Ethnography, Storytelling, and the Cartography of Knowledge in a Global Organization: How a Minor Change in Research Design Influenced the Way Our Team Sees, and is Seen by Our Organization.

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Our team unites qualitative researchers, designers, and prototyping engineers to investigate workplace technologies using a four-step process: ethnography, analysis, intervention, measurement. Projects develop in relation to the needs of internal corporate units identified as project stakeholders. An experiment with a more ethnography-centered research approach, conducted without a specific internal sponsor, led us to develop findings we believed could benefit many groups in our organization—designers, product teams, salespeople, corporate strategists—but presented us with some unfamiliar challenges. First, we needed new storytelling and social media tools to disseminate our message. Second, we needed a way to find out who, in our organization of 75,000 globally distributed employees, might value our findings. In response, we initiated an internal project investigating and mapping out social networks of knowledge exchange and strategic influence in our company. We foresee using this strategy map to guide future efforts to share our findings to a more diverse audience in our company.

Ethnographers in corporations contribute a unique way of knowing about the world to their organizations. An ethnographic way of knowing requires listening to people as they share stories of their personal experiences, their feelings, and the deeply personal meanings they perceive and create in all aspects of their lives. In our work, as members of a team researching technology opportunities, we typically focus on identifying customer needs in workplace environments. Based on these findings, we create working prototypes, introduce those prototypes into our research subjects' work environments, and measure how valuable those prototypes are for our subjects. Projects following this research design, which our team has refined over more than 25 project cycles, typically require six months to complete.

In 2009, for largely incidental reasons, we attempted an exploratory project that involved abandoning the prototyping and measuring stages and embracing a more lightweight, ethnography-centered approach. As a consequence, we ended up having what were, for us, some novel experiences that resulted in nothing less than a rethinking of our position in our global organization, and of our relationship with strategy in that organization.

This paper begins by describing that project and the model that emerged from it. Next, we discuss how our need to share our findings in our organization led us to expand the set of tools we use to share stories about the work we do. Finally, we describe how, as a result of these experiences, we launched a project to map out the different ways of knowing in our organization, and how those ways of knowing contribute to internal conversations about our organization's corporate strategy.

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A NEW ROLE FOR ETHNOGRAPHY IN OUR RESEARCH DESIGN

In the fall of 2009, we undertook what we expected would be a two-month project investigating how people use cloud-based services[1] in their work and personal lives. In the first two weeks we developed a simple interview instrument, recruited informally among our friends and colleagues, identified 15 individuals as research subjects, and visited subjects at their work or home offices, interviewing them and taking pictures as they showed us their work spaces and web services. By the end of those two weeks we had completed the thirteen one-hour interviews that would provide the data for our analysis.

In total, eight men and five women shared with us stories of how they used digital services. Manuel, a sixteen-year-old high school rap artist, described the web services he used to create, share and promote his music, and told us he used email as a channel for receiving updates about activity on social networking sites like Facebook and MySpaceMusic, but not for communicating with friends. James, a 65-year-old Fortune 500 vice president, explained how he had moved his business and personal data entirely to the cloud, despite corporate IT policies restricting him from doing so. Although our recruiting was informal and fairly casual, we did seek, and were able to interview, individuals with diverse personal profiles, people who were entrepreneurs, small business workers and enterprise workers, who ranged from tech-savvy to tech-wary, and people of different ages between 16 and 65.

After typing up our interview notes, we spent four weeks rereading and analyzing the stories our informants had shared. As we examined the data we collected, we realized we could use their stories to map out the phases people go through in their relationships with digital services. By the end of the sixth week of research, we had developed what we referred to as a Service Relationship Model. Below we will say more about the steps in the analysis that led us to this model, but first we would like provide some background on how this project was in so many ways a new experience for us.

A Four-Step Research Design and a Six-Month Commitment

Ricoh Innovations is a small, 10-to-20-person research organization in California's Silicon Valley with seven years of experience conducting original user research to support our corporate sponsor, a multinational company that manufactures and sells a range of office equipment and media devices.

Since our foundation we have developed a standard methodological approach, revised through more than 25 project cycles, in which teams of ethnographers, designers and engineers identify important values for users through a six-month-long, four-step process. First, we conduct ethnographic research on subjects at a work site, using methods such as contextual observation, shadowing, and structured interviewing. On this basis we identify unmet needs or other opportunities

[1] The National Institute of Standards and Technology (Peter Mell and Tim Grance, Version 15, 10-7-09) defines cloud computing as "a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction." http://csrc.nist.gov/groups/SNS/cloud-computing

to improve their work experiences. Second, we work together with our research subjects to prioritize the needs or opportunity areas we have identified, selecting the issue of greatest interest to both parties. Third, we build a functional prototype that seeks to create a valuable experience for workers in relation to that issue. Fourth, we deploy that prototype for subjects to use in their everyday work—typically this is an overlay on their existing tools, which they can adopt, experiment with, or ignore as they choose—and we measure the value of the solution we provided using ethnographic and quantitative methods.

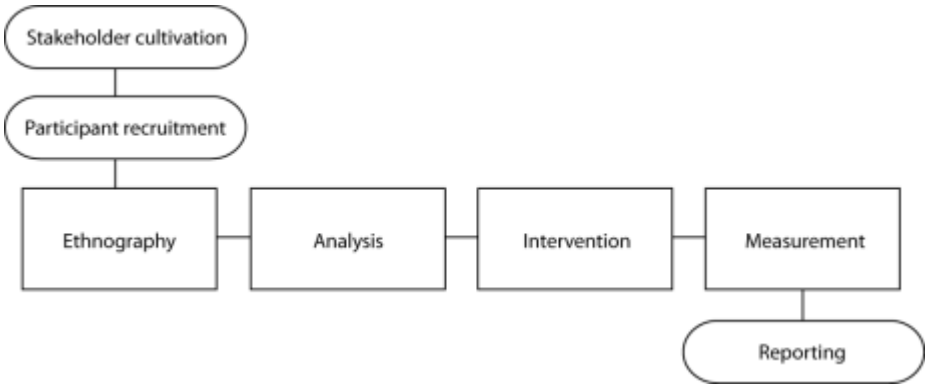

FIGURE 1. ***Our traditional six-month research process.***

The above account usefully describes our research design, but in practice it also erases several important areas of work that contribute to making our research successful. First, we regularly spend time cultivating relationships with various units in our company to learn what issues they care about. Before a six-month project begins, we typically designate one internal unit as the audience or stakeholder for that project. Knowing in advance who our audience will be influences our choice of site, our prototype approach, and the metrics we use to test value. Second, having determined our project stakeholder, we identify and recruit research sites; it can be no small challenge to convince an organization to grant us six months of access in exchange for our insights into their work situation. Finally, when our research is completed, we create presentations and reports to communicate our findings with the division or unit identified as our project stakeholder.

With this as our standard research model, how and why did we find ourselves conducting a two-month project with no research site, no prototyping agenda, and most importantly, no internal audience? The answer is, we had anticipated that future six-month projects would likely be shifting in the direction of digital services, and we decided to use the two-month window available to us to attempt some lightweight exploratory research to provide grounding for that new area of inquiry. Little did we know at the time that this decision would launch a cascade of unintended consequences for how our team works, and how we understood our position in our company.

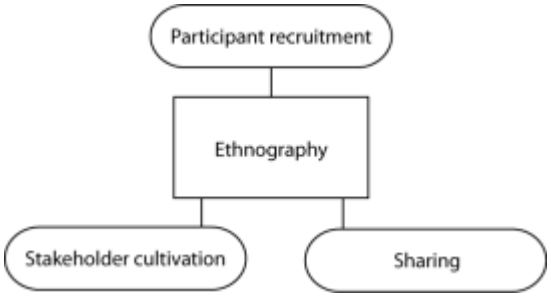

FIGURE 2. ***Our recent two-month research process.***

EXPERIMENTING WITH NEW TOOLS FOR STORYTELLING

Working through the words and images collected in our contextual interviews, we had arrived at a model for how people form relationships with digital services. What we didn't have was a specific unit inside our company to which we could present our findings. We believed we had an important story to share, one that could potentially benefit many groups in our company, but we were not sure where to start disseminating our message in an organization with 75,000 globally-distributed employees.

In response to this challenge, we adopted what were for us, new forms of storytelling, new digital technologies, and new social media tools. We are not saying that the methods we used are fundamentally novel, or are new to our industry. We mean only to emphasize that we were experimenting, trying things that were new to us, and that the conditions pushing us to do so arose unexpectedly as a result of our new research approach.

The Book as a Familiar Medium for Sharing Stories

To help people outside our team understand the steps we used to develop our findings, we created a hardcover book, a 'methods sampler', that we had printed by a web-based on-demand publisher. The book presented images of fourteen artifacts from the project, and described how each artifact represented a distinct step in the process of creating the model. Because we chose to focus on documenting each and every step we took in generating our findings, it prompted a lot of interest from leaders in our organization who, in the past, had focused their interest more on our findings, rather than on the ethnographic ways of knowing that produced those findings. We also found that letting people hold a small hardcover book, flipping through pages, offered them a comfortable way to interact with the story we were telling, without the need to coordinate a shared interaction such as a traditional slide presentation. As a result of this positive response, we have since printed numerous copies to share with key executives and with other teams in our organization.

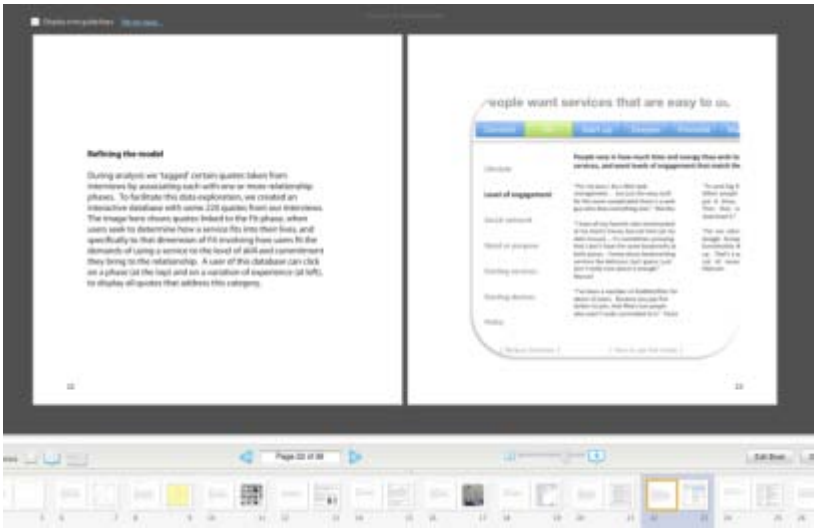

FIGURE 3. ***Web-based on-demand publishing means researchers can create hardcover books documenting project activities in a format project sponsors and others can review quickly and conveniently. High-quality copies produced at low cost, like the one being laid out here, can make meaningful memory objects for project stakeholders.***

Using Videos to Achieve Feral Distribution

Toward the end of our two-month project we created a slide presentation about our findings. Such presentations are perhaps the dominant way that information is shared in our organization, and presentations to small groups are traditionally how we deliver our findings to stakeholders in our work. After completing that presentation, we quickly realized that a slide deck as a stand-alone document was an inadequate response to our situation.

For this project, we needed a medium that would allow our findings to be disseminated more broadly; we also wanted to share our story in a form so compelling that people would want to pass it on to others. Until recently we might have said we hoped our findings would "go viral" within our corporation, but after seeing Genevieve Bell speak recently about "feral technologies,"[2] a more appropriate description would be to say that we wanted them to "go feral," meaning that we hoped our findings might escape into new ecosystems of meaning and practice, to find new niches to exploit. To us the term "feral" helps us move beyond the idea that we can control and plan for how our findings might find new life and create new value in our organization, and helps us recognize that it is the unexpected ways they might find new places to live that were most interesting to us.

[2] "Feral Technologies: An Ethnographic Account of the Future." An Ethnography in Industry presentation, PARC Forum, 3 June 2010.

The idea that we were making a video pushed us to rethink almost every aspect of our original presentation design. We set out to create a new presentation that would tell our story in a cleaner way, using a more simple visual language, with the expectation that we would use it as the basis for a video. We ended up making three separate videos, one to present our model of the service relationship, one to focus on how users experience the service relationship, and one to focus on how our organization can take advantage of our findings to design products and services in ways that give users better relationship experiences. To create interest in this video series, we also chose to make a trailer, which we released in advance, and promoted through internal corporate blogs, to stimulate anticipation of our findings.

FIGURE 4. Inexpensive screencasting software can allow researchers to quickly and easily create videos from slide presentations. In the project shown here, soundtrack recording and editing, the design of the screencast from slide image files, and the inclusion of subtitles, can all be handled within the software. Video can be a useful way for researchers to spread stories about research findings beyond their traditional internal audiences.

On our first attempts at making the videos, we simply clicked through our new slide presentation using screen cast recording and editing software, while recording a voiceover directly into our laptop using a USB microphone. After many failed attempts, we recognized that live recording was not allowing us to achieve the quality level we desired. We prepared written scripts for all four videos, and recorded audio takes until we were satisfied with the results. Finally, after minor soundtrack editing, we imported the slides into the screen cast software, and timed the slide transitions to match our narration.

THE WAY OF INDUSTRY

To address the fact that our audience was composed mainly of native Japanese speakers we also tried different methods for helping our story cross that language barrier. We experimented with both Japanese subtitles and Japanese-language narration, and settled on subtitles; a local freelancer translated our English-language script into Japanese, and our editing software made it straightforward to place subtitles appropriately.

With our video series completed, we were able to begin to release our findings through internal corporate blogs, directing viewers to a site where all project materials could be viewed, downloaded, and shared. Materials available at that site included all videos in subtitled and not-subtitled formats, scripts in both English and Japanese, and the slide presentations used to create the videos, in various formats. It was an incredible challenge, at the time, to find approaches to distribution that leveraged the power of social media and social networking, but that allowed us to retain control over the dissemination of materials that were, at that time, confidential internal findings. These frustrations were, for us, the final experiences that led our team to make concrete shifts toward integrating cloud-based collaboration platforms into our communication and productivity toolkit.

Moving from presentation-based sharing to participation-based sharing

As we developed our Service Relationship videos, we realized our vision for sharing findings was moving away from a presentation-based model to a participatory model; essentially we were tired of showing presentations in dark rooms to passive audiences, and envisioned ourselves creating opportunities for teams in our global organization to explore our model and apply it to their immediate work situations through more playful and engaging activities. We came to see our video series as a tool for driving viewers to participate in future activities like games or workshops where participants could actively explore and experience new ideas rather than simply passively watch them.

As a first small step in that direction, we created a Relationship Design Guide, which teams in our organization could use in a workshop context to explore how insights from the Service Relationship model might intersect with specific projects those teams were working on. More broadly, we have also taken significant steps to increase opportunities for audiences to have participation-based learning experiences. For our team, trying a two-month project and following an uncharted path through new situations and new experiences, came to be seen, in retrospect, as an experience that shifted our own internal team culture in the direction of increasing activities that promote participatory and play-based learning.[3]

[3] Jane McGonigal's research generally, which we first encountered through her whitepaper "Engagement Economy: The Future Of Massively Scaled Collaboration And Participation" (Institute for the Future, 2008), was influential in orienting our interests toward the relationship between gameplay, engagement and innovation. Ken Anderson and Jane McGonigal's "Place Storming: Performing New Technologies in Context" (NordCHI 04) exemplifies the value of participation-based approaches for technology innovation.

MAPPING WAYS OF KNOWING IN OUR ORGANIZATION

The circumstance of having research results we cared about, but no designated internal stakeholder with whom to share them, had an additional unintended consequence. It highlighted for us a previously unrecognized opportunity to cultivate a broader audience for our activities in our organization, and launched us on a path to redefine our place in our organization. We cared strongly about sharing our findings because we believed our ethnographic way of knowing had uncovered *strategic* insights: Giving people strong use experiences and strong relationship experiences should be, we felt, a cornerstone of our company's strategy. So who else in our organization, we wondered, was interested in users? Who was focused on strategy? What other ways of knowing shaped Ricoh's strategic vision, and how would our ideas fit with, support, or conflict with ideas generated by those ways of knowing?

Such questions caused us to turn the lens of ethnographic reflexivity, which researchers often apply to themselves as individuals, onto our extended corporate self, asking essentially, Who is our corporation, what does it believe, and what factors influence the perspective it adopts toward the world? In response, we began an internal project to investigate and map out the networks of knowledge production and exchange that contribute most directly to the formation of corporate strategy in our company, a map we foresee using to guide our future efforts to recruit and market our findings throughout the company.

Our first step was to look for evidence on the Internet and in internal publications. We looked for groups that appeared to deal in strategy, and for individuals who had published internally or externally on design or ethnography. Using search and social networking sites we found people with roles, or in groups, that included the word "strategy," although their publications and technical reports did not always show evidence of strategic thinking as we would recognize it.[4]

Probing further through personal contacts, we discovered that many groups have names that mask or simply don't correspond closely to their function. The primary responsibility of a particular 'corporate strategy' group might be maintaining a release schedule for upcoming copiers. Organizational charts in Japanese companies, we soon learned, were often *intentionally* opaque, to veil a team's true purpose and provide protection against potential corporate espionage. So, we began to build our own information-rich organizational chart, with personal names, contextual information, and histories attached to the impersonal structures presented in corporate annual reports. In sum, these methods gave us useful insight into our corporate self, but left us unsatisfied.

The conundrum we still faced was that the most important questions, such as "Who in our organization is working on strategic problems?" or "Who does the CEO actually listen to?" couldn't be

[4] We find useful Collis and Montgomery's description of corporate strategy as a competitive vision for gaining corporate advantage that "actively directs executives' decisions about the resources the corporation will develop, the businesses the corporation will compete in, and the organization that will make it all come to life." David J. Collis and Cynthia A. Montgomery, "Creating Corporate Advantage." *Harvard Business Review* Vol. 76, No. 3. (1998), pp. 71-83.

answered by looking in from the outside, nor could they be posed directly or openly inside our corporation. We realized quickly that it would be more productive to work informally through our team's contacts who knew company executives' histories through decades of experience. Identifying individuals in our organization who contributed to conversations about strategy, and gaining a sense of how their personal histories might predispose them to relate to our work, became our new goal.

In choosing the technology platform for this project, we opted for a low-tech, lightweight prototyping approach for our first iteration. Trading cards, like those widely collected among children and baseball fans in the U.S. and Japan, seemed like an appropriate form factor to start with for a number of reasons. They are small, tactile, visual, and inspire a sense of fun and playfulness. Like sticky notes, they can be spatially arrayed and recombined to facilitate interactions during group activities.[5] We also chose to make discrete physical artifacts, rather than, for instance, using digital tools, like social graphing software, interactive visualizations, or databases, in part to keep this potentially political project under wraps more effectively, and avoid the unpleasant possibility that this work-in-progress might, via the internet and other forms of digital transmission, inadvertently go feral on us.

To provide the materials needed to grow our card collection, we have recruited colleagues to help us take photographs of, and write short bios about, key people they meet during trips to Japan. In the next iteration of these cards, we intend to augment these materials by eliciting from our 'players' personal narratives of their values, beliefs, hopes and fears regarding our company's future. Where this process will lead us isn't clear, but it is clear that this new engagement with our role in our organization, and the strategic value of ethnographic ways of knowing in our organization, came about as the unexpected consequences of our decision to do a small side project, a decision that at the time, we saw as a minor blip in our way of doing things.

ARE YOU IN A GROOVE, OR IN A RUT?

Generalizing from our experience, we propose that research teams accustomed to iterating and incrementally adjusting their research methodologies may in fact, over time, approach local equilibrium states in relation to their internal customers and their social and political relations in their organizations. More radical shifts in their approach to methodology can have the advantage of disturbing those conditions, pushing teams in new directions regarding their situation within social networks of knowledge exchange and strategic influence in their companies.

Broader reasons have prompted us to share this story, as well. As corporate ethnography practitioners, we believe that reflexive examination of the holistic world of our practice is an important component of that practice. Our worlds are complex wholes comprising a range of elements, including various practical and theoretical ways of knowing, methodologies for executing research, and

[5] Uses of cards in activities include: identifying people and groups we might share specific findings with, or recruit as stakeholders for future projects; combining cards with ethnographic data to provide constraint and inspiration to facilitate ideation and concept development; identifying which kinds of strategic thinking are well represented in, or missing from, our organization's decision making.

relations of power and status within organizations that play out through competition between ways of knowing as much as they do through competition between individuals and groups. Promoting an ethnographic way of knowing, for us, means working to make transparent the relationships that hold between our research methods, our findings, and the stories we tell, so that our contributions are seen as coming from a way of knowing open and accessible to all, and not as the results of a privileged, objectivist or exotic practice. In this way, the rewards of an ethnographic way of knowing can contribute to a broader dialogue within our organizations about the ways of knowing that guide corporate strategies and corporate actions. For us, this reflexivity has also transformed our sense of place in the world; where we once saw our role as helping our company identify new business opportunities, we now see our role as changing how our company thinks about people.[6]

NOTES

The authors wish to thank Izabel Barros for her comments on a draft of this paper. This paper represents the authors' views only, and does not in any way represent the views of any other individuals, or the official views of Ricoh Innovations Inc. or the Ricoh Family Group.

[6] Simon Roberts has made the point, in a way that has influenced our thinking on this matter, that "embedded ethnographers" working inside corporations have a unique opportunity to seed ideas. See his "Embedded Anthropology: My Talk from the RSA Design Society Event." http://ideasbazaar.typepad.com/the_ideas_bazaar/2010/05/embedded-anthropology-my-talk-from-the-rsa-design-society-event.html#more accessed July 13, 2010.