into action. We then highlight the direct implications of this shift for ethnographic projects, from a focus on how knowledge is produced and description of context, to an analysis of society and culture. We have not spelled out the entire process but have created a minimal viable product that can be experimented upon. Keywords: path-finding, ethnography, business opportunities, methods, case study, ecosystem, robust action, innovation, transformation.

There is no magic in this paper. We do not take a failing company, then sprinkle ethnographic pixie dust over and save it. We do not take an ill formed product, an advertising message missing the mark, or magically reveal a new market through the wonders of ethnographic pixie dust. We do take on a relatively serious problem – how can large companies create “transformative innovations” with the aid of ethnographic research. Ethnography partnered in the past with designers for “design ethnography”, but as we are more active in the innovation space, business partners and language emerge as our new fellow travelers. We will suggest this requires a change in ethnography’s main unit of analysis to ecosystem, an enhancement in how we orientate the work and new tools to help translate into a language that matters to large corporations.

BIG BUSINESSES ARE DYING YOUNGER: INNOVATE OR DIE

In 1925 the average life of a company on “the Standard and Poors 90” was 65 years. In 1998 the average life of “the S&P 500” was 10 years (Foster and Kaplan. Large corporations are dying younger all the time. We work for one; we’d like it to live long and prosper. We work for Intel that is a Fortune 100 company. The company was founded in 1968.. The primary product was memory chips (SRAM and DRAM) until the company pivoted in the late 70’s to become one of the largest producers of microprocessors. While microprocessors remain a profitable business, further innovation will be crucial to long-term sustainability of the business.

Consultants have been driving LEAN and AGILE techniques into large corporations but the results seem mixed at best. Startups are not small versions of large corps. They are temporary organizations designed to seek and discover a business model. The experimental and ephemeral nature of start-ups is a key tenant of Lean Startup. The problem of how do more permanent corporation employ these temporary techniques to similarly discover transformational business models is a problem we attempt to explore. The techniques work well for small start-ups but what works for start-ups doesn't always scale up for large corporations. Further, we are interested in a particular type of innovation – transformative innovation. The innovation models are further complicated by the frequently changing market ecosystem dynamics. While we (anderson et. al. 2013) and others have noted the rise of complexity in the ecosystem, strategies for adaption, especially around innovation, are still emerging. While we have discussed the product introduction path, we want to develop the creation of that innovation first, as well as, some additional ways to probe the ecosystem. We adapt the FOC (flux, order & catalyze) model (anderson et al 2013) around product development more broadly to innovation. This paper expands on what changes the flux, order and catalyze approach for our innovation work practices.

Let's start by grounding our use of the term "innovation." We track three kinds of innovation--core, adjacency and transformative--as a part of company's innovation portfolio. Core innovations relate to the existing products we produce. This is a focus on keeping a competitive advantage in a well-defined product space. We are solid in this space. Moore's Law has driven our core innovations for over 40 years. Technological and manufacturing innovations around processors and Moore's Law have enabled us to be market leaders. To produce adjacency innovation means to use core competencies to look beyond the current business into a space that is adjacent—for example, taking an existing product to a new customer segment or serving an existing customer with a new product. This has been particularly popular since the Great Recession since it allows leveraging assets for new revenues. Adjacency innovation is a moderate risk strategy, producing good payoffs without massive investment.

Transformational innovations are fundamentally different in mind-set and approach. Transformational innovations are about the introduction of a technology and business model that create an orientation of the industry ecosystem to the company that introduces that technology and business model. Of course, transformational innovation potentially alters the way we live and work. This kind of innovation often eliminates existing industries or, at a minimum, totally transforms them as well. Transformational innovations generally have a company calling upon new or untapped assets. To tap these innovations companies need to build capabilities to gain a deeper understanding of customers. They must learn to communicate about products that have no direct antecedents to both customers and partners. Finally, they don't develop just a product but must develop markets that aren't yet mature. Obviously, transformational opportunities are rare. Apple's introduction of the iTunes business is an example that changed not only Apple but also the entire music industry. This would be in contrast to a core innovation like Nabisco's repackaging of Oreos into on-the-go snackers (Nagji 2012).

Transformational opportunities are usually considered to be high risk and high reward. Our approach is counter-intuitive and even radical in that we seek to reduce the risk but maintain the high reward. Further, while searching for transformational opportunities, we've discovered opportunities that align as core and adjacent innovations for the company. This is

a fortuitous outcome of doing the work but discovery of those core and adjacent opportunities should not detract from the overarching objective which is to transform a business whose bases of competition have been shifted by a changing market. This is hard work for any company to do and it requires a massive shift in mind-set as well as innovation practice. The fact remains that while honing innovation processes in the core space over the years, expanding out to adjacencies or making transformational innovations remains a challenge for most large corporations.

OUR APPROACH TO TRANSFORMATIONAL OPPORTUNITIES: FOC it

Our approach has 4 key components.

1. Sense social and business ecosystems (flux)
2. Form hypotheses about the opportunity & market (order)
3. Test cheaply to learn, adjust, confirm or disprove (order)
4. Invest for commercial success upon hypothesis confirmation (catalyze)

We manage these parts through three phases

In principle, our approach is not very different from some lean models.



Figure 1: Three Parts of Our Process

Flux: Industry Transformation Concept Development

There are many ways to begin an innovation process. Management can dictate a direction. Market research can suggest trends to tap. New technologies can emerge from lab products.

Really innovation can come from anywhere. The issue is what is appropriate bedrock for transformational opportunities? If the innovation is designed to transform society and/or markets (systems of exchange), then looking for areas that are already in-flux presents unique opportunities (Bezaitis et al 2011). More traditional innovation approaches fail to consider that “the social” is constantly emergent. By emergent we mean that coherent structures coalesce through interactions among the diverse entities of a system; that the system is by definition a dynamic one. Our use of the word in-flux was an attempt to align our approach to what scientists would call strong emergence. Strong emergence occurs when a novel form arises that could not have been predicted. When we first introduced “Flux” as the first component of our overall approach, the example we used was the rise of what became known as “The Sharing Economy”. The Sharing Economy was presented by the mainstream media as the opportunity to collaborate and share that the internet created for people. Instead, we analyzed and presented this shift as one that expressed the changing nature of ownership patterns and the associated emergence of a new social role, the Everyday Entrepreneur. Our starting point for concept development rests on the questions of what industry foundations, whether they are social, technical, business or economic, are shifting or can be shifted to create new opportunities? When foundations of a market shift, a company must either adapt to maintain a meaningful market position but more importantly, with the social and business shifts it creates the opportunities to find new roles or even new markets.

Order: Discover Order for Business Opportunity Search (Transformational Probes)

The questions that drive our analysis of an ecosystem, as well as further probes into the value vectors are linked to how we can stimulate the ecosystem to understand its current dynamics. Additionally these questions provide insight to potential landscapes of experiences and business opportunities. We are literally creating maps of ecosystems to understand the dynamics and rough sense of the terrain. Ecosystems are dynamic systems of relationships. Grasping the outlines of the dynamics helps move us toward real possibilities and potentials. If we can discover the dynamics at this moment well enough, we have the potential to organize and mobilize the stakeholders in the system around our products/services. The maps and probes of the ecosystem help us learn about specific questions and at the same time to understand other paths or opportunities in the space. It is at once a matter of knowing, but also of understanding the possibilities and options we can pursue.

Catalyze: Intel Options and Strategy Creation

While many innovations are possible, even under the constraints of an ecosystem, the question that persists is whether or not the company or a client company one is attempting to transform is the correct one to integrate a new set of capabilities discovered in opportunity search into solutions and platforms that orientate the ecosystem around them. Can the opportunity presented by a changing landscape be understood within a framework that is familiar to the company and to the ecosystem, while preserve the flexibility necessary for future actions and uses. In other words, business opportunities should have characteristics that are familiar to the company so they understand the innovation, even

while the same opportunities introduce new variables that (business models, processes of technologies). Will the new role for the company be robust in light of market dynamics? Will the role create the possibility of robust action with pivots or growth opportunities in the market?

Case Study: Data Economy

In 2010 Intel Labs wanted to reconsider what had been conceived as the user experience for the future of mobility. Mobility had proven elusive to the work in the labs, and a more direct approach to UX was thought to be a possible solution. In thinking through the future of mobility, the team considered the prior 3 years of research around people, technology and business developments. Three items in flux shifted their outcome from a focus on mobile devices to one on mobile data. First, the team offered up the consideration that while people may no longer be mobile, their data was increasingly mobile. Second, the value of personal data was driving billion dollar businesses in the ecosystem. Third, there was a shift in business models and people's practices from data monetization to participatory value through data.

Taking these three foundational shifts together, hypotheses were formed around personal data literacy, data analytics, and secure circulation of data. While we continued experimenting around all three vectors in various ways, data analytics emerged as the ecosystem opportunity with greater potential for getting the ecosystem to orientate toward us. We conducted larger scale hypothesis testing around analytics as the next consumer platform (a platform, like Facebook was a platform). We partnered to create The National Day of Civic Hacking (NDOCH) as an event to test our hypotheses. Taking our learning's from the NDOCH further explored our possibilities and partnerships through accelerators like our Data Services Accelerator.

The project ended with a Mergers and Acquisitions deal in April of 2015. The method and tools we used were deemed to be valuable tools for innovation at Intel. Throughout the process, ethnographic researchers played key roles, from the discovery of areas in-flux, to the defining of hypothesis to explore potential paths, to conducting probes of the ecosystem, and finally to assisting analysis of the case of a data analytics platform.

KEY CONCEPTS

In this paper, we have quietly introduced three concepts that deserve a broader discussion as parts of a successful innovation plan that has a foundation in ethnographic research. Each of these three concepts represents a shift from practices today. We have suggested that in this type of innovation practice, a key unit of ethnographic analysis shifts from the product or consumer to the ecosystem. We have proposed that a way to approach both our work and corporate strategy is around robust action, rather than traditional funnel or linear approaches to product innovation. Finally, to facilitate the translation of research to corporate strategy we propose a shift away from design tools, like personas and brainstorming, to the use of the Business Opportunity Canvas.

Ecosystem - The Unit Of Analysis

Throughout this paper we have talked about ecosystems. Ecosystems are not a new concept in the business world; however their importance and meaning in this context is slightly different than the usual discussion. When we use the term “ecosystem” we are referring to network of organizations involved in an industry domain through complicated relationships based in both competition and cooperation. The idea is that each business in the "ecosystem" affects and is affected by the others, creating a constantly evolving relationship in which each business must be flexible and adaptable in order to survive, as in a biological ecosystem or Complex Adaptive System. Here we are using ecosystem borrowing from Holland’s understanding of complex adaptive systems (CAS), of which business ecosystems are but one example (Holland 1995, pp. 4-6).

The problem with classic business ecosystem analysis is two fold: (1) it does assume a more or less static ecosystem and (2) the view on the ecosystem usually assumes the company is the center of the ecosystem. We’ve already argued that the ecosystem is not static or even changing at slow pace – change is rapidly occurring. Our shift to an ecosystem as a unit of analysis stems from the work of Moore (1996) around business ecosystems. Most ecosystem analysis is done from the point of view of the company. These traditional types of analyses explore the company’s position relative to everything else. Standards bodies, competitors, investors, government agencies, etc. are thought of from the point of view of the company which is at the center. Our network analysis lets the relations between nodes drive the view of the ecosystem so essentially there is no center and there are always multiple points of view possible. The difference in approaches provides a new perspective on the ecosystem that ironically allows more options for action. The analogy we often use is the shift in views of from Ptolemy’s view of the earth at the center of the solar system over to Copernicus’s with the sun at the center. Does the shift in a view on an ecosystem matter? By looking at the entire system, with us not at the center, we enables a company to see where it sits in the system, what it means for it to be central or more peripheral, and what these positions translate into in terms of partners, co-travelers, etc.

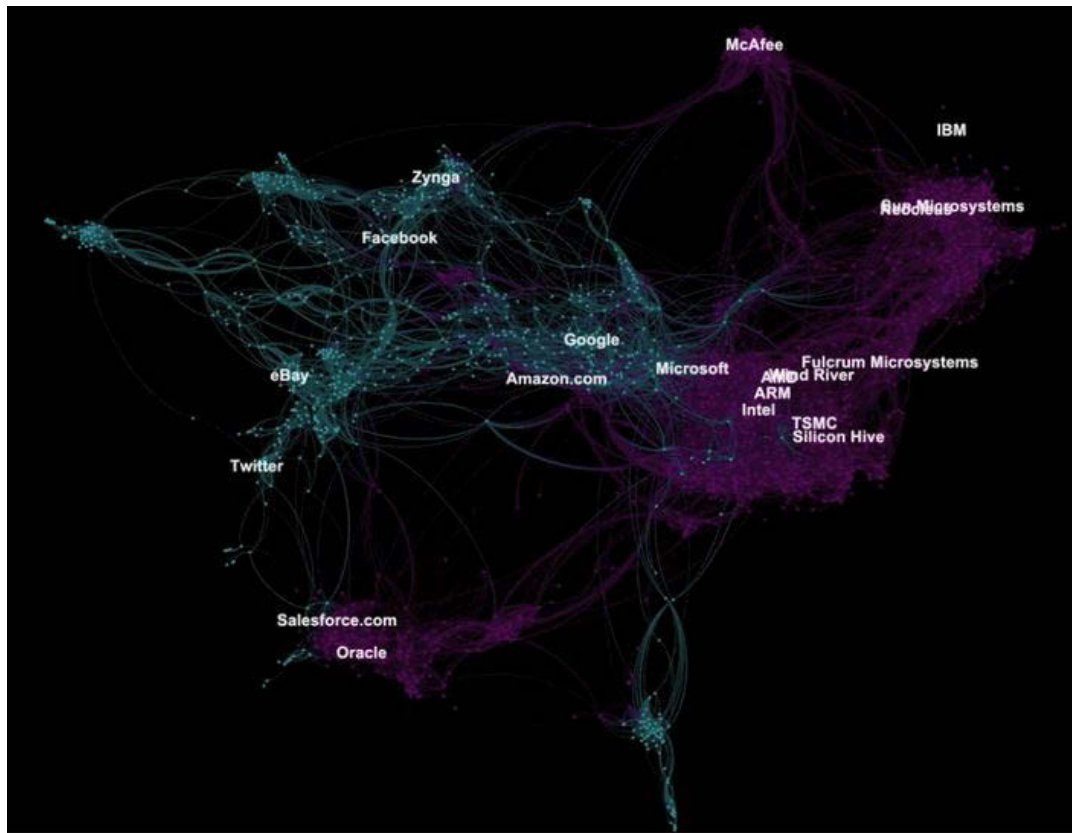


Figure 2. Data Economy Ecosystem 2011

Figure 2 shows one of the ecosystem mappings from the Data Economy program. In this mapping the blue represents the companies that have or are moving to business models that incorporate data as a value. The purple color represents companies that were operating more as traditional (c ~2000) computer technology companies. Here you can see Intel as central to the computing technology part of the ecosystem. Google, on the other hand, is positioned as a central node to the emerging data economy part of the ecosystem, with companies like Facebook and Twitter getting parts of the ecosystem to orient toward them. Being able to see this structure through data visualization tools, allows us to explore the ecosystem dynamics and understand the opportunity spaces.

Ethnography does a great job of identifying invisible forces that shape markets – social, cultural, economic, etc. If we view a market as an ordered system of producers, consumers, suppliers, and partners, the structure of the system, the map, is to a large degree dictated and shaped by the underlying forces. The market system is the organization, or ordered network of participants who seek to get something for themselves (need met, revenue) within the constraints of the forces. So, in effect, while our premise is that a market system responds to changes in the forces (flux), it is the structure of the system that tells us about the details of that response. Like iron filings in a magnetic field – the field is the driving force but it can only be seen by observing the effect on the filings. With modern data and analytics, we are

gaining access to the information to see this structure and to test hypotheses about the impact of social and cultural flux on a market system. If we believe, for example, that changes in ‘trust’ and ‘ownership’ will shift a market structure - establishing new values and bases of competition and new aggregations of technology to meet emerging market needs - it is the structure of the ecosystem – investment flows, success and failure of startups, license and partnership agreements, etc. – that is visible and reveals the dynamic structure. A company-centric view misses this perspective, relegating the value of ethnography to a local product or market fit assessment, rather than a market system and social-cultural foundation fit assessment. A single iron filing will only know if it’s pointing north or south, not that it is following the field lines of an unseen force field.

The mappings provide the key communities in an ecosystem, how they interact and connect, or don’t. The examination of the system reveals the key value propositions already emerging in the network. Understanding how the ecosystem is orienting at the moment reveals key control points and the forces of interaction. The mapping also aids in the discovery of the “needs” and more commonly, the combination of needs or value-vectors that the ecosystem is orienting toward; the newer ones that are emerging, and do not yet have the gravitational pull of the whole ecosystem, but perhaps have the potential to shift the system based on the relationships to others in the system. The mapping also provides strategic insight into the white spaces, or the gaps not being filled in the ecosystem. In yet another area of investigation into precision agriculture, John Deere provides an interesting example. When you think of John Deere you probably think about tractors, combines, and farm implements. The ecosystem may extend to small farm, home, other institutional utility machinery and construction equipment as adjacency spaces. John Deere, however, is very active in the data and analytics area. Their activity signals an awareness of what many would think was outside of their ecosystem, but is rapidly becoming a key part of their ecosystem, as John Deere seeks to transform from an era of value creation based on machinery to one that is based on data and analytics.

When ethnography makes a prediction about a shift in the foundational forces that shape a market, we can observe the system response by monitoring the companies in the ecosystem. Or, we can hypothesize what systems might evolve and attempt to test them ourselves. Just as a startup will create a minimum-viable product (MVP) to test a product’s market fit, a corporation can create a minimum-viable system or ecosystem to test if a specific configuration of companies delivering new value can become stable. We can only do this if we: 1) understand the underlying forces at play (via ethnography), 2) hypothesize potential market structures that conform to the forces, and 3) construct prototype systems that expose the new market configuration to market forces.

The focus on an ecosystem clearly changes the role of ethnography in the research. One of the changes has to do with understanding from an emic perspective how key communities might perceive the ecosystem and its needs. The idea of studying systems is not new to anthropologists; in fact anthropologists are very good at systems. We have only to look back to people like Malinowski (1984) who studied objects of trade to understand how an economic exchange system like the Kula Ring worked. The particular system of the Kula Ring, however, was available to all participants so Malinowski could interview anyone to understand the system and its work. Becker (1984), in *Art Worlds*, described a system where what we think of as a focus, the artists, is really part of a broader ecosystem of institutions and actors. In our case it wasn’t understanding artists or museums, but an understanding of

how everyday entrepreneurs made sense of their ecosystem to understand where we could optimally enter into the ecosystem.

The other shift in the ethnographic work is around needs. By starting with an examination of what needs are currently being met both in terms of consumers and other parts of the ecosystem, there is less demand to understand generic consumer needs. With 1000s of companies in a ecosystem, there are 1000s of ways needs are being met. By starting with an ecosystem we can understand whether something innovative requires development or whether a start-up can be leveraged with our own capabilities to drive the orientation of the ecosystem and to meet consumer needs.

Robust Action: Mechanism For FOC Innovation

One of the shifts we are proposing is from “plans and situated action” (Suchman 2006) around future product and service development-- where actions are linear toward goals with slight adjustments--to a model of “robust action” (Leifer 1983, 1991; Padgett and Ansell 1993; Eccles and Nohria 1992). Robust action is action directed not at a specific aim, but at maximizing flexibility under conditions of ambiguity. It accomplishes immediate objectives while preserving long-term flexibility. Actions are robust when: 1) they can be made to serve multiple purposes, all of which may not be known when the action is initiated; and 2) past actions can be made to serve new purposes. Robust action maximizes opportunities by positioning organizations advantageously in emergent ecosystems.

The concept originated in the context of understanding individual rational action in situations characterized by high levels of competition and environmental uncertainty, namely competitive chess players (Leifer 1983). Studying the strategic choices of high-level chess masters, Leifer found that rather than being able to think further ahead than their opponents, the best chess players acted in ways that maximized future flexibility even as their strategies and positions evolved. The best chess players didn’t have better strategies, or more foresight in their execution. They excelled at making flexible, multivalent moves to maximize opportunities as the game unfolds. Only when the game reached a point where opportunities to consolidate gains or win outright did these “robust action” players make moves to eliminate uncertainty and flexibility.

Robust action has more recently been utilized in the explanation of enabling of innovation. Here, it has been understood as a distributed process, highlighting action in contexts with multiple actors with conflicting interests and agendas, and focusing more directly on “material artifacts, technology, and sociotechnical systems” (Ferraro, Etzion and Gehman 2015: 372).

For example, robust action helps us understand Edison’s successful development of the electric light. Edison design of the electrical system (the light and its attendant electric generation) was *robust*, insofar as its details provided “schemas and scripts that are immediately effective in the short term, by invoking preexisting understandings, but that do not constrain us to only those existing understanding and actions, instead allowing us to discover new ways to interact with the new ideas as our understandings evolve.” (Hargadon and Douglas 2001: 488). The electric light solved immediate problems of understandability, while preserving future flexibility about what else we might do with electricity.

In these examples, we begin to see the parameters of robust action applied to product development and organizational strategy. What does multi-valence look like? Are we in an

environment of emergence and uncertainty, or one where gains can be successfully consolidated? Most importantly, what are our competitors doing in this, and adjacent, ecosystem? Is our current portfolio of offerings increasing our flexibility, offering opportunities to discover new ways to interact with new ideas? These questions flow directly from an emphasis on robust action.

Robust action is a corrective to the long-standing belief that the proper trajectory of strategic decision-making is to research, plan, design, and then execute. In this view, the ends are relatively clear, as are the challenges organizations face about execution towards those ends. The mechanisms to achieve those ends may change, but the ends are determined *a priori*. We want to enter a space, or build a product that satisfies a pain point. These are absolutely essential pursuits, but they are methods which work best where: 1) there is little competition; 2) the environment itself is relatively stable; and 3) there are enough research resources to gauge in advance that the ends are the “correct” ones to pursue. As we have described (Anderson et al 2013) these conditions simply do not characterize contemporary technology ecosystems.

Business Opportunity Canvas: Tool for Translation

One of the traditional tools for conveying reach into a form that is actionable is the persona (Cooper 1999). Arnould’s (2013) critic of the persona as an innovation tool has highlighted the strengths and weakness as a research information tool. While the persona remains an important tool for us here as we talk about “experience” (see below) we found we were faced with issues that use of a persona could not address. Given our objectives, we needed to shift from a reliance on design tools like personas to business tools. Our research created a rather complex picture, what is the best way to represent the opportunity while maintaining the sense of complexity? What is the rationale? What is the case to be made: is it comprehensive? traceable? coherent? Can we account for multiple perspectives and multiple dimensions? Too often opportunities are grounded in one point of view – a product innovation, a particular need to address, a persona, and a gap in the market. How do we go further to account for a more complex environment that begs for the incorporation of multiple perspectives, and the development of a more sophisticated, multi-dimensional sense of opportunity?

We’ve found that Osterwalder’s (2010) Business Model Canvas (BMC) is perfectly fine and effective if working with teams on existing businesses, and mapping those business models.. But what if you’re trying to create is a new business opportunity, Osterwalder’s BMC didn’t offer the ability to characterize that opportunity in a way that provides richer, better informed material for new business model development.

So, we developed the Business Opportunity Canvas (BOC) to identify business opportunities and to compliment Alex Osterwalder’s Business Model Canvas, which is a standard tool used in business innovation. The BOC identifies/hypothesizes opportunities, where the BMC tests a specific business model within an opportunity. The BOC helps us to move beyond the hypothesis and experimentation phase to create a coherent argument for the transformative business opportunity (Nagji 2012). The BOC highlights the importance of understanding deep cultural frameworks and the use of ethnography in creating these new business opportunities. The incorporation of ethnography is one of the crucial and fundamental shifts in building on the BMC. Ethnography is not just a component but is key

to several contexts in the BOC. We will highlight the ethnographic contribution throughout the rest of this discussion.

The BOC is for building a business rationale and testing that rationale for its resilience as an opportunity. The BOC provides a tool for ensuring that when you're designing your business that design is based on multiple dimensions of opportunity. The Dynamic Contexts are the core part of the BOC. We will briefly cover each of these sections. As one works through the tool, the opportunity becomes multi-dimensional by the very fact that a range of contexts informs it. Building evidence across different perspectives helps to build a more complete rationale, a better hypothesis and so a business opportunity is more likely to succeed. The BOC provides a starting point for potential customer segment, value proposition, key resources and activities, and other elements of the BMC.

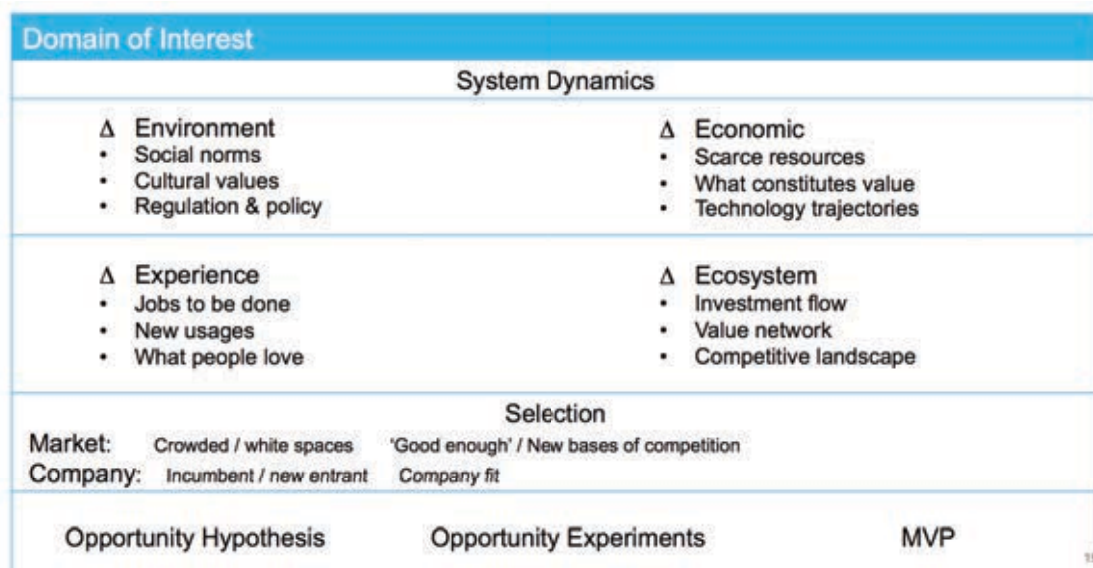


Figure 3. Business Opportunity Canvas Context Areas

The *Dynamic Contexts* is the section that diverges most significantly from Osterwalder's Business Model Canvas. This section builds off of our assumption of a rapidly changing ecosystem in which all business innovation is happening today. We break it out to four key parts: Environment, Economic, Experience and Ecosystem. These dynamic contexts form the basis of where to look and what is to be evaluated and are the foundation of the business opportunity, which without the proper foundation, will not succeed no matter how many pivots an organization is able to take.

Environment

Culture happens. The key is knowing what are potential areas of shifts that provide transformational business opportunities. Trends are seldom transformational; they become something the company just knows and can plan corporate strategy around. Will Gen Z purchasers be different than Gen Y – sure. We can do research on Gen Z and plan

accordingly because they will move slowly to become the key targets of marketers and then we can slowly adjust. The fact of no “surprises” also means no unique opportunities. Other areas of culture that are going through more radical shifts that often touches upon the core of culture and society. We have tended to focus around those that have had to do with shifts of moving from an analog society to a digital one. But digitization is not the only arena where this is relevant. One could also explore the fundamental shifts around gender, and what it means to be “male”. We’ve talked about this as moments when culture is in-flux, where there is going to be a new social pattern and potentially different set of cultural values, but it is unclear at some present moment what those are going to be.

Economic

The economic dynamic context involves the things people and industries create and/or believe will be resources to others. Some of these are likely to be under your control and design, like technologies, IP, unique features and capabilities. But often you’ll need to tap into shifts with resources. For the Data Economy work, we considered the rise of data as a resource, and personal data as a resource that had not yet been tapped. A EU Secretary had declared it the new oil and the World Economic Forum was highlighting it as a new asset class (WEF 2011). But technology trajectories are also important. When we did a BOC around Intel’s Galileo and IoT, we considered that 3D printers had become “good enough” to be part of a new economic engine. Broadly speaking, this dynamic context tried to capture the relevant broader economic changes occurring that must be considered for any given business opportunity.

Experience

The experience context taps into what are the key jobs to be done, the new usages that are possible and the emotional context of the offering. The experience gets to the sentiment, beyond the functional elements of a product - the emotional, the personal, ease of use, reliability, and qualitative elements. The iPhone is a classic example where the experience of using a phone changed fundamentally and conferred competitive advantage in part based on the experience. Some industries and markets are based entirely on experience dimensions – ease of use, atmosphere or other qualities, that is, they no longer compete on function. This has been especially true in the hospitality industry – think of hotels or restaurants. The dominance of experience also happens when the functional job has largely reached the good enough point for most customers. Coffee is a great example. Coffee has a clear functional job. You can go to Dunkin Donuts, your office break room, or 7 eleven and grab a cup. But when that job is wrapped in an experience that communicates qualities – like comfort, warmth, coziness, even artistry, it can become a powerful differentiator and dimension of opportunity. Many businesses have capitalized on the opportunity to design compelling experiences around functional jobs and some of the classic examples are Starbucks, the Ritz-Carlton, BMW, and even Facebook in contrast to MySpace. Experience becomes a new basis of competition. Of the four contexts, this one has been the most explored in ethnographic work. Here, ethnographers have focused on the daily routines, the variety of contexts where use happens, the motivations for people using and the responses that people have.

Ecosystem

The ecosystem is another foundational dynamic context to creating a business opportunity. Your company probably has plenty of "market trend" and "social signals" reports, but deep down there is the suspicion that there are two guys in a garage somewhere aiming to eat your lunch. The ecosystem approach creates the ability to discover and capture those two guys, not just the usual sets of competitors and fellow travelers. An ecosystem-based approach captures key components of the market context and the competitive environment. This space has been well documented in the business literature like Kim's *Blue Ocean Strategy* or Christensen's *Innovators Dilemma* and others as a way to intentionally identify and design disruptive or uncontested positions and to catalyze new markets. Some of the key questions to be addressed in this context are: Is someone else trying to do the same job as you? Deliver on the same value prop? Is it a crowded space? Are there jobs where people are underserved and you have an opportunity to serve them? Are there opportunities to disrupt complacent players in an ecosystem? Are there gaps, white spaces in the market environment? Are there entirely new jobs emerging in the ecosystem that no one is serving?

Selection

Which hypothesis to test and market-system to prototype is a matter of selection based on several business factors. We prefer systems that are distinct from a system we can observe in the wild (i.e. a white space) of an ecosystem. For example, to the test a business model that is not sustainable under the current ecosystem and which we believe might be under the new ecosystem (e.g. non-advertising for personal data). We can test if the bases of competition are shifting because the current product trajectories have reached a 'good enough' point for general consumption (new market Disruption). And we can test the ability to democratize what was previously a scarce resource, providing more people with a lower quality (than current might end products) but better alternative solution (low-end disruption). Testing these hypotheses positions us to understand bigger opportunities that are not small adjustments to an existing known yet competitive landscape that we might pursue as a new entrant in a field of powerful incumbents. Rather, they identify the emerging control points, or white spaces; the shifting bases of competition, and disruptive opportunities in the ecosystem.

For the Data Economy project we found the greatest opportunity space around providing control to users of the data they themselves created. That is to say, when we started the project people had no control over their data – Google did or Fitbit did, but not the users. This was a giant white space in the data landscape – there was virtually no activity in the ecosystem and no clear business model that would succeed here. We understood that personal use of personal data was an area where Intel could make an intervention given our technologies. We also assessed that personal low end analytics, not at the scale of enterprise analytics, would offer us a disruptive opportunity that was unlikely to get a competitive response from other aggregators going after big margin enterprise business. Finally, we felt we could build a foothold in the app developer community by providing them with a low cost analytics tool.

Opportunity Hypothesis

Even though we are not a start-up, we follow LEAN practices around an opportunity hypothesis (Eisenmann 2011). The business hypotheses is translated into a statement that is falsifiable. The hypothesis is then tested using a series of "minimum viable products," each of which represents the smallest set of features/activities needed to rigorously validate a concept. Based on test feedback, we then decide whether to persevere with the business model, "pivot" by changing some model elements, or abandon the business opportunity entirely. The hypothesis gives us a focus for information, as well as, grounding robust action. Our working hypothesis around the data economy was we could offer analytics-as-a-service to enable developers to provide 'discovery' value to consumers through data under the consumers' control. The analytics service would enable app developers to create applications with capabilities to rival larger ISVs capabilities.

Opportunity Experiments

Opportunity experiments have taken many forms from webpages to apps to hack-a-thons to incubating companies to investments in start-ups. The experiments were probes into the systems around the core tenants of the core business opportunity for data economy. In this vein we sponsored the first (and second) National Day of Civic Hacking with the challenge of using personal data with larger public data sets. There were over 11,000 participants from 96 cities. Projects from the hack-a-thon became a data for our understanding of the validity of our hypothesis. We were able to experiments with three things: 1) the kinds of business models that might emerge from the participants; 2) the value their apps attempted to address for consumers; and 3) the value of an analytics platform.

Minimal Viable Product

A minimum viable product is one which has just those features and no more that allow you to release a product that early adopters can see and use. The point is that at least some early adopters will resonate with it, pay you money for it, and/or provide feedback. The MVP approach allows for the use of robust action. The MVP is a kernel of the business opportunity vision that solves a core problem, with general feature areas, and is launched to early adopters who would value that kind of solution. The point is also that these early adopters will be the most forgiving and because they can cognitively fill in features that aren't quite there with just the core of the business opportunity; tent-pole features that indicate the direction where the product will go. Use and feedback from these early adopters is key.

In the Data Economy project, six teams creating consumer facing apps and covering a spectrum of consumer values and business model were selected to be part of a Data Services Accelerator. Amongst other things, the Accelerator provided the teams with an enterprise-level analytics capability for their use. The Accelerator enabled us to test the value of democratized analytics as a service. Further, the app developers were enabling joint use of the data created in the apps, so users could choose if they wanted the data from one of the apps to be shared with other apps. This allowed us to test how developers and consumers might respond to a fuller set of applications at a different scale.

The alternative approach would be to build the entire product, test it along the way, and then release it. The problem with this approach is that it is costly and real world reactions aren't possible until it is complete and launched. Another approach is to launch and iterate often. The key problem with this approach is the public feedback. While feedback does provide direction, feedback from different groups may be at odds with each other or what you think is right, at which point a new version is going to disappoint some customers. Here we were able to gather feedback, while containing the risk to the future form of the analytics service, as well as managing risk to the corporation.

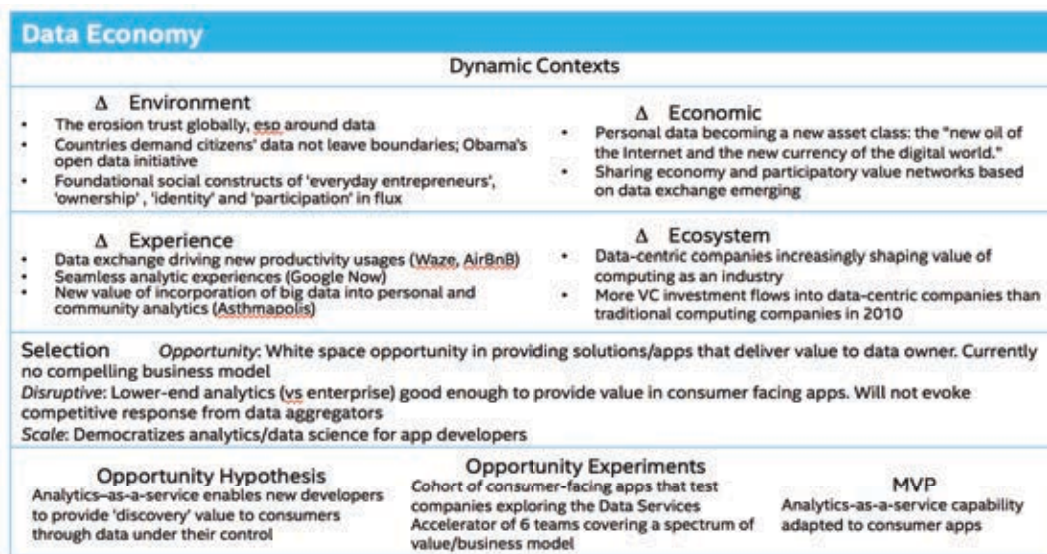


Figure 4. Example Business Opportunity Canvas Applied to Data Economy

BOC in Sum

Any one of these *dynamic contexts* can be a starting point. But individually they are not the whole picture. Each is necessary but not sufficient. It's not just about social environment, the jobs and needs, and customer insights. It's not just about economics, the product or technology innovation, or a key resource. It's not just about the user experience. It's not just about ecosystem, the competitive advantage or a gap in the market. It's not just about mega trends. . . . It's about a synthesis of all of the dynamic contexts. The tool provides the means to assemble the business opportunity, generate discussion and common agreement, a way to compare different business opportunities, and a core set of information that management needs to make an informed decision.

A critical problem is always how to make bridges between the research and action. Tools like personas have attempted to bridge that gap for a particular kind of tool in design and marketing. Personas can support the process of product development, however they fail short on two accounts: (1) they can only account for a very small part of the picture needed to develop a new business model. They focus on just one perspective, the user, and the needs, desires, and constraints of the user. The BOC is multiperspectival. As we've demonstrated it is the sum of perspectives gives the BOC power as a tool in establishing the

groundwork for a business innovation; and (2) Personas are static. The persona works in part because it can't be changed. Everyone in a project comes to understand and know the persona. The persona can't be contorted to the will of the designers, developers or engineers- the persona stands firm (Cooper 2004). Personas enable holding fast to shared values in design and marketing. Part of the power of the BOC's dynamic contexts is they are capable of change during the development of the business plan. Unlike personas, the dynamic contexts of BOC enable robust action. Of course this flexibility is both the opportunity and greatest challenge for most large organizations who are wedded deeply to traditional, culturally established ways of thinking and acting

BOC is also different than design research. A business opportunity doesn't emerge out of a set of research that is used to create a workshop or brainstorming sessions, out of which little ever materializes. BOC doesn't necessarily make people who use it feel hip or creative. It does provide a solid boundary object from which many parts and players in the company can come together to understand what can to be accomplished, how it is going to happen and where the check points are at along the way. It is not as much about "thinking" as it is about "acting" on opportunities.

ETHNOGRAPHIC IMPLICATIONS

For years we have argued for the importance of field research work in strategy and business innovation (Anderson et al 2009). The approach we've developed makes field research an integral part all along the process of creating a transformational business opportunity. The cornerstone to our approach is an anthropological or sociological understanding of areas in the social-cultural that are in flux – understanding the Dynamic Context of the System. We propose three considerations to ethnography of practice in the business community to address business opportunities: (1) ask the big questions and work to identify directions that are equally big and ambitious, (2) a focus on the knowledge produced not on how it is produced and (3) more emphasis on cultural dynamics, not just the "native" experience. By expanding ethnography in these ways we can not only address issues around design and UX, but also address issues of corporate strategy and business opportunities.

Without a solid corner stone of social practices and cultural values business shifts would not yield successful business opportunities. Tim Ingold (2008) in writing about the state of anthropology and ethnography, draws an analogy between anthropology and art. While, there may be some issues around the analogy, the essay raises a quite important point in this discussion of ethnography's role for ethnographic work in transformational business opportunity development. He notes that the questions being asked determine the value of the research. Of course Ingold is interested in the big and important questions in anthropology today, especially in the technology area. The logic of Ingold's argument is appropriate. In the absence of interesting, big philosophical questions about life, society and humanity, the value of ethnographic research to help businesses create transformational opportunities is diminished. Our starting point for business opportunities is exactly the kinds of questions with which traditional ethnographic research was concerned. Ingold's argument is that in present day anthropology is not asking these questions and suffering as a result; the level of the question scopes the quality and level of production. Of course academics and practicing ethnographers have slightly different orientations. Academics have commitments to ask and explore. Practice research has to be committed to ask and then answer. Still, we

worry that the bulk of ethnographic work in and for industry is the same as academia – garbage in, garbage out.

What then are “transformational” kinds of questions that we should be addressing? An area where we’ve been interested at Intel has been around some of transformations that have been occurring, or not, as more of social life moves into the realm of digital. Bill Maurer, at the UCI Institute on Money, for example is asking questions about the meaning of digital and physical when people deal with money and transactions. Basically, going back to classic anthropological questions, these big questions, are about the social nature of economics and exchange. These understandings will be at the core of any transformational business opportunity in digital currencies. In our work, we were interested in the changing role of people in the economic system, particularly as they moved from the classic roles from either consumer or producer to participants. One version of that role was “everyday entrepreneurs” and another was “makers”. Interpreting the shifting roles, changing values, labor dynamics, how that was changing the social underpinnings of society, and what are new forms of “the collective” emerged as a result were imperative to being able to identify and outline transformational business opportunities for the Data Economy project. The key shifts we are proposing in this paper for the EPIC community are from both a focus on *how* knowledge is produced (methods) and description of contexts *to* the *knowledge we are producing*. This is where EPIC started 10 years ago – using knowledge produced in our day jobs to improve theories of the social and cultural in order for us to translate true opportunities to business. The need to return to a praxis approach is more crucial than ever as changing social cultural shift under business models.

We want to be clear, this is a not a shift to be more “academic”, by which we mean start every presentation with the theoretical groundings of the research question and subsequent results. Nor do we feel there is no need for contextual descriptions for design or new methods for us to do our work. Rather, we are requiring that people conducting ethnographic work do that translation, as well as, the translation of field research, appropriately for the business audience. It is not the finance officer’s job to know the importance of performance theory for wearables (or why glassholes emerged) or appreciate the tone of Appanduri’s *imaginaries* for virtual reality technologies. It is not the engineers’ job to appreciate household dynamics and kinship structures of suburban Brazilians. It is ours job to use these intellectual tools, and so many other, just as we’ve used methodological tools: to build cases around how aspects of the social and cultural hold promise for new grounded opportunities for transformational businesses. It is our job to have rich cultural knowledge to understand social and cultural dynamics to ensure business is on a solid and even lucrative foundation. This type of knowledge is not going to happen only in the 3/3/3 approach of strategy consultancies or 2/2/2/ of design research firms, unless we build our knowledge over time and share it with each other. The EPIC people platform provides a year round space to have discussions around content. The EPIC conference provides a space to codify what we are learning for the community to build upon.

From a methods perspective, we’re not arguing for longer fieldwork necessarily. Let’s take “time in the field” as an example. Mike Agar (2013) recounts two stories where he provided value. In one case, he had been asked to consult about the Thomas Edison Museum in West Orange, and had trouble getting the town to participate in museum activities. Agar talked to one participant at the Chamber of Commerce. The man told him how the factory where the museum was now used to be the lifeblood of the town and source

of livelihood for many in West Orange. The company had decided to close this factory and moved the factory to Florida, a right to work state. The result for West Orange was an economic collapse. The factory, now a museum, became both a marker of better times never to return and a betrayal by the Edison Company. People wanted nothing to do with it and wished it was gone. It took him one interview. Just in case you might consider Agar a super ethnographer, another example from Agar is his work on illegal drug use in Baltimore. Agar had been active in drug use research in the '80's but had abandoned the topic for a while. When he came back to the streets of Baltimore in the 90's, drug use was worse than ever – despite millions of dollars on the “War on Drugs”. Agar conducted a multi-year study of the “why” of illegal drug epidemics in the U.S. He developed the concept of “trend theory” on illegal drug use (Agar 2007) that he could have never done in less than several years.

Let's be honest: how the knowledge gets produced does not matter as long as the knowledge produced is of value. Many of the tools we've used over the years are in part performance art and have been quickly adopted and adapted by market research organizations staffed by business analysts and engineers. Photographs have been a tool that validates the researcher having been “there”, and actually “seeing” a context as if context is something to be seen. Video clips let the audience “hear” straight from research participants so we know the researcher is telling the true story. Our data visualizations demonstrated we had large sample size and captured “real” data. DScout is touted as innovative ESM (Experience Sampling Method), while the value add appears to be to prove that real richer data (than the 1980s beeper studies) can be collected from real people at real times. In the 90's we conducted urban safaris of drug locations with drug users in Denver. This was a great method to give funders an experience, a Disney ride of drug life on the streets. It garnered money for research. We learned what was and wasn't of interest to funders. But not insight – insight was needed before these began. We've used similar participatory methods with engineers. Generally they come back converted to needing to do more home studies. We brought “the other” to life in a meaningful and shared experience with them. Powerful stuff. Perhaps insights about what to tweak in the product are learned but basic information to create a transformational project or create a strategic direction fall flat without an understanding of the invisible processes at play. We (Nafus 2006) have documented this pattern before, yet as a community we continue to focus on techniques that demonstrate “the real” or create “real experiences” rather than substantive knowledge created.

The one exception to a lack of concern about methods is the declining use of participant observation, perhaps the biggest threat to our ability to know much of anything of any use. As a community we have moved away from “participating” and “observing” and moved more toward “listening” to what people say. One-on-one, or sometimes called contextual interviews or worse, Skype interviews are excellent at capturing the spoken word but fail to get to important actions or actions that can inform cultural shifts. Talking about reasons for buying a different PC is very different than all the actions and actors that form practices behind the purchase that replaces an existing PC. The shift away from the empirical basis as our foundation exposes us to dangers of credibility and knowledge production. The obvious dangers of over reliance here are (1) we will have no moral or practical authority to highlight differences between what people say and do and (2) as anthropologists from Malinowski on have pointed out, people often can't articulate the social and cultural structural foundations of their lives. Of course, we need to capture new methods but in the process we need to

elucidate how those methods have advanced cultural or social knowledge. Conveying the sense of the “real” is really no longer enough without the addition of new knowledge produced to address key social and cultural infrastructural issues.

Finally, we’d like to change our origin story. Almost every design ethnography or design anthropology talk or paper we wrote or gave in the 1990s quoted Malinowski’s (1984) “The final goal ... is to grasp the native's point of view, his relation to life, to realize his vision of his world” (p25). While this is apt for parts of our work that fall into the Dynamic Context of Experience, it isn’t foundational as we move to business opportunities. As we move into the next decade of business innovation, Geertz poses a stronger starting foundation. “Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs...” Our discipline starts from a place that also says that people, societies and cultures are largely rational, but that rationality is understandable only by knowing the system. If we want to understand why people are doing what they are doing, we have to look at what they assume to be true. Those assumptions are what we take to be culture. If we need to understand foundational shifts, we need to understand the webs and the dynamics behind them, just like we do with networks in ecosystems.

Clifford Geertz, who talks about man <sic> as an animal suspended in webs of significance that he himself has spun--- this expression works because it helps us see how people never escape their culture. There is no culture-free existence. Geertz’s statement is important in that it assumes that culture can in fact be changed. Additionally, it leaves open the notion that at any time there are multiple threads of culture happening simultaneously. Finally, it is clear that people can spin new webs and that companies necessarily facilitate the spinning of new webs. For better or for worse, companies participate in culture; in what it is and in how it is lived. Technologies can enable new webs. Or businesses can highlight one web over another. Of course, it isn’t easy to wrestle with the old ones or dominating threads. Parting with the old webs and the creation of new is where our place as cultural translators to business operates. Our purpose is in part to understand how those webs work-- to unpack what those systems of beliefs are as they are unfolding. They never completely unfold but they are constantly unfolding. Our job isn’t to capture a perfect picture of the web but a good enough understanding to provide footing for robust action by companies. In the end, robust action is not just how we want to help companies operate but is also how we as researchers should approach our research.

CONCLUSION

Innovation is not magic; it is rigorous work. While running a sustaining business in a known market is coordinated by tested tools and frameworks (Porter Five-Forces Model, Moore’s ecosystem map, model PnLs, etc.), innovation often is viewed as driven by inspiration and even serendipity. Thus, for many companies innovation remains a sprawling set of activities, energetic but uncoordinated. Research happens here. Brainstorms happen there. And decisions are made entirely somewhere else. We find that transformative business opportunities do not emerge from a room full of sticky notes. And yet the imperative for growth through transformational innovation is clear. In today’s dynamic business environment in which bases of competition shift rapidly, what constitutes value changes, and long-held cultural/social constructs are rebuilt, companies must find analogous tools and

frameworks to structure the search for new growth opportunities in a changed environment. Recognizing that the search for growth is indeed initially a *search* challenge (vs. an *execution* challenge), the tools and frameworks must structure and progressively focus the search through an understanding of underlying market fundamentals (flux), hypothesis of a new market system (order), broad exploration of value creation, and experimentation with value capture (catalyze).

What we've presented is a systematic approach to business opportunities that is grounded in multiperspectival research, tested in the real world, and matched to the corporation's culture. Furthermore, the frameworks presented serve to translate ethnographic insights into more traditional innovation language so that corporations can better absorb the learning and weigh the cost of pursuing transformational options against sustaining investments. The presented approach scales Lean Startup methods, which seek to discover a product/market fit, to corporate scales by seeking to discover a corporate-role/transformed-ecosystem fit.

To succeed in that process, some modification to work as we have known it needs to happen. We have suggested expanding the research focus to shift to include the broader understanding of the ecosystem as that unit of analysis that helps to discover the dynamics necessary to succeed in business innovation. Robust Action, we argued, provides an orientation to both business innovation and research that is necessary in a time of dynamic change. We offered the BOC as a tool that incorporates and translates different types of ethnographic field research into a form that is both usable and actionable in a business environment. Finally, we proposed a shift of the importance of ethnography from how knowledge is produced to the actual knowledge produced in order to focus on the social and cultural in foundation of business innovation. By following our best known methods on how to manage business innovation as an integrated complex system, we can harness ethnography's energy and make it a reliable driver of growth.

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A Seat at the Table of Social Change through Service Design

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Services and access to them are related to core societal concerns such as sustainability and the role of families and communities in people's lives, themes of enduring concern to the discipline of anthropology. Our aim in this paper is to begin to outline arguments for why anthropology and the EPIC community more broadly should have a prominent seat at the table of understanding and engaging social change emanating from innovations in the service economy. The discourse on services advises that we are in the middle of a major transformation akin to the move from agriculture to manufacturing, where modern economies are becoming service economies and people's relations to material possessions are being reconfigured through services. We suggest that if a major shift is underway in how people get on in the world then it is incumbent upon the EPIC community to consider the opportunities and limitations for shaping this transformation.

INTRODUCTION

The literature on services stresses how service economies are less focused on the production of material goods, a characteristic of industrial societies, and more focused on transformations of state, for example, from dirty to clean (cleaning services), from ignorant to informed (educational services), from sick to healthy (healthcare services). Most definitions of services distinguish them from goods, mentioning their intangibility and their inability to be possessed, stored, or transported (George & Berry, 1981; Lovelock, 1996; Zeithaml & Bitner, 1996). It is noted that services only exist at the time of their consumption (Vargo & Lusch, 2004), when skill and expertise are applied to achieve a transformation or produce some outcome. In this way services are co-produced through interactions between providers of the service and those who “consume” or receive it. And equally important, the value of the service is dependent on particular relationships between service providers and consumers (Gutek, 1995). Clearly an economy increasingly fueled by services with these characteristics is changing the sociomaterial conditions in which we live. Services are world-making in that their success requires people who recognize and value the transformations brought about by a changing and expanding collection of services.

The dramatic expansion in the scope and complexity of services makes it appropriate to speak of “service worlds” (Bryson et al., 2004) where services are integrated into the fabric of contemporary life and in the process transform it – for example, when the things that used to be done in and by families and communities become commodified and are offered as services. Furthermore services provide an important portal through which assumptions about expertise and intentionality flow into previously “untouched” arenas of social life – for example, when ordinary people become taxi drivers or homeowners become hoteliers

offering rooms in their homes for a price. Because contemporary service worlds include more than services, an engaged scholarship on services and their design must include a critical assessment of how services are conceptualized and designed.

In recent years there have been interdisciplinary efforts to create a “science of services” grounded primarily in the disciplines of business marketing and engineering that seeks to discover generalizable knowledge about services in order ultimately to better control and design them. The danger, of course, is that such a science may replicate assumptions of the professional fields and disciplines that are themselves firmly grounded in specific ways of knowing and societal conventions. Accompanying the development of service science has been the extension of the discourses of design to include services where it is claimed services can be designed and implemented from plans that reflect human intentions. Although it has been argued that designing is a basic human capability (Kingery, 2001), design also has become institutionalized and popularized as a field of specialized expertise. As social scientists interested in understanding the human condition and contributing to the design of services that contribute to human betterment, these new developments in both service science and service design are of interest and provide arenas where the unique perspectives of anthropology can make significant contributions (Blomberg & Darrah, 2015).

To explore these possibilities we have organized the paper in three sections. The first examines changes that are taking place in the service landscape and raises the question of what kind of social change we imagine is shaped by services and the worlds that attend them. The second section considers two notable responses to the expansion of services – attempts to create a science of services and efforts to develop a professional practice of service design. In the third section we explore some of the ways the EPIC community might respond to the world-making opportunities services offer.

CHANGING SERVICE LANDSCAPE¹

We often think of the service sector as providing low-end work in food service or janitorial services, but for years services have also included high-end jobs such as in law and medicine. Even a casual look at services shows their sheer diversity. They included the hands-on services of janitors, teachers, doctors and chefs; the technology-mediated services of automated bank teller machines, self-service checkout lanes, and online travel reservations; and the business-to-business services of IT outsourcing, package delivery, and insurance claims processing. There are differing views on the impact of the service economy on work, some are rather optimistic, focusing on knowledge-intensive and high-skilled labor (Frenkel et al., 1999) and on the reduced need to own things when they are offered as services (Thackara, 2005), others portrays service sector jobs as primarily menial, gendered, and amenable to offshoring (Rothman, 1998), and still others imagine the end of work where machines and artificial intelligences will replace the need for human labor (Arthur, 2011; Zysman, 2006). In addition, services enabled by digital technology have added to the near ubiquitous access to many services and, coupled with “big data” analytics, hyper-customized services that provide personalized services to match individual characteristics with custom offerings are becoming commonplace. The proliferation of these new kinds of services and service relationships are shaping the service worlds we have come to inhabit. Part of the story then of the recent rise in services involves the emergence of new divisions of labor between humans and machines, some of which are dislocating workers and redefining

human-to-human relations along with the non-human actors involved in delivering the service. We describe a few of the recent changes in the service landscape that are having an impact on communities, families, identities, organizations, and institutions.

Product-Service Systems

Product firms have begun to focus more and more on the services that are enabled through the use of their products. These product-service systems supplement or replace traditional product offerings building on a strategy of bundling services with products. Firms opt to retain ownership of the product, and only sell the service enabled by the product. Companies like Salesforce.com, Intuit, and Adobe provide software as a service (SaaS) where software applications are hosted by service providers and made available to customers over the Internet. So instead of buying software packages and/or licenses and installing them on proprietary hardware, firms are paying for the capabilities the software provides in increments that match their consumption needs. Firms have been moving toward this “servitization” of products model for a number of reasons, but importantly they realize there is more profit to be made from selling services than products. This trend has meant that people and organizations no longer need to own the products to receive their benefits and this in turn has a potentially profound affect on economic, policy, and tax systems that privilege capital over labor.

Peer-to-peer

Services once marketed by businesses are now being made available through technology-enabled networks of people. These peer-to-peer services bypass traditional service providers and enable people to procure services directly from their peers. The emblematic example is Airbnb that allows individuals to offer spare rooms in their homes by positioning rooms as “under-utilized assets” that become part of a network of “hotel rooms” where guests search, select, negotiate, pay for, and review the service. Information technology makes finding and managing these resources a whole lot easier and in some cases possible at all.

Early on these peer-to-peer models of service were lauded as contributing to the creation of a “sharing economy” where people could more easily share their material possessions, sometimes for a fee, thus reducing the need for manufactured goods. Thackara (2005: 7) opined that, “For more or less anything heavy and fixed, we don’t have to own them—just know how and where to find them.” Furthermore it was argued that people could share their skills in meal preparation or graphic design through online marketplaces like Task Rabbit or eLance or through collaborative exchange networks. And in recent years time banking (Seyfang, 2004; 2006) has become a non-monetary mechanism for service exchange where people invest their time by providing services to others for which they have expertise with the expectation that they will be able to call upon others to provide services to them (Carroll, 2013). Time banking connects to a long history of neighbors helping neighbors with ICT making it easier to keep track of people’s time investments. However, also changing are the informal accounting practices embedded in the stories neighbors formerly told each other as a means of remembering past acts of kindness.

These shifting service landscapes, enabled by technology, are reworking people’s relations to one another and to their possessions. For example, long-standing working class

and professional jobs may be threatened by people who dabble, or have few alternatives but to participate in the so-called “gig economy” where people directly provide their services for a fee. These new service models also raise issues about the role of governments in people’s lives and in the redistribution of wealth when services once provided by governmental agencies are offered through collaborative exchange networks.

Services and the Internet

Also contributing to the growth in new services has been the arrival of the “Internet of Things” where sensors send and receive information that connect people, places, and things to the Internet and to each other, thereby generating a dramatic increase in the data streams of these interconnections. Every day we learn of new apps that analyze these data to report on, for example, buying habits, blood sugar levels, traffic congestion patterns, voting behaviors, parking space availability, and airline ticket fares. Mobile devices such as smart phones and tablets give anytime access to these services with embedded GPS chips enabling location-aware services. Many digitally enabled services involve “hidden” machine-to-machine interactions that aggregate data from diverse sources, connect frequency data with geospatial displays, route users through task flows, and perform behind the scene calculations. Many of these functions were until recently performed by a skilled human workforce, but efficiencies in cost and improvements in quality and reliability mean that data-driven algorithms are displacing people at an ever growing rate. Reflecting on the growth in these technology enabled services, Arthur (2011:2) worries that a “Second Economy” is emerging where human labor is displaced by machines and, “Business processes that once took place among human beings are now being executed electronically ... in an unseen domain that is strictly digital.”

In a different way, the Internet also has become increasingly important for the distribution of services, extending the reach of services into new and sometimes unforeseen markets and providing opportunities for a varied set of actors to become involved in economic activities. Older configurations of exclusively public or private concerns are yielding to more complex and idiosyncratic arrangements that bring together non-profits, public funding, foundation funding, exchange or barter, and donations. Notable here are crowd funding firms like Kickstarter and Experiment.com, where people with projects appeal to the public for financial support with expectations of receiving some benefit, although not necessarily monetary, in return.

Services and Social Change

Simply contrasting services or the service economy with goods or manufacturing oversimplifies the complexity and ambiguity of services and the extent to which they are changing the fabric of contemporary life. While services sometimes replace activities that were performed outside an economic sphere, such as when we use a restaurant to cook our meals or an accountant to prepare our taxes, they also exist in bundles that create and support entirely new kinds of activities, often in ways we barely comprehend. We have chosen to use the concept of service worlds (Bryson, et al., 2004) to draw attention to how services contribute to social change and the organization of society. It is difficult to imagine how we can engage contemporary social life for human betterment without understanding

the service worlds that flow into and out of the everyday lives of people. Service worlds have implications for how people relate and interact, what they value or think is part of the good life, and even what it means to be a person. Accordingly, we argue both that services are the loci of considerable social change and, furthermore, that they will continue to alter social arrangements. Regardless of intent, many of these alterations will have the sort of unintended consequences that have long attracted the gaze of anthropologists.

FINDING A SEAT AT THE TABLE

The growth of the service economy and the importance of services in defining how we live and interact with each other have led to efforts to systematize scientific knowledge about services and to professionalize service design. To affect change through service worlds it is critical to have a seat at the table where services are being conceptualized and designed. How services are conceptualized as the objects of design frames the possibilities for involvement in their production and enactment. And yet institutions are emerging that study and design services that are not benefiting from the cross-cultural and perspectival sensibilities of anthropology. Services are changing the social landscape and the voices of ethnographers and anthropologists need to contribute to the discourse on services and the ways we imagine how best to shape service worlds through intentionality and engagement.

A Science of Services

Concepts from engineering and management are being applied to services in an effort to understand and gain more control over the impact services are having on the economy and society (Maglio et al., 2006; Spohrer & Maglio, 2008; 2010). These efforts build on previous research on services in the field marketing (Grönroos, 1984; Gummesson, 1987; Lovelock & Wirtz, 2004; Oliver et al., 1997; Teboul, 2006) with the aim of creating a science of services. Motivated in part by an acknowledgement that science proceeds by developing and refining concepts to describe the phenomena of interest, scholars and practitioners have been developing a set of concepts and a vocabulary to systematically inquire about services that is distinct from the language of manufacturing (Saco & Goncalves, 2008). While the scholarship on services continues to evolve rapidly and its nomenclature has not always been consistent, the aim is to allow scholars who approach services from different standpoints to collaborate. While a common language does not by itself resolve disciplinary differences in knowledge claims and know-how, the hope is that systematic, agreed upon approaches to describing services will enable the design of more complex services and ultimately introduce greater predictability into service outcomes.

For our discussion we focus on three overarching concepts used to describe and understand contemporary services: *services*, *service encounters*, and *service systems*. Our interest is to explore the consequences of particular ways of conceptualizing services on how we understand and engage with service worlds.

The concept of services is foundational and without it the notion of a service science makes little sense and yet it can be vexing precisely because it seems so obvious and familiar. The concept is widely used by scholars and ordinary folk alike. While there are numerous scholarly definitions of services, early definitions almost always make reference to how services differ from goods. It is said that services provide intangible benefits that satisfy

identified needs through some form of exchange (Zeithaml, 1981; Rushton & Carson, 1989; Berry, 1995). Also emphasized is the difficulty of separating service production from consumption, noting that services are produced as they are consumed (Zeithaml et al., 1985). An implication is that services cannot be inventoried or stored since they do not exist until they are consumed. Finally definitions stress the difficulty of standardizing services because of the heterogeneity of service recipients who are involved in producing the service. Recently scholars have challenged these as the defining characteristics of services because they are not uniformly applicable to all services and instead have suggested that a more useful and universal distinction between services and goods is that services cannot be owned (Lovelock & Gummesson, 2004). Services give recipients the right of access to objects and to the labor and expertise of others.

Services are often characterized as being simultaneously produced and consumed which positions the service recipient in an intimate relationship with the production process (Zeithaml et al., 1985). In essence service recipients are viewed as co-producers of the service as they mobilize knowledge and other resources in the service process. In a related way they can also be viewed as the co-creators of value because their actions affect service outcomes and the attending value received by both provider and recipient (Vargo & Lusch, 2008). Because services are enacted by people who participate in different institutions and lifestyles, and who thus bring different skills, knowledge, and expectations to the service encounter, co-production and co-creation introduce a significant element of unpredictability into service outcomes and value (Bitner et al., 1997; Grönroos, 2011).

If services are co-productions and co-creations, people must learn how to participate appropriately in service encounters by identifying and ascribing meaning to characteristic elements of the service. Part of being a competent member of society involves learning how to perform in the context of a service exchange. Services viewed as the processes of co-producing outcomes and co-creating value, places tangible goods in a secondary role to the things people do. This observation figures into the notion of a service-dominant logic put forth by Vargo and Lusch (2004) who argue that services, not goods, should be the fundamental unit of exchange. In this sense “things” are valued in use, which suggests that goods too have to be enacted for their value to be realized. Service dominant logic challenged earlier definitions of services that suggested a strong disjuncture between services as intangible and goods as material. These observations are not particularly surprising to anthropologists who have long understood that people have always lived in social worlds that are simultaneously material and immaterial and they have always been entangled with each other in creating things, ideas, and interactions.

A second and foundational concept in the development of a science of service is the service encounter where services are made visible through interactions among people and things (Shostack, 1985; Clatworthy, 2010). It is through encounters between service providers and recipients that services are realized. The concept of service encounter is seemingly simple, but it belies the complexity and variability of encounters. An encounter with a massage therapist, involving bodily contact and ongoing communication about appropriate levels of pain, is notably different from an encounter with a service technician located many time zones away occurring through a chat line. People come to service encounters with expectations they learn by participating in and being part of a social milieu (Meroni & Sangiorgi, 2011). In this sense it is important to acknowledge that society shapes the encounter and defines possibilities for action and interaction that go beyond individual

actors interacting with “the service”. This simple observation quickly expands the scope for what is required to understand and describe service encounters into realms that are at the core of concerns of the EPIC community.

Some of the complexities of service interactions are addressed in the concept of a service system where the focus is on specific relations between entities – people, technology, organizations – through which value is created (Spohrer & Maglio, 2010). Service systems may be invisible to the users of a service, but they support service encounters by mustering information, spaces and artifacts, participants, and flows of capital to ensure that the service can provide its essential transformations over time. A hospital providing services to patients, doctors, and staff, for example, could be described as a service system where the activities of a coordinated set of actors (entities) are needed to create value. The connection between such entities as pharmaceutical companies providing medicines, credentialing bodies certifying doctors and nurses, databases storing patients’ paper and digital records, hospital beds and other medical equipment, information systems scheduling procedures and visits, and so on are connected in specific ways to deliver value. Deciding what is within the service system and what is outside ultimately depends on the purposes for which the system is being defined. This requires that we reflect on the practices through which some entities become part of the service system and others are omitted, how the elements of a service system are assembled, what training is needed to see them, and whether everyone will define particular service systems in the same way. Accordingly, service science is itself profoundly social and embedded in particular societies, with their divisions of labor, allocations of power, and assumptions and values regarding everyday life.

Service Design

Design has become the lingua franca shared by those who want to speed innovation (Ostrom et al., 2010) and bring about social change. In a recent report of the European Commission on Design for Innovation (2014:5) the authors point to “the transformative power of service design which is understood as the process through which services disrupt traditional channels to market, business processes and models, to significantly enhance customer experience in a way that impacts upon the value chain as a whole.” Prompted by the rise in the service economy and the view that design is the route to innovation, service design exploded on the agenda of many organizations where “a multitude of tools, many from the social sciences, [were assembled]... to bear on problems, all under the banner of design as an organizing principle and leitmotif” (Saco & Goncalves, 2008: 10-11). Service design was championed as facilitating the integration of expertise from different disciplines, including interaction design, marketing, and technology development (Dubberly & Evenson, 2010; Kimbell, 2009; 2011; Ostrom et al., 2010; Polaine et al., 2013; Strickdorn & Schneider, 2010). The language of design seemed to bind together the activities of diverse fields and disciplines whose members were engaged in the common endeavor of bringing about services.

The unified language of design combined with the sheer variety of activities that fall under this rubric has led to a proliferation of service design techniques, but many fit within a set of recognizable design steps borrowed from product design. One such example is Dubberly and Evenson (2010) elegant sequence of activities that begins with the step of observation involving a description of the environment and “user and stakeholder needs

identification". The next step, reflection, includes describing the current service system and the imagined one using techniques of blueprinting and customer journey maps. Following-on is the making step where the particular features or "resources" are designed, including the processes, enactments and "experience strategy". The next step of socializing creates "the network for uptake" – both within the service organization and with the customers. Finally, implementation occurs when system resources are "brought to life" through beta tests and fine-tuning over time. By engaging in these steps designers explore possibilities, generate alternatives, and evaluate outcomes – the long established routines of design. However, accepting these as canonical steps of service design does not directly specify what activities service designers will be engaged in as these depend on factors such as where the designers are situated in relation to the design project and the skills and know-how at their disposal, both theirs and others, including lay people.

A central puzzle for service designer is what is their object. Some have suggested the outcomes or transformations brought about by application of human or mechanical effort might be viewed as the object of service design (Kimbell, 2011). Alternatively, the performances of providers and recipients as they enact services could represent a reasonable object of service design (Secomandi & Snelders, 2011). Others contend that the "touch points" or the times when service providers and recipients interact, either directly or mediated by technology, to "produce" or "co-create" service offer a possible foci for design (Clatworthy, 2010). Designing for outcomes – the transformations that designers would like to achieve – suggests a strategy of working backwards from outcomes to consider the various levers or resources available to help realize outcomes. Service design's object might then be to design the conditions or prerequisites required to make service transformations possible (Secomandi & Snelders, 2011:23-24). In this sense service design shares characteristics with interaction and experience design where there is a concern with the sociotechnical affordances that enable interactions and define experiences (Holmlid, 2007; Patrício et al., 2008; Zomerdijk & Voss, 2010). This is similar to Meroni and Sangiorgi (2011:10) who argue for a focus on designing "the right conditions for certain forms of interactions and relationships to happen." In this sense service design rests upon theories of human behavior, how people will be inclined to act, and the practices and know-how that condition what is reasonable or even possible.

Reflecting on the current state of design, Thackara (2005:7) observes, "... designers are having to evolve from being the individual authors of objects, or buildings, to being the facilitators of change among large groups of people." Without presupposing that designers can control how people interact with each other or their surroundings, the design challenge is to create certain conditions that will make some interactions and encounters more likely than others and at the same time reducing the gap between what the designer imagines will be the outcomes of design and the world as experienced, given all the intermediaries and historical antecedents that shape futures.

Broadening the scope of service design in this way complicates and to some extent unreasonably expands the designer's role beyond areas in which she may be comfortable or feel empowered. Furthermore, the expectation that any one designer or design project will be able to address in any meaningful way the myriad of potential influences on service outcomes is likely unreasonable. That said, service design effectively requires that designers connect to different kinds of knowledge and know-how at different times and with varying degrees of attainment. The multiple and varied sites for service design offer many potential

opportunities to shape outcomes, each requiring different sets of skills and implicating the designer and design project in particular accountabilities to actors and outcomes.

What does service science and service design offer?

Service science concepts are expressions of the worldview of a community of practice. They do not just describe and analyze services, but they simultaneously define the world as a particular place with attendant opportunities and constraints on our ability to intervene. The scholarly discourse about services defines services as an analytically distinct phenomenon of interest and service science as a distinct field of scholarship. But by abstracting services and by developing a specialized vocabulary to describe them, scholars are framing questions that in the end can only be answered by exploring the social contexts within which services make sense. For example, service encounters are located within frames that members of a society understand and value and they implicate “matters of concern” (Latour, 2004; 2005) and the practical ways through which knowledge is produced through everyday activities. In this way as Hanser (2008) argues in her ethnographic account of retail service in a Chinese department store, service encounters play an important role in forming and reproducing social hierarchies. Similarly the discourse of service systems can give a false sense of unity, inhibiting critical reflection on the ways the system as defined may silence some voices. And by emphasizing the ability to engineer service systems to be efficient and effective as systems, entities that fall outside the boundaries of the system may be overlooked with unrecognized consequences.

Distinct starting and stopping points that often characterize the design process are typically lacking in service design. The various elements from which services are built have histories and as such are less *de novo* productions than modifications to on-going flows of activity. As such the designer writ large is better understood as intervening in interactions and exchanges that are both enduring and partial. Designers also participate in service worlds where they learn to see problems and opportunities – and construct services as their solution. They do not just discover services in the world that are then described and analyzed, much like a natural historian. Designers participate in communities of practice with their own conventions that are consequential to their ability to intervene in service worlds. Likewise, what is designed – a set of symbols, rules, specifications, models – will be enacted through similar social processes.

Regardless of whether we are describing a service, teasing apart the “props” of encounters, or navigating around the complex terrain of systems, we soon find ourselves looking at the practices of people participating in service worlds and of those who venture to describe and intervene in them. We are effectively resituating services within a larger sociocultural context and this is a place where the social sciences, and anthropology in particular, have long dwelled.

THE EPICurians ARE COMING, THE EPICurians ARE COMING!

If social change is being driven by services, then what are the opportunities to participate in defining service worlds? With tongue barely in cheek, we issue a call to EPICurian arms framed in terms of challenges that service worlds present to society, to anthropology, and to EPICurians. We believe we must expand the concept of service beyond its grounding in

post-industrial Western societies. Failing to do so leaves us with an impoverished conceptualization of services and one that runs the risk of exporting inappropriate or unwelcome service models that discount the experiences of other societies and move our own in unwelcome directions. There is rich variety of services found around the world even though they are not expressed in the nomenclature of service encounters, systems, or science. EPICurians are well suited to see continuity and disjuncture between contemporary services and those evident in the ethnographic record. While service worlds are often starkly contrasted with industrial age of manufactured goods and are presented as a transformation that is sweeping away all that came before, services have always characterized societies although their forms have differed historically and across societies. The service world of the Trobriand Islanders, for example, would be described as one in which ceremony, ritual and cosmology contributed significantly to the necessity and value of services. Concepts like efficiency, productivity and return on investment would fail to capture important characteristics of the services rendered. Instead, the Trobriand Islanders would be seen as having created multiple spheres of exchange, each following their own logic with no single over-arching calculus of value, with the realization that some exchanges were incommensurate. Likewise, we would see that their services were not designed per se but emerged over time and became foundational to the survival of the Islanders as people with a distinct identity that was at the same time fuzzy at the edges where they collided and conspired with people from other societies (Blomberg & Darrah, 2015).

Seeing contemporary service worlds as a disjunction, a significant break in how societies and everyday lives are organized, while also reflecting on the deeper continuity of services that connect people through time is one of the well known tricks of anthropology – for example, making familiar services exotic and the seemingly exotic practices of other societies familiar. We suggest revisiting anthropology's record of cross-cultural studies to provide a critical reflection on knowledge claims about services that are based solely on the experiences of post-industrial, western societies. Presenting an expanded database salient to services must also be accompanied by discussion of how to link it to actions that are responsive to challenges faced today in bringing about more just and sustainable service worlds. It is not enough that the rich ethnographic record is greeted with interest. We must insure that it is an essential resource for those engaging in bringing about social change through service design. Even though EPICurians are relative newcomers to service science and design, we must find ways to communicate the distinct and significant value we have to offer as a reflective practice that is attentive to representing multiple perspectives and that acknowledges that consensus of purpose or motive is not required and rarely possible. Our value goes beyond arguing for the distinctiveness of ethnographic methods and analysis for service design by providing perspectives on how services integrate interactions, materiality, ideology and values while problematizing the way services are conceptualized, designed, developed, and enacted.

Additionally, EPICurians have an opportunity to challenge the view that services simply enact value propositions that allow for their commercialization and commodification. Instead services should be understood as enacting societal values and as such can be the site for promoting social good and not just for responding to individual desires. While not suggesting that contemporary service worlds are necessarily dystopian, there is a need for more critical reflection on the ways services are potentially damaging relationships and commodifying interactions that were once offered through generalized or balanced

reciprocity. While it would be naive to think that business value propositions will or even should disappear, more attention on broader social values will allow service design to become a way of enabling communities to realize their defining aspirations. In this sense, the opportunity for service design should not simply be to commercialize the service, but to enlist services in creating new forms of sociability and sustainability.

Finally there is an opportunity for EPICurians to democratize service design by cultivating the skills and knowledge to bring about new services and service relationships more broadly. We want to avoid the pitfall of assuming that service science and design provide the necessary basis for generating services, which renders service design beyond the reach of those lacking expert knowledge. Instead, we suggest attention to varied perspectives and shifting the locus of action from grand design by experts to interventions into the *mélange* of activities, interactions, and artifacts that comprise a service. Rather than demanding a single, consensual definition of the proposed service, it is important to recognize that living within service worlds gives a wide range of actors access to the means of teasing apart the variety of practices that may be salient to creating services. Where there is a lack of access to costly expertise these local, community based interventions may garner widespread use. Above all, they may demystify the production of services by making social change through intervention in service worlds everyone's *prevue*.

Services and service worlds also pose a set of challenges for the discipline of anthropology that is captured by the idea of an anthropology of services (Blomberg & Darrah, 2015). Although the study of services is a multidisciplinary endeavor, even a cursory review of the literature reveals the dominance of business, marketing, and engineering perspectives and the relative paucity of social scientific, especially anthropological ones. Treating services and service worlds as legitimate subjects for anthropological, specifically ethnographic, inquiry is essential to the future of the discipline. We need a larger agenda of looking at the place of services in society and participating in imagining, defining, and engaging with new services. Services change everyday lives, often in ways that are difficult to fully appreciate while they unfold. An anthropology of services draws attention to the intended and unintended consequences of the shift to services on individuals and collectivities. If anthropology is to meet its intellectual goals and the EPIC community its pragmatic aspirations, then the rise of services, especially as designed human activity systems, requires that we take seriously the place of services in society.

The anthropological study of services is immediately relevant to wider audiences with whom collaboration will be essential. Our call to EPICurians contrasts with earlier calls to the discipline, such as the Boas invective to document the vanishing ways of life of indigenous peoples. Anthropologists may have been among the few scholars interested in vanishing ways of life, but they are not alone when it comes to an interest in services. In fact, they are recent arrivals to the dinner party, with scholars and practitioners from numerous disciplines and fields already seated at the table. However, far from being ignored, anthropologists are finding themselves with audiences that are knowledgeable about the discipline, if somewhat misguided in equating anthropology with ethnographic methods. While anthropologists are committed to documentation and analysis, their fellow guests are using the findings, concepts, and analyses of ethnography for their own purposes. This may annoy and frustrate and even drive some to leave the party early, but abandoning the service arena is not a viable option since it effectively cedes a significant domain of human activity to other disciplines. Furthermore, engaging with scholars and practitioners from other fields,

who have different expertise and even purposes, can make our analyses more robust and increase the likelihood that our efforts will have an impact on the world.

Regardless of whether service worlds seem familiar and mundane or exotic and exciting, ethnography is a methodology that is well-suited for tracing connections, giving voice to diverse perspectives, embracing ambiguity, and probing claims of grand consensual visions. Services and service worlds place a premium on holism as a foundational principle that enables the exploration of how services become embedded in people's lives and also on identifying loci for intervening. Interventions into service worlds are likely to occur over extended periods, with shifts here and there leading to notable transformations over time. This means that the assumption that services presume intentions and precede implementation is better replaced with the view that actions are followed by reflections that lead to further actions in a more emergent and iterative way. And this fundamentally alters how best to think about designing for services since it necessarily involves relationships that must be maintained over time. There is a need for broader sets of skills that morph as services become embedded in and alter service worlds.

Services require interpretive work performed by those who study, design, and engage with them. Even when participants are not aware of their contributions, they define how intentions and desires are translated into information, interactions, and transactions. Studying services involves understanding how some voices become privileged (or not) and how power to mobilize resources and address unintended consequences are differentially distributed. And it entails exploring networks and entities that are mobilized around a service, recognizing how they work for different constituencies. Taken together new skills are needed to support an extended involvement with those engaged in transforming service worlds. New practices that draw upon the recognized roles for anthropologists as brokers and translators are needed. Familiar anthropological skills and knowledge may be plied intermittently over time with other attributes less associated with anthropology required in order to remain engaged in bringing about social change. An anthropology of services ultimately must address the fact that service worlds include much more than services. They include modes of production, institutional arrangements, and diverse and complex belief systems. This means that a larger agenda is needed that looks at the place of services in society as part of what it means to design new services.

EPICurians should be helping draw attention to the consequences, intended or unintended, of a shift to services and its consequences for identity, divisions of labor, institutional processes, and patterns of consumption. We need to look at the distribution of services in society, as well as the implications for individuals of service worlds and the skills they imply. And we need to do so in ways where analysis and critique are prelude to action and not paralysis. We can contribute to developing services directly by both drawing upon the ethnographic record and by conducting new research either on the problem situation *per se* or on other social settings that may provide lessons relevant to our interests. But we can also contribute to a more reflective approach in which our actions as service scientists, designers, maintainers, providers, and users are incorporated into our practices. The challenge here is to not just sell our skills and ourselves to the highest bidder, but to see opportunities to develop new services that address individual and societal desires.

Much of what we have discussed throughout this paper is intended to make the case that services and service worlds provide terrain that is amenable to the anthropological gaze. Ethnography can enrich appreciation for the complexity of services and their embeddedness

in wider social processes. But we cannot simply sit on the sidelines and offer up critique. We must become directly engaged in service worlds in order to transform them and this at times involves taking risks that our design intentions will not be realized in practice. There is a necessity for being fully engaged in “producing” services and not just sitting on the sidelines as commentators. This can be a challenge for the many anthropologists who see the discipline as above and apart from the messiness, ethical and otherwise, of explicitly attempting to support changes in everyday life with implications for the broader society. Our starting point may be ethnography and a broadly anthropological approach to understanding service worlds, but our goal is to support practices that contribute to human betterment and doing so requires the willingness of anthropologists to plunge in and accept having a stake in defining services, knowing that there will be consequences, intended and otherwise. Simply being engaged in service worlds does not place us on the side of angels, for services are incredibly diverse and the values and transformations they hope to achieve are divergent and sometimes contradictory. It means putting “things” in the world that people will engage with and being ready for feedback that may shock or dismay. Regardless, it will affect the discipline of anthropology and how we practice it.

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NOTES

1. The next two sections are based largely on Blomberg & Darrah, 2015.

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Knowing That and Knowing How: Towards Embodied Strategy

SIMON ROBERTS

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This paper explores two different forms of knowledge. We compare embodied understanding with propositional or abstract knowledge. Ethnographic research, with its commitment to understanding through immersion and engagement in social fields produces dexterous, intuitive and practical cultural knowledge, which is highly suited towards culturally attuned activity. We argue that ethnography can often be reduced to propositional knowledge as a result of the lack of team participation in research and how we communicate insight. Ideas of professional expertise sit behind the division of labour that characterises client-researcher relationships. Accompanying that division of labour is a need for the communication of ethnographic research to bridge the gap between client and external worlds – the world we as researchers explore and that our clients need to act in. By engaging our clients in shared, immersive experiences we can create the conditions for them to develop ‘know how’ about relevant social fields. The shared nature of this understanding forms the basis for the development of ‘embodied strategy’ – collective action based on shared, deep, first-hand understanding of a world.

“I don’t want my team to focus on strategy; I want them to focus on becoming strategists. Strategy is stilted. The field has been relegated to a specialist’s discipline. In doing so, leaders have come to rely upon experts to inform their direction. However, it is only when strategy is embodied in a living, breathing person that it can be actualized. The separation between strategy and the strategist has created a gap between planning and execution. It fixes strategy as a periodic event rather than an unfolding process. A winning strategy is not declared; it is lived into”

– Flint McGlaughlin

BRIDGES BETWEEN WORLDS

EPIC has always sought to bridge the theoretical and the practical, the academic and commercial, the world of exploration and action. As a community we have always prided ourselves on an ability to bridge these gaps and to continually advance our own, and others’ thinking, about how to unify research and practical action.

As a professional community that has positioned itself at the interface of these different worlds we have, arguably, had a stake in keeping them somewhat distinct. This paper suggests that we need to examine the ways in which our current practice is based on these ideas of division. Specifically, we are interested in exploring, and breaking down, distinctions between non-expert and expert, cultural novices and virtuosi, client and researcher¹.

We argue that the current configuration of research praxis – with non-expert researcher (i.e. clients) actively discouraged or excluded from the field – denies our audiences the dexterous, intuitive knowledge that is so important to appropriate cultural action. If the foundation of successful activity in any social field is “practical knowledge not comprising knowledge of its own principles” (Bourdieu 1977: 19), and mastery of this arises from

engagement in the world, it seems strange to us that we tend to exclude clients from the field and then attempt to communicate to them the sort of embodied understandings that defy accurate elucidation.

In this paper we explore the weakness of approaches to solving client challenges that are structured around a division of labour that means while *we* 'know how', *they*, our clients, only 'know that'. We make the case for, and sketch out, an approach that we call 'embodied strategy': collective action based on shared, deep, first-hand understanding of a world.

EXPERTS AND EXPERTISE

The EPIC community, and the canon that its members have built up over a decade, bears witness to the belief that the longer and more deeply we study something the better the understanding of it we will have. The hallmark of our work is, and should remain, a deep and reflective engagement with social worlds.

Central to our occupational identity is the belief that we study social realities, cultural phenomena, behaviours, beliefs and values that are highly complex and demand deep examination. Our research deploys a set of techniques, theories and heuristics that provide sophisticated but useful analyses and interpretations. Our identity is fashioned from a broad but essentially shared set of ideas, practices, and beliefs that casts us as cultural analysts and interpreters. Our identity is one of expertise earned through training and experience.

We are not seeking to suggest that there is no role for trained or expert researchers; there is. Nor are we seeking to undermine the role and value of this professional community that has been nurtured for over ten years (and whose mission statement is to provide "access to the best practical ethnographic expertise from around the world"). However, we are arguing for a reconsideration of the division of labour that exists between clients and researchers.

At the heart of this idea of expertise and its practical expressions, lie notions about the distribution of skills and knowledge for exploring, analysing and subsequently communicating understandings of the world. According to this logic, our expertise is in framing, observing, analysing and sense making. Our clients – consumers of our work – have different skills and abilities – limited to acting on the results of our work (e.g. Schwarz 2011; Greenman and Smith 2006).

This role separation is integral to our identity and threats to it are risky. Sometimes, as outlined by Greenman and Smith (2006: 230), 'non-experts' are admitted into the field as a means of understanding how we work and the nature of the knowledge we produce, but not as contributors in their own right.

In a similar vein, Schwarz, spoke to this separation in an account of a project that put a team from a media company together with their readers in order to generate product concepts:

"A workshop like this is always a problematic offering for a consultancy. It tends to send the wrong message to the client. It makes it look as if deep user-insights and novel and relevant product concepts could actually be derived and developed in two days by *non-experts* - a process that in normal consulting projects would...involve *professional* researchers and consultants" (2011: 79, emphasis added)

Schwarz's articulation of 'professionals versus non-expert' emerges from his discussion of the nature and value of bringing clients into the research encounter and this is something we return to at length below. But we believe that this distinction is implied in much of the EPIC cannon and in its conferences (where clients are a rare sighting).

A different but even stronger articulation of expert vs. non-expert emerges in calls for the certification and accreditation of ethnographic researchers. These seek to distinguish ethnographic expertise, within and beyond our community, more formally (see Ensworth 2012).

Whether or not it is credentialised formally, the notion of expertise is at the heart of the community. We want to question this notion of expertise for the simple reason that we believe it sits at the heart of what is broken about traditional models of consulting. This model relies on divisions of labour in the production, communication and application of knowledge and understanding. Our view is that such divisions are not just inefficient but detract from the utility of our work.

First, we want to explore the idea (and reality) of expertise in a little more detail.

FORMS OF EXPERTISE

As a community we claim, explicitly or otherwise, three forms of expertise. The first is an expertise in developing a rich and deep understanding of the world through direct experience of it. This is an expertise that draws on methodological abilities, theoretical knowledge and a reflexive outlook on the nature of our practices and the nature of our knowledge. This expertise helps us make sense of the world for those unable, unwilling or lacking in the training or intellectual sophistication to experience and engage with it themselves.

This expertise in making sense of the world bears with it an assumption that is played out in the rhetoric of EPIC and the construction of many of our papers and case studies. The unspoken but pervasive idea is that the better *our* understanding of a phenomenon, the better placed our clients will be to solve the challenge or seize the opportunity that led to our research in the first place.

According to this logic we make our impact by the creation of powerful new understandings of the world. What we find intriguing with this notion, and it is one that has gained much force through its recent articulation in published form (Madsbjerg and Rasumussen 2014), is its silence on the issue of how it is that *our understanding* becomes *our clients' understanding*. Without a discussion of how it is that the knowledge we develop becomes the client's knowledge our research emerges as a *deus ex machina*.

In this rendering of our practice, the work of developing a perceptive and novel perspective on the world is, in itself, enough to win the day. We typically focus our accounts on the profundity or novelty of our insights, not into the subsequent work that was involved in enabling this perspective to change the way an organisation thinks or acts. A set of insights emerge as something in themselves sufficient to change the company's direction.

The second claim to expertise we make is our ability to impart this understanding to our clients in ways that can drive successful action. Typically we focus on acts and artifacts of communication. Our work as a community contains many examples of different communication tools or styles designed to influence, inform and impact our multiple audiences (see Arnal and Roberto 2007; Churchill and Elliott 2009; Wakeford 2006)

All these different communication forms – the deck, books, films, personas, experience maps and posters – take our experiences, our analyses and abstractions and attempt to make them communicable to our clients and durable within their organisations. Our notions of what best represents and communicates knowledge – despite our best efforts and intentions – betray the logocentrism of our disciplinary backgrounds and educational heritage. The worlds we explore for our client are, most of the time, given form solely through words (or PowerPoint decks with words and images).

Our claims to expertise are founded on our twin abilities to understand the world and communicate that understanding. But this in turn suggests a third area of expertise: the ability to translate between two worlds: the world in which our research took place and an entirely different social field – the organisation of our client. The ‘actionable insight’ – that key deliverable for many of the consultants amongst us – asserts the skill of being able to identify an insight *and* sufficiently ‘get’ our client’s organisation so we can materialise this new understanding in a way our clients can act on it.

However, we believe that the time has come to question the assumptions embedded in these three claims to expertise.

1. **Reframing expertise:** We think it is time to ask again what abilities our clients have to understand the social worlds in which their work is ultimately located: do they really not have the expertise required to understand the world with us? How might we reframe expertise to allow a more central role for our clients?
2. **Revisiting forms of communication:** We want to suggest the way understanding is communicated to clients needs revisiting. The very need to communicate to bridge a gap between what we have experienced and what our client organisations have *not* experienced suggests we need to think about closing the gap, not find ways of bridging it temporarily through ever more ‘sophisticated’ communication tools.
3. **Reconsidering client participation:** Finally, while we like to think of ourselves as experts uniquely placed to intermediate between the real world and the world of business – we rarely act in the world. The notion of the actionable insight as the bridge between two worlds – the client’s and the external world – betrays a need to get our clients involved in experiencing and understanding the external world.

Recently, the development of our own praxis as a consultancy has focused on exploring how we can transcend the need to bridge the worlds of the social realities we seek to understand and the worlds our clients inhabit. Our conclusion is that while innovating around the communication of ideas is not without merit, it does not get to the heart of the problem.

The problem, as we see it, is that much of the research and consultancy industry has been geared towards the provision of propositional over non-propositional knowledge (Ryle 1940). Propositional knowledge is abstracted and conceptual. And while useful, it is knowledge of an entirely different nature from intuitive, embodied, non-propositional knowledge.

Work for clients often leaves them ‘knowing that’, but not ‘knowing how’. We believe the former, whilst valuable, is not as well suited to the way large organisations seek to solve

strategic challenges and innovate. On the other hand, ‘knowing how’ – a form of knowledge that is intuitive, fluid and embodied – is at the heart of culturally sensitive and therefore successful action. ‘Know how’ arises from experience – that’s why as a community our research practice privileges observing and participating in social fields. But we believe its time to develop our practice so it becomes more participatory for our clients: to create the conditions for them to learn through experience and doing in the same way we do.

This shift towards experience and engagement as the route to developing ‘know how’ and embodied knowledge puts the body at the heart of our research encounters.

We believe that by making this tacit knowledge central to our approach and by introducing our clients to a shared social field we can help our clients develop embodied strategy. ‘Embodied strategy’ is strategy that is based on a deep understanding of something that is known because it has been experienced. And our experience is that embodied strategy is successful strategy.

KNOWING HOW AND KNOWING THAT

“It seems like the best problems to solve are ones that affect you personally. Apple happened because Steve Wozniak wanted a computer, Google because Larry and Sergey couldn’t find stuff online, Hotmail because Sabeer Bhatia and Jack Smith couldn’t exchange email at work.”

—Paul Graham (2006)

It is received wisdom in Silicon Valley that the start-ups that succeed are built on opportunities identified in their founder’s personal experiences. The spark may have come from a recurrent issue encountered during daily routines, or in a flash of inspiration when, say, observing a daughter playing after school. The common thread to such stories is that the founder started something based on an intimate, first-hand understanding of a specific world or social field².

It is perhaps for this reason, as much as it is about the availability of resources, that many start-ups eschew in-depth research. They don’t need somebody else to explore, analyse and explain what they already know. Their understanding of the world in which they operate is, according to this logic, already and consistently close and intimate. Maintaining this intimacy becomes an obsession for some founders – Airbnb’s Brian Chesky famously has not owned a home since 2010, choosing to continually use his own service (Fairweather 2013).

There is a striking contrast between the way successful start-ups stay close to their world, and the approach taken by more established, larger organisations. Such organisations usually stay informed by commissioning external research agencies to conduct research on their behalf. The task of commissioning and managing research is a specialised role and research departments or individual managers become the buyers of research and reports or other outputs. They become the internal brokers of specific types and forms of knowledge.

The different approaches to research, here characterised by start-ups and larger established organisations, involve quite different forms of knowledge. Start-ups, with first-hand insight permeating everyday decisions possess ‘know how’. Larger organisations, with established structures for commissioning and subsequently circulating research, have knowledge products (and cultures) of an entirely different nature: they ‘know that’.

Our contention is that these two kinds of knowledge have different impacts and different levels of effectiveness. And while start ups – and the proximity they have to the

world they are developing for – are very different from large organisations, we believe that the ‘know how’ they possess is within the grasp of larger organisations.

‘KNOWING HOW’ AND ‘KNOWING THAT’

The philosopher Gilbert Ryle first made the distinction between ‘knowing that’ and ‘knowing how’ in a 1945 essay. He illustrated this distinction by using the metaphor of a person finding their way around their home village.

The villager knows how to reach the local church from the station. But it doesn’t necessarily follow that they can accurately map the route for somebody else. The villager intuitively ‘knows how’ to get to the church, but doesn’t necessarily ‘know that’ is the way to get there. In this sense ‘knowing how’ is practical, embodied knowledge, while ‘knowing that’ is propositional, conceptual knowledge.

Imagine a tourist arrived at Ryle’s village looking for the church. Written instructions for finding the church from the station would help the tourist ‘know that’ was the way. They may not reach the church as quickly as the local, but by following the instructions step-by-step the tourist can find it. Now imagine if halfway into their walk the tourist turned their ankle. They now need to go to the hospital. But they only have instructions to go to the church. The tourist hobbles back to the station to get another set of instructions.

If the local were in the same situation the outcome would be different. After turning their ankle the local would take a shortcut to the hospital without needing to go back to the station. Their intimate, intuitive understanding of the village means the new route is already obvious to them.

To summarise, the tourist has relevant knowledge for a specific, contingent situation. But once the situation changes the knowledge becomes redundant. The villager, on the other hand, has an embodied ‘feel’ for the local area based on first hand experience. As the situation changes the villager is able to intuitively change with it.

The following table helps to crystalise the distinction between these two ways of knowing:

Table 1. Knowing That and Knowing How

	Knowing that	Knowing how
Knowledge type	Propositional knowledge	Embodied understanding
Acquired through	Interviews Focus groups Surveys Desk research	‘Being there’ Active participation Bodily experiences
Conveyed by	Reports, presentations, videos	Shared experiences, reminders of the experience
Benefits	Appropriate knowledge for a <i>specific situation</i> within a world	Appropriate understanding of <i>any given situation</i> within a world

Now let's return to the difference between a start-up and an established organisation. Think of the start-up as the villager. They know their world inside-out, because they are of that world. When an unexpected situation arises they intuitively 'know how' to adapt to it.

Think of the established organisation as the tourist. The knowledge they have about their world is propositional. The segmentations, surveys, tracking studies, market and competitor reports that they commission provide them with lots of context specific knowledge that is framed by the research.

The research they commission helps them 'know that' x is the appropriate response for situation y. But when situation z arises, or other conditions change, a new piece of research needs to be commissioned since the 'knowledge that' they possess no longer provides the basis on which to act efficiently or confidently.

We are often purveyors of these forms that rely on 'knowing that'. We observe, participate in and experience the social fields that we seek to understand for our clients. We transfer these understandings and analyses into documents designed to communicate these experiences and our interpretations of them. Our deliverables – the 'actionable insights' – are a way of translating the 'knowing how' that we came to have in the field, into terms which can be shared with our clients: propositional knowledge.

Our established model of turning the 'know how' we generate in the field into propositional knowledge for our clients denies them access to the embodied knowledge that they could use to more fluidly and confidently get things done.

In order to become purveyors of 'knowledge how' rather than 'knowledge that' we need to revisit and rethink our ideas of expertise.

FROM NOVICE TO CULTURAL VIRTUOSO

Aristotle defined an expert as someone who knows how to do "the appropriate thing, at the appropriate time, in the appropriate way" (Dreyfus: 1998). An expert has the ability to respond to their shifting, dynamic world. The 'right thing to do' will emerge in each given situation within their field of expertise. Experts can identify a course of action that only seems right to non-experts after it has succeeded.

Expert 'know how' is based on a deep, embodied understanding which is not reducible to a set of unitary representations or instructions. Pierre Bourdieu has a useful term for the expert - the 'cultural virtuoso'.

"Only a virtuoso with a perfect mastery of his 'art of living' can play all the resources inherent in the ambiguities and behaviour and situations so as to produce actions appropriate to each case, to do at the right moment that of which people will say "There was nothing else to be done"... We are a long way, too, from norms and rules... The temporal structure of practice functions here as a screen preventing totalization" (1990: 107)

For Bourdieu expertise is not transferable through the communication of instructions or explanations any more than social life is best described through recourse to norms or rules. Expertise is accrued through direct practice and experience in the world. As those who conduct fieldwork will be only too aware, actions that breach or transgress the grammar of a social context are often the best way of surfacing what social actors may know unconsciously, or otherwise be unable to explicate.

Hubert Dreyfus (1998) applies the insights of Merleau-Ponty to map the phenomenology of skill acquisition. He uses the example of learning to drive a car to contrast the differences between a novice and expert.

For the novice driver:

“the instruction process begins with the instructor decomposing the task environment into context-free features, which the beginner can recognize without previous experience in the task domain. The beginner is then given rules for determining actions on the basis of these features, and so acts like a computer following a program.” (*ibid.*: 2).

The novice driver ‘knows that’ is the way to drive, but doesn’t yet ‘know how’ to drive. On the other hand the expert driver:

“not only feels in the seat of his pants when speed is the issue; he knows how to perform the appropriate action without calculating and comparing alternatives. On the off-ramp, his foot simply lifts off the accelerator and applies the appropriate pressure to the brake. What must be done, simply is done.” (1998: 7)

The prevailing wisdom in business – the common sense – is that making decisions based on feel or intuition is not a good idea. As Madsjberg and Rasmussen (2014) make clear ‘default thinking’ displays this antipathy to intuition. Better to apply the cold but impartial process of rational decision making based on hypotheses and data analysis. However, Dreyfus’s analysis suggests the expert should trust their instincts because they are the product of deep, embodied understanding. An expert’s embodied understanding of how to perform everyday activities such as drive a car, make a good cup of tea, or run a successful meeting is worth much more than a dozen novices armed with instructions, recipes or guidelines for how to do these things.

The question then becomes this: how can we help our clients develop the ‘know how’ of cultural virtuosos, rather than just helping them ‘know that’?

BEING THERE TO KNOW HOW

A central premise of the sort of work that EPIC is engaged is that by ‘being there’, through experiencing, participating and observing the social fields we study, we are able to understand everyday phenomena. Our presence allows us to explore what a good cup of tea is, the occasions when tea is and isn’t a good thing, and the nuances in how tea is made, served and drunk. We can traverse and explore multiple dimensions of tea – from an idea, a thing, to an ideal and socio-cultural marker. We are able to understand the stuff and substance of tea making and tea as an idea. By ‘being there’ we are able to really ‘get’ tea.

In our subsequent analysis and presentations to clients we share what we experienced, attempt to reveal the meanings of what we found and make recommendations. But the know how that we have developed is not so easily communicated to those who did not share the same or similar experiences.

We tend to communicate knowledge of a propositional nature. The richness of the experiences we have become diluted. We transform these experiences into knowledge products that to all intents and purposes could have been produced through other methods. We attempt to “recreate the original experience in the field...[but] PowerPoints, even with

pictures and video clips, never quite reach the same persuasive force (Schwarz 2011: 85). Even when ingenuity and innovation is applied to the production of our deliverables our visceral experiences from the field are rarely, if ever, recreated for our audiences. Framing current shortcomings to our praxis as ‘communication challenges’ is a category error. The issue lies in the separation of our research audiences from the research experience.

We are not the first to raise this problem. A variety of papers during the last ten years of EPIC have explored how to involve our audiences to address this issue (see Schwarz 2011; Salvador 2007). But the tendency has been for authors to see involving our clients or audience as an essential dilution of what we do. The involvement of non-experts in what apparently should be a domain restricted to those with the appropriate expertise is a distraction to be avoided.

For example, Schwarz, in his exploration of ‘Executive Exposure’ tellingly distinguishes between ‘experience-centred’ and ‘insight-centred’ projects (2011: 78). In his analysis, involving the ‘non expert’ client leads not to ‘real’ insight but merely an experience. They are spectacles or ‘safaris’. On the other hand, when consultants act alone, without clients looking over their shoulders, the real business of insight generation can take place. Here the outcome is the “production of knowledge” (ibid.: 81) not the “production of experience”.

We are arguing against the necessity – and value – of this distinction. Why, we ask, should the two been seen as mutually exclusive? The belief in the value of knowledge about social fields gained through bodily experience is one of the foundations of our practice. So why have we either discounted the value to our clients of such experiences or actively discouraged them from learning through such experience? One possible reason for us to exclude clients from the field (or position such practices as peripheral) is the challenge it poses to our professional identities.

In the next section of this paper we explore in more detail how and why shared experiences have value. We then start to build out the case for a re-orientation of our practice.

KNOWING HOW AS AN ORGANISATION

Our clients act in the world. It is them, not us, that are charged with taking forward ‘our’ work. The work they commission is typically about revealing the world outside their organisation – the external world in which they must operate. Our insight is designed to drive their action.

These organisations are often large and diverse. They are typically characterised by extensive divisions of labour (see Tett 2015) resulting in entities organised by functional teams or divisions that need to work together to achieve successful outcomes. Entire organisations have assumptions about or ways of looking at the world that might be artifacts of their industry, their position within the industry, or arise from specific cultural or historical factors. Equally, different divisions or departments might have shared and divergent assumptions about their consumers and the markets they operate in.

So if organisations have specific views of the world, and are also internally complex, diverse and divided, research needs to build bridges within the organisation and between the organisation and the external world. Research can do this most effectively when it creates a shared point of view.

Another way of framing this is that organisations or their constituent divisions (marketing, sales, R&D teams) have their own specific sets of 'know how' but they also need 'know how' about the external world against which their own, organisational or functional specific 'internal' know how can be applied. Critically - and this for us is the heart of the notion of embodied strategy - it is not enough that this perspective is owned by a few members of a team. It must be shared by all those who will work on the execution of a strategy arising from it. There is a need for shared reference points – and shared reference points emerge most effectively from shared experiences.

Shared research experiences give a team collective, intuitive understandings of the external world they are operating in. They give people the practical knowledge Bourdieu characterised as being about “tact, dexterity and *savoir faire*” (1977: 10).

KNOW HOW FROM SHARED EXPERIENCE

So how do we develop this kind of know how? Our answer lies in creating shared experiences, which disclose aspects of the organisation's external worlds – the social fields they operate in. Simply put, that means creating the space and time for clients to work closely together with us in the field so they have a chance to experience, understand and embody the social fields they are operating in.

The result is that when people within an organisation are asserting what course of action to take in pursuing a goal or specific outcome, they do so with mutual reference points. Informed discussion can take place. The decision will be understood by everyone, even if it isn't unanimous.

In analysing the phenomenon of assertion, Heidegger wrote “assertion is not a free floating kind of behaviour which, in its own right, might be capable of disclosing entities in general in a primary way: on the contrary it always maintains itself on the basis of being-in-the-world.” (2009: 199)

In other words, an assertion by one person only makes sense to another person if they share the same underlying experiences in relation to what is being asserted. Because the underlying experiences are not entirely explainable, they must be assumed. Miscommunication arises when the person making the assertion acts as if their audience shares the relevant underlying experience when they do not.

This is not the fault of the messenger, but the structure of the medium of communication. As Joachim Renn puts it “The problem of representation hardly originates simply from the anthropologists lack of imagination. Even if there may be a way out in the direction of imagination and good scientific poetry, the basic and general difficulties posed by the indeterminacy of translation and hence of meaning...are irreducible” (2015: 123-124).

Renn's and Heidegger's observations serve to remind us that whatever our methodological ingenuity, and however creative and assiduous we are in communicating research findings, they remain firmly in the realm of 'knowing that'. Because the audience has not shared in the underlying experiences that went in to the report, the insights remain at the 'free floating' symbolic level. Or worse, proxy experiences are subconsciously and consciously attached to fill the void.

Heidegger's oft-cited phenomenology of hammering is a prime example of this. His story of the tool receding into the background is powerful precisely because most of us have wielded a hammer. Understanding is already embodied by his audience. Discussion on the

subject is therefore informed and meaningful. But it is a deep category error to make the same assumption about a complex social world if it is detached from your audience's personal experiences.

So where does this leave us? The analysis presented here suggests that the traditional way organisations stay informed about their external world is fundamentally flawed in three respects:

- the knowledge absorbed is propositional and therefore conceptual, shallow and transient
- the knowledge is open to a wide range of interpretation due to lack of exposure to the experiences and contexts which gave rise to the interpretations being offered
- the knowledge is inarticulate because it is produced by interlocutors who have limited understanding of the internal world of the organisation that is poised to act

The implication as we see it is as follows; to gain know how, the multidisciplinary teams who work to set and execute a strategy need to become part of the research process itself so they can experience the social fields and develop know how for themselves. In the next section we present a case study of embodied strategy development in action.

DEVELOPING CAMPING KNOW HOW

The decision makers of a consumer electronics brand identified the world of camping as a potential growth area for their leading product. In the past these decision makers would have commissioned a consultancy to research the world of camping, identify relevant insights, and make recommendations for how the brand could grow its market share.

In this scenario, the consultancy would have embarked on the research. If adventurous they might have gone camping themselves, or conducted interviews with campers and those connected with the camping sector. Either way, having got closer to the world of camping they would likely have developed a report and presented their findings to the decision makers. This report would have attempted to transport the client into the world of camping and allow them to understand those that camp. The report would also contain recommendations based on the insights from the research.

The decision makers, utilising their technical knowledge and internal know how, would then set about assessing and translating these recommendations into next steps. If they felt there were opportunities worth pursuing they might decide to take the project to the next stage. An implementation team would be created: project managers, engineers, marketing and external agency partners would move into action. Either original project documentation or edited versions of it would be circulated. The original research team might be invited back in to present their work. A research manager would take on the role of interlocutor – the voice of the research consultancy within the business.

On this occasion, the decision makers were open to exploring a different approach. Something in the specific situation, given the opportunity at hand, suggested they needed to do something different. They observed that none of their team were experienced campers and many lived in or spent much of their time in metropolitan areas. They sensed that in order to understand camping the whole implementation team needed to experience camping.

We met the extended client team at the airport and transported them directly to an outdoor store on the outskirts of San Diego. At the store we met with three groups of campers who immediately set about ensuring that they had the gear and provisions needed. One camper reliably informed us that it was going to be a clear, and cold, night. Warm clothing and winter thickness sleeping bags would be required. The regular, expert campers set about helping the outdoor novices with their clothing and provisioning before we headed to a national park a few miles from the Mexican border.

Know how is disclosed when worlds are practically experienced. Pitching a tent on uneven ground you quickly establish which way round to sleep. Setting up camp you quickly learn the value of digging a shallow hole beneath a water tank to prevent muddy puddles developing. The bright head torch, you quickly understand, is great for practical tasks but not so good for conversation. To avoid the glare of such directional lighting, you see how the 'hack' of using LED wardrobe lights clipped to the tree above provides the perfect ambient lighting solution. It is only by shivering in a tent at 3 a.m as the temperature sits below zero that the value of understanding tog ratings becomes apparent. A visit to the bushes in the middle of the night reminds one of the worth of a good torch under the dark sky of a new moon.

Writing these words now, we are struck by how banal or prosaic these flashes of knowledge or experience might feel. Perhaps this serves to illustrate one message of this paper which is that our ethnographic work rarely is able to transcend the medium we use to communicate it.

However, because it was a collective '*we*' – researchers and clients – that experienced these things for ourselves, as consultants we were not reliant on words or images to communicate these experiences after the fact. These experiences, and the emergent understanding they created, were collective property.

The world was disclosed in situ to all, not experienced by researchers to be subsequently revealed by them to their client audience. In that sense the camping trip established an instance of existential *communitas* (Turner 1974) in which status between researchers and clients dissolved and a sense of togetherness was created by a shared experience. Important though this *communitas* might be, the significant impact on research practice arises from the complete immersion of the client in the social field they are seeking to operate in and their acquisition of camping and outdoor.

Both during and following the camping trip, the team shared stories about the experiences they had, the people they had spent time with and learned from, and the equipment they had used and seen deployed on site. Combining these new experiences with the organisational and technical know how of each team member, a clear sense of how the brand could successfully increase its presence in the world of camping emerged.

For reasons discussed above, the texture and richness of this shared insight is impossible to explain here. The experience and the know how it produced transcends its explication through the written word. Instead the shared experience becomes the primary vehicle for understanding – embodying – the meaning and the import of the phenomenon under examination. The progression from this to defining and aligning around a strategy as a small, senior and multi-functional team turned out to be relatively simple. And the results of the trip and the work done by the combined team were vindicated commercially.

The integrated campaign the team launched was a huge success. It was launched under six months after the research trip and within two weeks of launch one of the advertising spots had been viewed 8 million times on YouTube. It had gone viral amongst campers. Arguably, this is because of the way the spot was executed. The tone, message and language were highly attuned to the world of camping. Their strategy and subsequent execution embodied this shared and deep understanding. The result spoke clearly and compellingly to people who are part of that world. The work of the business was culturally attuned to the world of its target audience.

EMBODIED STRATEGY – TOWARDS A NEW PARADIGM FOR ETHNOGRAPHIC RESEARCH

In concluding this paper we want to recap the argument we have made, and discuss how and where this approach to conducting successful (i.e. impactful) ethnographic research could or should be applied. In so doing it is necessary to reflect on some of the changes that have taken place over the decade since EPIC formed as a community.

First, let us explore some of the more significant changes which ‘embodied strategy’ as a concept, and practice, addresses:

Rising awareness: Growing awareness and familiarity with ethnographic approaches has led to a better understanding of its strengths and weakness and increasing desire for members of client organisation to be involved in research.

Changing timelines for impact. A shifting balance between research projects tilted towards horizon scanning, intelligence generation and the long term towards projects more focused on immediate impacts.

Rhetoric of agility and speed. A world dominated increasingly by software, the scaling of disruptive start-ups and the widening influence of software development processes, has led to business wanting to discover how to ‘move quickly’, with a focus on multi-disciplinary working.

Markets have become complex. Markets are increasingly characterised by a) rapidly changing technology advances; b) very short product cycles; c) dense networks of relationships between businesses, between business and consumers, and amongst consumers themselves; and d) ever quicker feedback loops (Anderson et al 2013). Setting strategy in this context cannot be a static event – it needs to be a process that is lived by a fluid, culturally attuned team.

Our contention is that these contextual changes are not sufficiently accounted for in our current praxis. There was a time when our work was alien to organisations and this exotic allure gave us a monopoly over its application. This is no longer true. Equally, there was a time when we could just speak to the long term cultural change that our ideas could have on an organisation. There was a time when our investigations were a long wavelength, a contribution to deliberative, ‘slow thinking’ strategy work.

In our view the EPIC community tends to see these contextual changes as negative influences that weaken the value of our work. Instead we can see them as an invitation to re-calibrate our practice.

Embodied strategy is our response to some of these contextual shifts. It responds to the desire for people from client organisations to actively engage in research that is framed, structured and guided by people with training and experience. It is sensitive to the desire for teams to move quickly without sacrificing the intimate understanding of the social fields they are operating in. Embodied strategy is born of the need for organisations to bridge the distance between themselves and the world.

The EPIC community has done a great job in bridging these worlds and it is time to reconsider whether the current configuration of our research practice –with a neat distinction between ‘us’ and ‘them’ – and the resultant pressure this puts on communication is fit for purpose.

The central argument of this paper is that through immersion in social fields teams can develop dexterous, intuitive understanding; they acquire the ‘know how’ required to make culturally attuned decisions. They are able to create embodied strategy: collective action based on shared, deep, first-hand understanding of a world.

We have not announced the creation of a silver bullet making machine. The approach we have outlined is not suited to all challenges and organisational contexts or configurations. An embodied strategy approach works well where a core team share a common view of a challenge to be addressed, an opportunity to be seized or a specific development activity to be planned and initiated (be it innovation, product or communication development). In short, we believe it delivers impact where there exists a degree of pre-existing focus. Conversely, it may be less well suited to more open-ended, exploratory research contexts. Finally, given our argument about the importance of giving teams first hand experience of the world there are also questions about how to communicate such shared experiences to those who did not take part in the work.

Our practice in this space is very much in development. We are learning from our clients, and the culture and contexts of their organisations, what works best, when and why. However, we believe that we have started to shift research practice, to paraphrase McGlaughlin, from something that is consumed second hand to something that is *lived into*. And with that shift can come ‘embodied strategy’: collective action based on shared, deep, first-hand understanding of a world.

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NOTES

1. Throughout this paper we have referred to a distinction between clients and researcher. The position that this assumes is of an external agency or consultancy conducting work for another organisation. We are well aware that

researchers operate within larger organisations, working within tightly integrated teams or in more standalone research functions. We believe that our argument – while more obviously addressing the external consultancy-client relationship – is also relevant to these other configurations.

2. It is beyond the scope of this paper and a somewhat speculative assertion, but the number of start ups developing ideas that seem to solve a narrow range of problems relevant to the social and cultural milieu of ‘The Valley’ would appear to support the idea of insight into social fields to which start ups have spatial or socio-cultural proximity.

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Goodbye Empathy, Hello Ownership: How Ethnography Really Functions in the Making of Entrepreneurs

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Human-Centered Innovation has come to be known as the central discipline in the entrepreneurial arena. Through three-years of directorship at Innovation Studio Fukuoka, a “citizen-led” innovation incubation platform in Japan, multiple approaches have been investigated and thus learned a successful to-be-entrepreneur him/herself has to co-own a concern with potential customers that evokes him/her a mission to pursue, that is beyond simply understanding customers with empathy. We witnessed ethnographic approach well facilitates the to-be-entrepreneur to meet an unaware yet intrinsic personal concern and nourish to co-own it with the customers. We also discuss what and how ethnographic praxis in industry can contribute to the entrepreneurial arena and propose a new role that we experienced ethnographers to take.

“Hmm, what’s the most meaningful stuff I had in the five months?

I learned a lot of things here,
But, dare to say, Oka was always there for me.

He helped me a lot especially when I reflect on myself.
When I was losing the way and when I was dithering...”

—Hiro, an alumnus of Innovation Studio Fukuoka, 2015.

WHEN ETHNOGRAPHY ENCOUNTERS STARTUP-ARENA

In the past decade, the corporate arena has come to know that ethnography is an effective tool, bringing customer insights and help create essential values as they were sophisticatedly woven them into the process of product and service creation in a human-centered manner. This recognition, which originally started off from a large multinational organizations where understanding another distant culture is naturally crucial, the notion is now known and considered essential even to as early and small teams such as startups (Aulet, 2013).

One of the primary attraction among the startups that ethnography or the ethnographic research seem to entail is its power to bring empathy, the ability to “reach outside of ourselves and connect with other people (Patnaik and Mortensen, 2009)”. Today major startup incubators and accelerators emphasize the significance of hiring ethnographic researchers or the team to adapt such set of skills in order to help them access customer insights; This corresponds to the trend of startups where the significance and the viability of human-centric approach is recognized over technology-centric ones (Kolko, 2014).

While corporate ethnographic praxis has been the primary profession for the authors of this paper, the trend today has led us to take an initiative in innovation lab. Since 2013, authors of this paper have established an innovation incubation platform named Innovation

Studio Fukuoka based on the request by the city and its directive council of Fukuoka, a capital of southwest Japan with 1.5 million in population. The program is a series of five - months incubation programs, each of which addresses different societal challenges such as health, social boundaries, and ageing. In each program, approximately 60 individuals comprised of primarily citizens and some employees selected from the sponsored companies of the program would participate, forming ten to fifteen teams to become entrepreneurs or intrapreneurs based on the product and service ideas they eventually conceive. The participants so far range widely from technologists, designers, educators, social workers, housewives, and even to high school and college students.

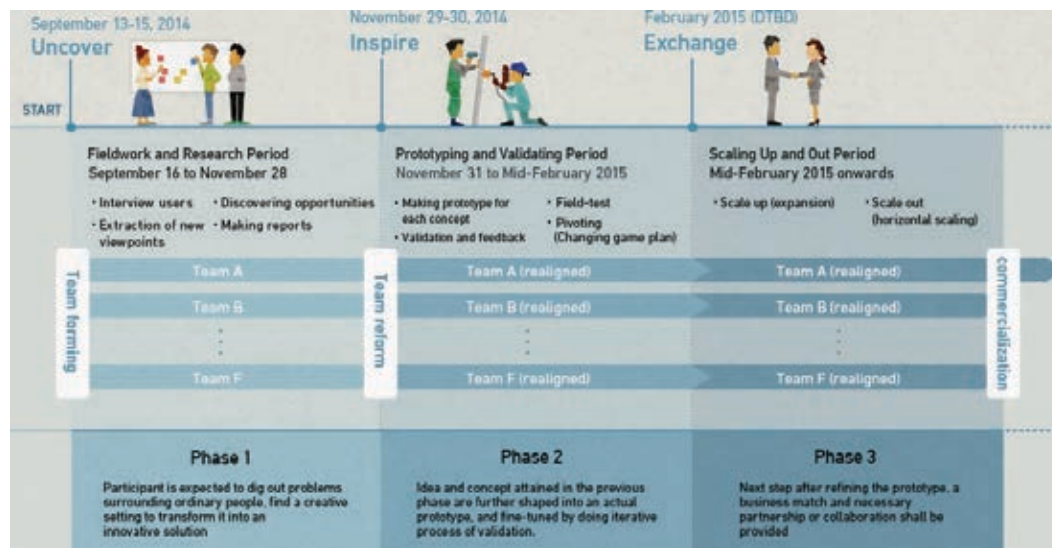


Figure 1. Process of the second project of Innovation Studio Fukuoka "Designing Sports in Everyday Lives." It was five-months long began in September 2014 and ended February 2015. See details at <http://innovation-studio.jp/en/project/index.html> © Fukuoka Directive Council, used with permission.

The characteristics of this program is although most participants have never been involved in a human-centered design practice, participants would start from research, spending substantial amount of time. At the very beginning teams are asked to define their field of interest, refine research questions, and conduct interviews and participatory observations. The program also takes into account that as a result of research, participants may rewrite their interest and areas to work on, and allow them to reorganize or even set up new teams. The second half of the program will take these unfolded insights, where teams will ideate new business concepts and prototype them. Towards the end, the participants will pitch their business concepts to venture capitalists, public sponsors, government policy makers and social impact bonds that would support the conceived business concepts to happen. Since the fall of 2013, Innovation Studio has organized four programs, one of which is ongoing as we write this paper. The program has so far had over 30 teams with approximately 100 participants to reach the final gate, among which 14 teams have started or are about to start their own businesses based on the outcomes of the program.

Quite a few lessons learned through the past programs. First, we were once again struck by the power of ethnographic research: Despite being their first to conduct research, participants delivered great stories and insights based on the research they have conducted, and were capable to inspire not only themselves but also the other participants and even mentors of the program. Secondly, we saw the power of empathy, as it enabled teams to gain deep understanding on their potential customers that eventually became the source of ideas.

However, what intrigued us the most took place in the second half of the program, when business ideas were generated and prototypes were made: we saw some teams fall behind despite of attractive business concepts based on their research outcomes. As we carefully observed and listened to each team during and after the program, we have come to notice that tenacious teams had all acquired new lens to see what potential customers to concern about, and as a result, were able to conceive ideas that not only addressed the concerns of potential customers, but also, addressed some of their own; In other words, we saw the concern was shared and what we call as *co-owned* (Uchida, Ichikawa and Tamura, 2014). The result was a better idea with a bigger impact, enabling the team members and even potential customers, who were involved in their repeated interventions to the field mainly as ‘informants’ to the first half and as ‘reviewers’ to the second half, to wish for its fruitful success. This sense of *co-ownership* was a much more powerful outcome of their research activities than empathy that usually is understood to perceive the other person as if one were him/her but without ever losing the ‘as ifs.’ (Rogers, 1966).

In this paper, we expound how this generative phenomenon happen and discuss how it works when one would become an innovative entrepreneur through research.

SENSE OF CO-OWNERSHIP: HOW SOME TEAMS CREATED BREAKTHROUGH STARTUPS AND DID NOT

Fukuoka, located in the Southwest of Japan, is the administrative, economic, and transportation center of Kyushu. It is the largest city in the region and belongs to the fourth largest metropolitan area in Japan. Being distant from the Japan’s national government while being closer to other Asian cities across the sea, the city has a culture of autonomy and grassroots efforts, which makes its citizens highly in sync with the notion of citizen-led innovation of the Innovation Studio program. Fukuoka almost always shows the highest rate of inauguration among the large cities in Japan.

In recent years, entrepreneurship has been the central interest of the local government that is strongly driven by the mayor Soichiro Takashima known as a leader of the oncoming generation in Japan’s political arena. Innovation Studio Fukuoka, the innovation incubation platform, lies at the heart of its policy. Since the authors of this paper were named as directors of the studio in 2013, a constant effort, and in some cases, an appeal has been made in order to keep the effort suited for Fukuoka, where it is primarily ‘citizen-led’ that distinguishes itself from the rest of the nation’s ‘large capital-based’ or ‘top-down.’ Organizers have also been careful that the studio avoids participants to be technology-centric: upon the announcement of each program when we receive applications from potential participants to make sure there are themes are announced to appeal the program’s emphasis on the human side of the innovation. So far four programs addressed following themes: “Reconstructing the social boundaries between kids with special needs and

without”, “Designing sports in everyday lives”, “Innovating the life course: future of human network, career and growing up”, and “Discovering hidden resource: people and materials.”

Although the studio currently runs its fourth program, its learning and reflection are still in progress as we speak. However, here we take one of the previous programs called “Designing sports in everyday lives” as an example and describe how three teams have succeeded and failed in shaping their businesses.

Team A: Led By Hiro

Hiro was in early thirties, a father of two daughters who were age two and zero respectively when he was at the project. He earned his PhD in material science and worked as a freelance consultant for local businesses and schools. In the first half of the session, he was not really a lead of the team. The team encountered a variety of informants under the hypothesis that parents often desire their kids to work out what they could not. However, the very change took place for Hiro and his team members when the team visited a family, or, to be more specific, a father and a son. When the father was a child, he dreamt to become a baseball player but he could not for family reasons; As he had a son, he again dreamt that his son would become the one, in particular, eventually to play at Koshien Stadium, where the final national high school baseball tournament is held. He has started to train his son when his son was a baby, prepared the best environments for his son to practice including choosing a team led by a quite a coach and devising a way to review every play in a game using camcorders and other instruments to measure his son’s performance. Other than baseball itself, he studied nutrition and physical therapy for his son to build up his strength. As the result, his son successfully joined a leading senior high school team, gained a regular position and won out local preliminary games, and finally got hold of the right to come in the tournament at Koshien! This is truly a successful case of nurturing and seemed perfectly holding true to the hypothesis that the team conceived, but Hiro had another perspective: “Has he really intended to ‘nurture’ his son?” Because he frequently used the term ‘we’ when he explained how his son having achieved the goal, Hiro realized that over the years, it was not his son who was nurtured, but the father himself: His son becoming a successful baseball player was a goal shared between the two and was realized together as a team! This notion alone gave Hiro a strong inspiration and was enough for him to stop his engagement to the team he joined earlier. He spun out and formed a new team to realize the idea of his own. The idea he conceived is based on a new educational toolkit developed by the perspective: Parent and kid grow together as a team.

In a fast changing era, knowledge is something that quickly becomes obsolete; This especially holds true to digital technologies, therefore Hiro thought it would be essential that the product should be an easily-modified, educational toolkit, which provokes collaborative effort among them. Towards the latter phase of the project, Hiro and his team has developed a prototype and quickly decided to start up a company despite that not a single investor showed an interest in his idea at that moment.

Why is this a case of shaping *co-ownership*? Because although the opportunity he identified was through the process of studying others, in the end the idea addressed the concern of his own, for being an educator and being a relatively new father of two daughters himself. In other words, his research was no longer a mere inspiration to a new business idea, but was *co-owned*.

Team B: Led By Yoshi

Yoshi is in mid thirties and had worked for a local company where he built his career in its human resource management. He joined the Innovation Studio program as the company became a sponsor of the program and was appointed as a delegate with an expectation to establish a new venture business of the company. When the program began, he appeared somewhat confused as none of his previous experiences had anything to do with the research-driven innovation process let alone business development. After much struggle, Yoshi joined a team consisted of participants who were interested in pursuing how people shape a health practice. Just like Hiro, Yoshi did not appear to us as the most proactive member of the team.

During the research process, he participated in an everyday community gathering at a cemetery. Consisted of people in their sixties, participants have been practicing radio gymnastics for more than twenty years. Everyday at 6:00 am, participants will quietly come out of their homes, do some exercise, and leave immediately after the radio ends its broadcast without even saying hi to anyone else. The scene appeared bizarre to Yoshi, as he knew that they are acquainted with each other for a long time. Intrigued by the situation, he then continued his study by interviewing the organizer of the gathering how it was organized and who took part. The organizer answered that he was not quite sure who exactly were participating and usually did not do anything together other than the gymnastics.

While the original intention of the team was to identify solutions on how people could construct their everyday health practices, the series of experience evoked him to shift his attention to more immediate, and direct concern of his: The atmosphere of his own company where it seemed to him lacking the direct communication affecting the overall atmosphere of the office. Soon after this shift, he teamed up with engineers in his company and together with scientists in other institutions he started to prototype that can measure different attributes generated during the conversation in a physical space and came up with a new service offering. Eventually he passionately persuaded the management team and succeeded to launch a new business venture inside the company that he has been leading.

After the project, one of the authors of this paper asked him what would he have done if the idea was rejected by the management, and, after a moment's reflection, he answered that he would have pursued it even if it meant that he needs to leave the company. The transformation that took place inside Yoshi was striking. Just like Hiro, he has become an entrepreneur as he realized that the problem was equally present within his environment rather than in someone else's. And once he realized that it is solely on his commitment that whether this problem can be solved, he developed a strong sense of ownership. In other words, it was the *co-ownership* we saw in Yoshi.

While Team A and B describes two successful cases, there is a case of failure where a team halted to continue their pursuit despite of a nifty business idea through their research.

Team C: Led By Iku

Iku is in early thirties and has been working for a branch office of a multinational electronics company where he had been grown as a product developer. He had postgraduate education in information systems that had helped him to create new digital devices in mobility and

healthcare businesses. Unlike Yoshi Iku personally applied to Innovation Studio as he has been considering to leave the company and to start a new business on his own. Iku belonged to the same team as Yoshi, and neither was he taking a proactive role. But once he started to conduct his research, he was extremely motivated and drove research forward.

Among the wide range of people he interviewed, the biggest influence came from three elementary school students, who were in fact, not the informants. Three of them and Iku has coincidentally met during the research phase, as he happened to stay at his friend's villa alongside the beautiful beach. It was a warm autumn day with perfect weather and Iku and his friends planned to bike along the coastline of white sand and green pines. One of his friends brought his kid with a group of friends. They all had taken Nintendo DS with them and as soon as they arrived, they started playing against each other using wireless connection. Disappointed at the scene, Iku urged them to play outside, but all were reluctant to do so. When Iku insisted, one student explained, "without rules, I don't know how we are supposed to 'play'." His words came as a shock to Iku: It never occurred to him that for this generation, whose definition of 'play' is dominated by game consoles, the real world lacks 'rules' for them to play with others. As soon as he had this a-ha moment, Iku decided to spin out of the original team. Together with others the team came up with a pair of sneakers, equipped with motion sensors that go hand-in-hand with smart phones. The device would track the location of each player, and the players in the proximity can compete against others over the area they have captured, or based on any other attributes the device could track. The device was simply put, a rule-making device, which enables users to convert real space as scenes from a game. When the prototype was demonstrated in the final presentation, the Studio was filled with excitement. A venture capitalist became interested and offered a support to the team.

How did Iku's start up go in the end? In fact, the team decided not to pursue. The team even declined the offer from the venture capitalist. As the entrepreneurship became reality, they seem to have been struck by the amount of commitment the project requires, and most of all, seemed to struggle to fuse an intrinsic motivation to start business.

So what was different between Hiro and Yoshi, who successfully started their businesses, and Iku, who did not? All three cases had very strong and attractive ideas, but what ultimately separated the two was the act of *rewriting* the problem: although both Hiro and Yoshi visited others and were inspired through observations and interviews, in the end, the solution was not only for *them*, but also, for *we*, including his own peers: Hiro's idea enabled him to interact more with his children; Yoshi's idea was for his colleagues, where everyday communication was often neglected. Meanwhile, Iku did not change who the target users would be, from the people he was inspired. He did not, unlike two others, did not reflect on himself to see, if the idea would have addressed any of his concerns or problems in his life. In other words, he could not develop a sense of *co-ownership*.

DISCUSSION: ACQUIRING SENSE OF CO-OWNERSHIP THROUGH ETHNOGRAPHY

Many challenge and most fail...becoming an entrepreneur is hard. This is particularly the case for so-called 'innovation-driven entrepreneurship' (Aulet, 2013), as entrepreneurs not only need to create products to appeal the market, but create the market itself. Considering what takes place in most people's lives today, not many would score as low as

entrepreneurship rate. Entrepreneurs need a reason why s/he would take such risks, and should have an intrinsic motivation, or to be more precise, '*a mission*.' And as we saw from these three cases, a *mission* is often generated through the process of research and its reflection creating a 'shared space' between oneself and the potential customers. In this sense, to-be-entrepreneurs need research not only as a way to understand the customers, but as a process of dynamic interaction with customers in order to co-create the 'shared space' as an innovation opportunity.

This resembles to the past discussions what roles that ethnographers can take. Ethnography is powerful to unleash us ethnographers to become "agents of change." We are often privileged as we are intrinsically in the frontline of corporate, social and academic practices. Brun-Cottan described us as "ontological choreographer" since "we owe the adequacy as well as accuracy of those representations to those we study, to those to whom we report findings, to those who hire us, to those with whom we work (designers, engineers, marketers, sales representatives, and so on), and to those who will be the consumers of 'our work' itself (our colleagues, our discipline)" (Brun-Cottan, 2010). We literally are in the center of problem sphere where multiple knowledges and multiplicities of meaning are elaborated. Therefore we can ride out the role being humble trustees of informants; we need not stick to "as if" we *were* they, but rather encourage us to *own* them.

As Depaula et al. argued we are no longer mere researchers, but are invited to contribute as product developers, business strategists, dealmakers, and corporate narrators (Depaula et al., 2009). For this transformation, we should utilize our knowledge, experiences, skills, our unique perspective to endow us an edge – creating interesting possibilities to stay relevant. Authors of this paper also discussed what roles we can take the social activist and interventionist stance (Ichikawa et al., 2013): Under the imperative circumstances of transforming the tsunami devastated area in the northern Japan, we spontaneously undertook a role to articulate an array of resources such as community leaders, high school students, professionals in broad areas, NGOs, and philanthropy organizations, from their knowledge, skills, passions, network, materials, to funds in order to create a force to move forward.

How might we help to-be-entrepreneurs to tap the power of ethnography? How might we help them to go beyond gaining "favorable insights" and to build sense of "*co-ownership*" through research? One idea we suggest is to detach ethnography from ethnographer, in particular, by ethnographer shifting his/her role from a translator to a coach. Figure 2 shows how this idea works. When ethnographer is a translator, s/he understands users through research, and translates their needs, desires and aspirations for practitioner such as developers or entrepreneurs. These practitioners would then utilize the outcomes of the research but having ethnographers as mediators, it leaves distances between the user and the practitioner, which makes them difficult to gain a sense of *co-ownership*. Meanwhile, what if ethnographer is a coach? Instead of passing on the messages from the users, the coaching brings practitioners to the frontline of research and through that, helps practitioners to extract, or to reflect their motivations and concerns, which overlap with the users. In other words, coaching by the ethnographers is the key for practitioners to *co-own* users' concerns and problems.

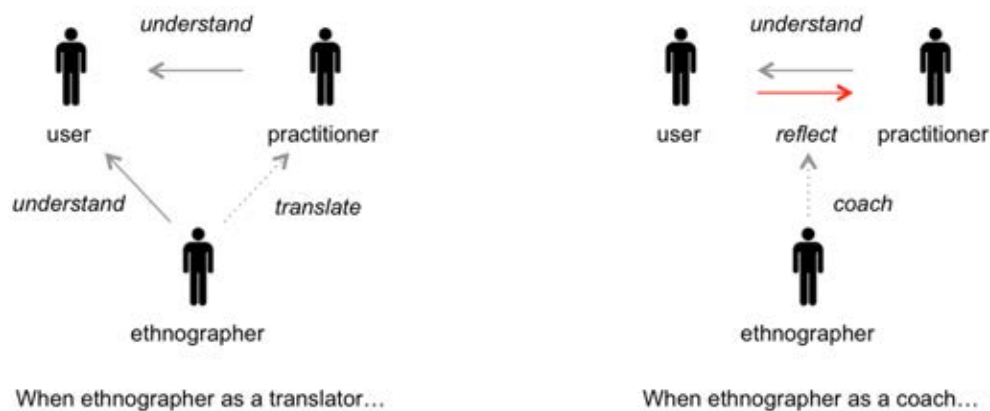


Figure 2. Comparison of the roles ethnographer to take: As a “translator” and a “coach.”

Being a good coach in this particular situation has not been well speculated, but anecdote that Hiro left in his experiences in Innovation Studio provides us an inspiration: When Hiro was asked what has been most helpful about Innovation Studio, he instantly told us that “Oka was always there for me.” Oka is one of the directors and, with his open-minded and casual personality, he is very accessible for participants of ISF both in physically and in mentally. This took us as a surprise as the program provides various supports, including methods, knowledge, cases, advice, and networks to help ideas come true. Despite of all these being offered, one of the most successful graduates of the program appreciates Oka’s presence, his generosity offering time to hear participants stories and try to understand what they wanted. Ethnographers may perhaps be equipped with a rich set of skills, experiences, knowledge, and unique perspectives, in the end we should be aware that we are perhaps valued for being *there*. This notion suggests that we are being on the new stage – legitimate facilitator of entrepreneurship.

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Postal Poetry: The Significance of Stamps

ALEXANDRA MACK

Pitney Bowes

Postage stamps, quickly receding in usage as we tweet our voices around the world, have for nearly 200 years been key enablers of a system that links humans by physical messages. But beyond their role as facilitators of communication, stamps themselves carry messages embedded in their usage and imagery. Functionally, stamps signify that appropriate payment has been made for the service of transporting a letter. Symbolically, stamps express meaning for a variety of actors. The agencies who create stamps can use the visual canvas they provide to promote national values through domestic achievements and significant events and people. Individuals who use them may focus on the beauty of a stamp and the intimacy they believe a personally chosen stamp implies to the recipient. The recipients who do notice stamps and other marks on the mail may be noticing something unintended by the sender, such as the class of mail, which signifies the letter's importance, or lack thereof. Stamps can carry personal meaning too, as connectors to one's own past and as objects collected by a loved one and passed down as heirlooms.



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Marketing the Anthropology of Ice Hockey

EMILIE HITCH

Thinkers & Makers and The Humphrey School of Public Affairs, UMN

In multiple cities and countries, ethnographic research unfolded in local ice rinks, Subway sandwich shops, high-school parking lots, and family homes. The objective was for a major hockey equipment company to learn more about their customers “off the ice” – challenging assumptions about consumption patterns, media choices and concepts such as authority, legacy, brotherhood and even the game of hockey itself. The researcher became an agent of transformation for the very way that the brand understood its place in the culture of ice hockey. Corporate marketers engaged this project in the middle of a yearly planning cycle - disrupting the allocation of resources for media spend and creative content and setting the company on a path to re-design their approach to customer communication. Returning from the ethnographic practice, the research team made recommendations for how to shift hundreds of thousands of dollars from celebrity, magazine and television contracts to locally executed communication. They led creative teams to change the marketing messages, to re-imagine hockey players themselves as media and brand agents, and to build a digital experience that revolutionized the way that one of the largest marketing machines in the industry of consumer packaged goods mobilized its core customers.



Image courtesy www.effie.org

Emilie Hitch is an applied anthropologist (Yale, LSE) whose work is rooted in the Common Good. From American, Cambodian and Zambian farmers, to modern philanthropists and Generation Flux-ers, she collaborates with people designing for social impact. She is also an active board member for the Quetico-Superior Foundation and Eat for Equity. Hitch0017@umn.edu

The Incas and Mayans Did It, Now We Do It

JOANIE JOCHAMOWITZ
INSITUM

Icons have grown in popularity in recent years thanks to the brink of technology and interface design after. Today we have over 800 emoticons to use from when we communicate with others and sometimes even adopting our own meaning of them. Our current use of icons and emoticons as a form of communication is very similar to pre-Incan Peruvian cultures. Their use of icons were based on their cultural and spiritual beliefs, making iconographic images that represented religion and lasting over 1,000 years. How do we use iconography in our cultures and social groups?



Joanie Jochamowitz, currently works as Operations Manager at INSITUM Peru. Joanie has extensive knowledge in the creation of experiences and interactions as a strategic pillar for a brand and business, both in digital and physical space in order to create experiences that generate engagement, change behavior and create value. joaniejochamowitz@insitum.com

Digital Love: Hacking the System

DEREK KOPEN

SapientNitro

JULIE CAPRON

Manifest Digital

According to John Lennon, “All you need is love...” Do these words still hold true? What happens when society, family, or friends don’t approve? Or when cultural values make finding love feel awkward or taboo? Digital has forever changed what is accepted and expected in the world of dating; however, even online platforms do not always enable everyone’s expression of love. Despite these obstacles, in-love audiences are hacking societal constructs through social media to find love on their own terms. They are manipulating the intended uses of social media platforms in unique and unexpected ways to express love — especially when this need is unmet in real life. Derek Kopen and Julie Capron see an opportunity for brands to learn from these hacking behaviors by examining what these hacks tell us about people, their motivations, and what it truly means to build meaningful connections.



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Derek Kopen Derek is an Emory graduate with a BBA in Marketing and Consulting. He is currently an experience brand strategist at SapientNitro, New York where he collaborates with cross-functional teams of technologists, UX designers, ethnographers, and brand strategists to deepen and grow relationships between consumers and brands. dfkopen@gmail.com

Eat Your Heart Out!

RENU ZUNJARWAD

Arizona State University

This visual ethnography explores how explicit understanding of the process of eating ethnic street foods can help design meaningful and engaging food experiences for users and providers. It presents an innovative approach of conducting ethnographic research that involves important domains of experience-focused innovation. Most importantly, it integrates broader perspectives of globalization, immigration, and cultural assimilation to ask if gustatory pleasures of the palate can act as a powerful medium to develop deeper inter-cultural ties. Nobel Laureate Gunnar Myrdal commented, “Problems do not come in disciplines”. “Eat Your Heart Out” takes an interdisciplinary route to explore an issue that is economically pertinent, socially challenging, and culturally intricate.



Renu Zunjarwad I am a Ph.D. candidate at Herberger Institute for Design and the Arts, ASU, United States. My area of interest is ethnographic research for design innovation and I am working at the edge of design and anthropology disciplines to explore integrative research approaches.
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The Sportcaster Voice as the Main Emotional Link between Fans and the Experience

MAURICIO GUADARRAMA BAZANTE
INSITUM

This research was to redefine the design structure, strategy and implementation of the sport narratives of the National Mexican Team during the last Soccer World Cup in Brazil in 2014. There is a crucial difference between attending a global sporting event and watch it on TV. However, the moment when a fan start watching TV, the narrators create the main emotional link providing engagement. They are the ones who narratively indicate the exact moment of attention, epic, passion, and emotion.

Sportscasters are the bridge between the game and the fan; therefore, the game is not only experienced through “sight”, but can also be through “bearing” and through the loyalty towards your preferred narrators. At that moment when the excitement and passion increases, because your national soccer team is playing, the sportscaster’s performance is essential in the fans experience.



Photo by Mauricio Guadarrama

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“Right in the Middle”: An Experience of Women Reconciliation within the D.I.Y. Movement

ANDREA MORALES MORENO

Autonomous Metropolitan University, Cuajimalpa, Mexico

A very personal view of how a Mexican teenager finds empowerment in the D.I.Y. punk culture and how she manages to reinterpret her femininity in a patriarchal country by making meaningful creations for her and other girls.



Photo by Andrea Morales

Andrea Morales Moreno is a Mexican Design student, feminist, sewing enthusiast and full time witch. She calls herself *Andrea Tumbas*, started *The Grrr!VIRUS* movement in Mexico. She currently has a menstrual cloth pad project called *Ixchel* inspired in Mexican textiles and their relation with the universe, birth and blood. andreatumbas@gmail.com

Empathy without a Face: Is Ethnography Effective in the Absence of Participant Photographs?

ELIZABETH ELLIOTT BAYLOR

MARINA KOBAYASHI

Google, Inc.

UX researchers channel the voice of the user. They succeed to the extent that they are able to build bridges, giving designers and stakeholders an authentic sense of user emotions, motivations, challenges, and delights. Good research pushes the design team to feel what the user feels, participating vicariously in the user experience. One of the surest ways to establish empathy is through photography. Images 'from the field' bring a participant to life, while implying authenticity and the researcher's authority to tell a user's story. But we aren't taking pictures. As researchers for Google's internal tools and infrastructure, our subjects are our coworkers, and participant faces are conspicuously absent in our deliverables. We asked ourselves why and stumbled into larger issues of truth, exoticism, and representation. We explore what the lack of participant photographs has meant for our work by revisiting image-intensive past projects and addressing three burning questions: (1) Why are we less likely to photograph participants who are 'closer' to us? (2) To what extent are images 'photographic evidence'? Are we using them to assert an unfair aura of objectivity, an undeserved right to speak for the user? and (3) Is ethnography effective in the absence of participant photographs?



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Myths and Facts about the Sharing Economy Promise in Emergent Countries

NORA MORALES

Universidad Autónoma Metropolitana, Cuajimalpa, Mexico

A question about how taxicabs look alike in different countries started a visual dialogue between two friends living in India and Mexico. Through their conversation, they discovered similar patterns on how each country is adapting to the promise of sharing economies. How are those systems based on information technology are really empowering individuals, corporations and governments? Are they really delivering value and bringing opportunities to transact and collaborate? The author might not have an answer, but her narrative is challenging the way we think about local human and physical resources and their changing role in the emergent economy stage.



Photo by Dora Rodríguez

Nora Morales is an Information Design professor and researcher at Autonomous Metropolitan University in Mexico City. Her research interests include data visualization and participatory approaches for the co-production of knowledge. norismo@gmail.com

MARDI GRAS: A GIFT ECONOMY

HAL PHILLIPS

MEG KINNEY

Bad Babysitter

To residents of New Orleans, there is a special brand of pageantry and community surrounding the Mardi Gras ritual. At the center of it all are Parades - the heartbeat of Mardi Gras. Each Krewe (social club) puts on a huge parade sometime during Carnivale Season. They each have their own personality, costumes and "throws". Throws can be as simple as the iconic beads we all know, or elaborate handcrafted items that are highly sought after prizes.

During parades, a strange thing happens - objects that have little commercial value become incredibly valuable, even for a few moments. People jockey for position to catch beads, toys, custom medallions, and above all the prized throws of each Krewe. There is a whole system of value attached to each parade, which the city celebrates. We will explore how the gift economy of the Mardi Gras parade unites old and young, and bridges racial boundaries in a shared ritual.



Hal Phillips and his partner **Meg Kinney** founded Bad Babysitter, a business ethnography firm based in New Orleans, Louisiana. Combining principles of the social sciences, documentary filmmaking, and business acumen, Bad Babysitter helps businesses and organizations grow by becoming more empathetic to the people they serve.

DataTaxi: Applied Ethnography for Connecting the Feeling of the Streets and Communication Messages

SERGIO SILVA

nova/sb

The urban environment has created a multiplication of stimulus that causes people to pay less attention to message content. In an attempt to understand what really interests them, the author found the taxi cab—a traditional mobile scenario—as a way to explore aspects and encounter feelings of the population. By applying ethnographic approach and training taxi drivers this tool collects information from participant and consumers while traveling through São Paulo streets.

Ethnography, methodology development, research innovation, marketing research.

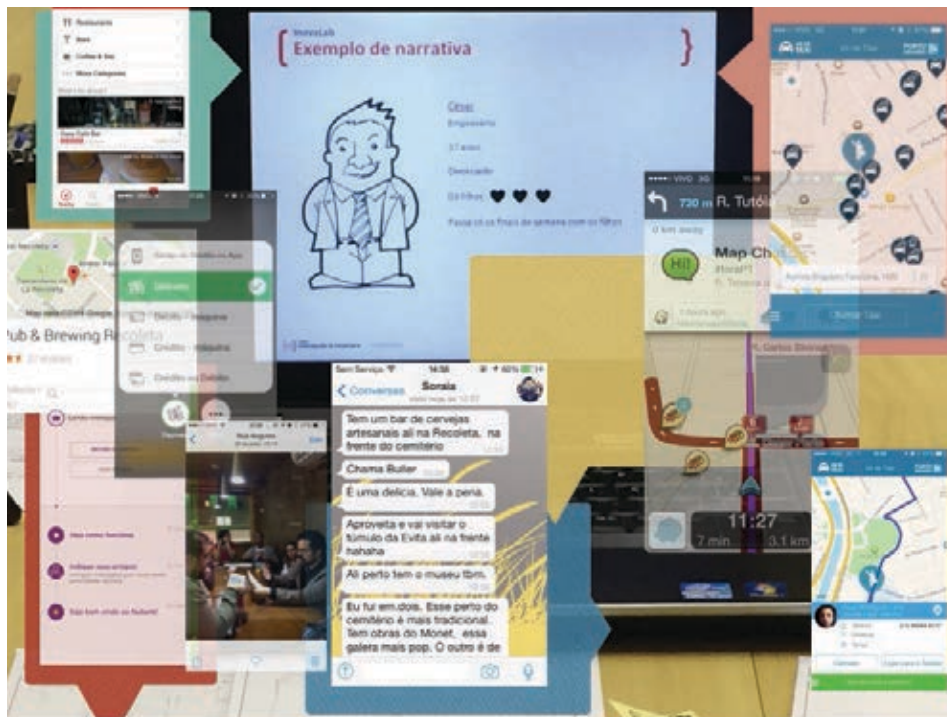


Sergio Silva is account planning head at nova/sb, an ad agency with large expertise in effective public service advertising. Has a master degree in business administration from University of Sao Paulo (SP) and teaches at FAAP. sergio.silva@novasb.com.br

Cyberurbans and Intermediatics: The New Individuals in Focus

LUCIANA HAMAMOTO TERCEIRO
USP

People that live in cities. Urban human beings that live in places that are far from being a flat space, but are places formed by multiple layers of intersected information. These layers affect each other and affect all people that are browsing them. Some time ago, we were guided by signs, outdoors, letterings, newsstands. Quickly, a new form of information source starts to shape our urban circulation. In our hands, people start to have access to all kind of data. Data as opinions and content from our friends (or not) starts to influence our decisions, in a larger scale. Between the physical and digital world, how are the relations? At the same time, people are having relations with others that are so close and others that are really distant. In this scenario, how will ethnography help us to understand the individual? Observing physically isn't enough. How can we observe what happens in both worlds, the real and the virtual? What process and methodologies can we use to look for this whole comprehension? We can't separate our physical and virtual existence, and the challenge here is to know this hybrid person.



Luciana Hamamoto Terceiro is a Fashion designer, studying a Master Degree in Communication Research. With more than 12 years of experience in information architecture and usability projects. She main interest focuses on how to better understand people and make systems for them.
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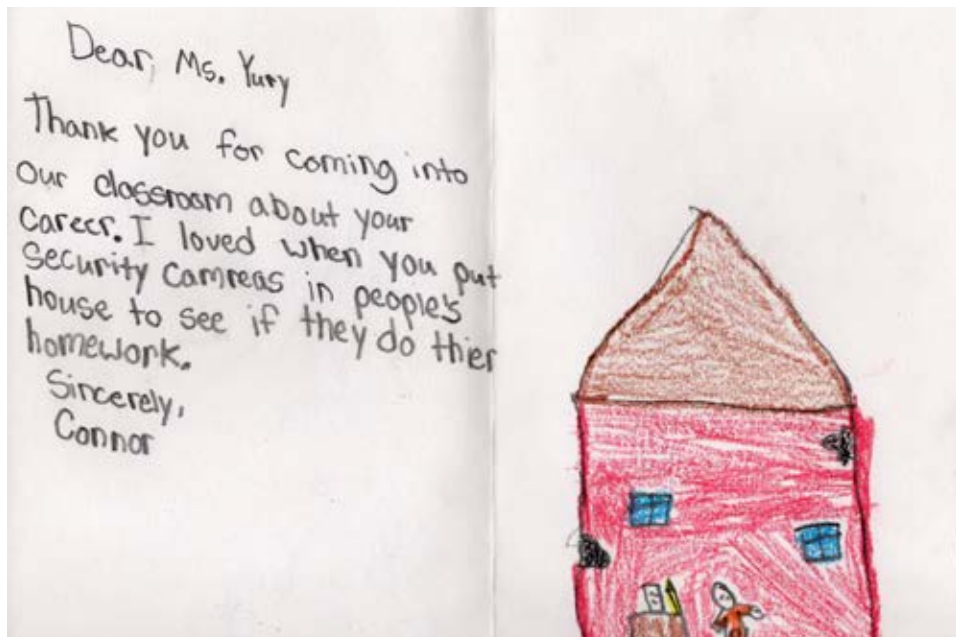
An Ethnographer Goes to Career Day

CARRIE YURY

BeyondCurious, Inc.

*As a working mother it's important to me that my 5 year old knows what I do. This isn't just so that she understands where mommy goes all day. It's also because I feel that it is critical that I provide her as many examples as possible of **women who are taking leadership roles and making an impact in the world.** And I know that, as her primary role model, it's important to both of us that I include myself among those impactful women. So without any hesitation when the form came home from my daughter's elementary school asking for volunteers for career day, I filled it out. In the field for occupation I wrote "Ethnographer." A few weeks later I received a formal invitation telling me that I would be giving a half hour presentation to two classes about what I do for a living.*

That is when panic struck.** Everyone in this room knows how difficult ethnographic praxis can be to explain. In fact, sometimes I feel like **I've spent my entire professional career as a researcher trying to explain--mostly unsuccessfully--what I do for a living.** And I'm not only an ethnographer, I'm also head of experience research at an innovation agency. I have a hard time explaining what that means to educated 45 year olds. So here I had set myself up to do this impossible thing in front of five-year-olds and fifth graders. What was I thinking? **And how was I going to compete with the police officer who was bringing his real live squad car?



Carrie Yury is VP of Experience Research at innovation agency BeyondCurious, where she uses a variety of quantitative and contextual, qualitative research methods to build experience strategies, guide user experience, and inform product design. cyury@beyondcurious.com