

ARTIFACTUAL RELATIONS IN UCD

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This explorative paper presents theoretical and methodological implications of User Centered Design (UCD) from a perspective of socio material-relations and a theory of performative artifacts. The process of “asking users” is rarely treated as a design artifact that can be interrogated in and of itself. The paper introduces a perspective on UCD as a “material-relational activity”. Thus, through the lens of a failed workshop, the paper takes a closer look at the shaping properties artifacts, and how artifacts interact and produce results.

INTRODUCTION

When we ask people, do we get an honest answer? This of course depends much on your concept of “honesty” or integrity, but more significantly, it depends on the concepts of “people” and indeed “asking” that we employ in going about finding out what that other people think, believes, wants, and so on. Hollway and Jefferson put it bluntly in their treatment of qualitative research (2000) when they argue for the presence of “widespread assumptions in the tradition, by ethnographers, participant observers and interviewers alike, that their participants are “telling it like it is”, that participants know who they are and what makes them tick – what might be called the “transparent self problem” – and are willing and able to “tell” this to a stranger interviewer – what we might call the “transparent account problem” (2000: 2-3). This paper focuses implicitly on what Hollway and Jefferson call the “transparent account problem” and how this might be related to user-centered design (UCD). As a response

to the assumption that leads ethnographically inclined researchers and practitioners to treat the interviewee or the informant (“users”, in the case of UCD) as a transparent medium of information, this paper develops on a material-relational view on UCD. The data, the information, the knowledge that is the product of an encounter with a user during a design effort is always a product of a specific relationship, mediated through a variety of artifacts.

THE PERFORMATIVITY OF ARTIFACTS

One way of approaching the notion of the non-human in the production of sociological data has been proposed by Michael (2004) who relates three different readings of a botched interview to a continuum of micro and macro-social interferences. He argues that looking at the production of data, non-human agents (in his case a tape recorder, pitbull terriers, Burger King and the world of academia) all play roles in making the the interview a catastrophe. Hence, Michael alters the primary subject of analysis in social research from being the things recorded in a qualitative interview (i.e. talk) to become the *interpellation* (“calling forth”) of certain relations through which “the researcher (and indeed the respondent) speaks “with”, “by”, “through” and “as” [different] entities. The status of data becomes altogether more relational” (Michael 2004: 20). Michaels analysis of what he calls “co(a)gents” emphasizes inter-realtional or heterogenous agency, where boundaries between non-human artifacts and human behaviour and agency are indistinct. This perspective could be seen as superficially related to some points previously treated in the HCI/design literature with reference to users interacting with design artifacts e.g. paper prototypes. It is, for instance, a general observation that interacting with prototypes on different stages of completion gives rise to different forms of feedback. In this vein, Snyder, for one, argues

that “an unfinished design [of a design prototype] seems to encourage a more creative response from reviewers” (Snyder 2002: 58). Conversely, a highly polished prototype tends to elude responses that focus on the specific form factor, graphic design or color of the artifact. In this way, the “feel” of the design artifact can be tactically shaped to elicit different kinds of responses from users. In the same vein, Buxton’s treatment of sketching in design is highly attentive to the communicative performance of sketches in different stages of completion (Buxton 2007). Within HCI research, studies point to how prototypes as material artifacts can play an important role in stakeholder understanding of a system concept as well as how they evoke empathic relations with the actors in e.g. prototype storyboards. A different kind of artefact is treated in Hult, Irestig & Lundberg (2006) in their treatment of “design perspectives”. Their argument is that it is important to take note of the values that are imposed upon design activities by the perspective chosen to inform the design process. Thus, designing e.g. a handheld computer device as a tool is different from designing it as a medium. In this way, design values (or frames) functions as performative, artifactual impacts in as they change the process and the outcome of a design effort. Finally, Bødker & Buur treat prototyping artifacts in PD as “boundary objects” that should support a process that enables the creation of multifarious language rather than unite difference of opinions of ideas into a single design vision (Bødker & Buur 2002).

A PATHOLOGICAL WORKSHOP?

We often do things that fail. Less often do we allow ourselves the time to learn from failure or reflect on how mistakes and misunderstandings changed what we had in mind when we started working on a problem. The workshop reported from here is in essence a workshop that went wrong, a pathological workshop. In the workshop we wanted to use the participants’ imaginations as starting points for new innovations and service concepts on mobile devices. The workshop took place in an open lab at the university. Refreshments and lunch was provided throughout, and the general atmosphere was relaxed and friendly. The participants were initially prompted with images of state-of-the-art mobile services as well as an open-ended list of possible conceptual areas. Phrases such as “handheld devices and therapy”, “finding your way in life”, and “e-banking on the street” were shown to the participants to stimulate their imagination and creativity. Throughout the workshop they were given a range of different tasks with

different materials to report in (clay, paper, written individual scenarios – “how would YOU use the service?” discussions) culminating in a “pitch” exercise where the group leaders were to present the final idea in a brief stand-up pitch. What was supposed to have been an inspirational workshop, however, had damaging instances of “noise” that can be seen as interference from events and various material agencies that arose out of the relations enacted in the workshop.

First, the content of what we assumed were “inspirational” power-point slides that were showed to the participants was carried along throughout the process of workshop. Hence, the shape of the final presentations of the participants could be traced back to points mentioned in the initial presentation of some of the potential themes for the innovation the participants were going to work with. *Secondly*, the social relation between the workshop participants and the organizer was one of student/teacher, which implied expectations of some guidance and examination of the work that was carried out. As such, some participants worried whether they were on the right track, and asked for instructions. On a more expansive, macro-social perspective, this also implies the wider *institutional artifacts* (Michael 2004) in the activity – the workshop took place at a university, hence relations were ordered according to traditional hierarchies of student/teacher, learner/knowledgeable, or lay-person/expert. Also, the expectation of “rounding off” the designs in the pitching session towards the end echoes a notion of coherence as a virtue in presenting academic work. Thus, it debilitated the “multiplicity of voices” that could have facilitated a more creative output (Bødker & Buur 2004). *Thirdly*, a particular set of material artefacts interfered: The participants were given free choice for the means of reporting a personal story about one of the concepts that came out of the group brainstorming exercise (section 3 above). The materials present were paper, colored pens, cardboard, clay, glue, scissors, Stanley knives, and post-it notes. Of the 24 participants, 22 chose to write, in longhand combined with sequential drawings (comic book style), a brief story of themselves using one of the groups’ concepts. This led to a sequence of events that was not conducive to the following group discussion. The researchers had hoped for a subsequent discussion that would lead to a broadening and iterative shaping of the ideas that could lend to them an inspirational or innovative character. However, participants adopted a “democratic” process of voting for the best presentation or idea, and spent most of the time finding suitable ways of voting or

debating internally the quality of the scenarios on a measure of viability or marketability.

Fourthly, the next-to last part of the workshop was a pitch exercise where a member from each group was tasked with presenting the group concept to the other participants. Here, again, the activity was proposed as a mere “reporting”, but in effect the participants became preoccupied with issues of viability or marketability. This part of the workshop therefore functioned as a last “gate-keeper”, where only the most realistic or feasible product concept came through. From the perspective of the researcher, this detracted a lot of creative energy from the concepts that were proposed in the groups throughout the workshop.

TRAVELLING ARTIFACTS

Hollway and Jefferson provide a good outset for a critique of qualitative methods by taking issue with the naïve understanding of research getting informants to “tell it like it is”. However, their focus is almost exclusively on “subjective artifacts” such as unconscious materials, significant narratives, and internal fantasies that often remain tacit in qualitative research. Such categories are useful for understanding what they term the anxious, defended nature of the subject in ethnographic research. The appreciation of (material) artifacts as a performative has provided us with another opportunity to take issue with simple models of the relations between informant and expert within qualitative methodology.

The following section will suggest a *partial* analysis of the pathological workshop from a perspective of “artifactual relations” – particularly noticing how artifacts *travel* through various activities in the workshop. Concluding the analysis is a suggestion for a generic typology of relations in collaborative, user-centred design work.

As the participants were recruited to the workshop, the researchers began setting up a set of inspirational images and words that were to elicit the creativity of the participants. What we expected to be relatively neutral images that would get the participants away from the conception of the mobile phone as a *phone* came to be received by the participants as if something specific was desired by the researchers. By suggesting, visually and with a few words, how mobile devices and services could also function, the slides in this way served to shape the concepts that the participants came up with. One of the three groups initially began developing an

“anger-management” service for the mobile phone, clearly inspired by the “technology-as-therapy” phrase from the slides presented to the students. Embedded in this artifact was also a kind of concurrent institutional (macro) artifact. All participants were students at a business school, and the institutional context of this gave rise to both micro- and macro-social artifacts such as pronounced hierarchy between students and researcher as well as a focus on feasibility and an ad-hoc market analysis in the innovation process.

Also part of the wider cultural framework, choosing written language and narrative writing as the means of reporting is a readily available format for the students involved in the workshop, a practice they have generally practiced since middle school. The format and the time allotted for the writing allowed for compact. This, so we found, meant that there was very limited interaction during the process of telling the personal story. The artefact thus afforded a kind of competitive “democratic” dialogue where, again, the institutional context of the university was struggling with the researchers wish for the student to let go of the constraints of traditional business school training.

Throughout the activities a variety of artefacts weaved themselves into the progression of the workshop. Artifacts such as the images *travelled* through micro levels and macro levels – from the immediately identifiable “shaping” properties that e.g. writing as a medium has on a report to the wider social imbroglios of institutions, people, and cultural norms in the academic setting. For an preliminary typology, we have identified three broad varieties of artifacts.

Verbal artifacts: These are the artifacts of verbal communication where prompts and other forms of instruction give shape to activities. It involves both direct, formal instruction, but also casual language, turn taking and pauses in dialogue or facilitation. It also involves the quality of e.g. questions being asked, e.g. the persistent problem of “loaded” or biased questions in social research. Further, it could involve expectations set up through written communication, and invitations.

Non-verbal artifacts: this type comprises a range of artifacts that are non-verbalized or indeed non-textual. Many of these reside in the larger social and cultural context around the involvement of the users. This involves the general value system that provides the background for the informants and researchers or general institutional associations. There is a profound difference between expectations from an academic student (learning, coherence, argumentation, scientific

language etc.) to a professional worker (professional performance, social skills etc.). Thus, observing the institutional embedding for users and designers is important for a full appreciation of relations. Non-verbal artifacts might also be e.g. compensation expectations (money), motivation, users previous knowledge, interviewers view on informants and vice versa, as well as the general mood during the process.

Material artifacts: This is probably the most immediately identifiable category, but also the most elusive in terms of the effect it has on the process. It encompasses the material artifacts that serve as either boundary objects – artifacts that directly co-ordinate activities (Star & Griesemer 1989) such as power points, black boards, printed guidelines or schedules. It also encompasses artifacts that are predisposed towards different kinds of use – pens support care in writing, while felt-tip markers provide more a immediate, fulfilling response. Crayons support sketchy drawing, large sheets of papers afford more collaborative activities, smaller ones prohibit such activities. Palpable materials such as foam or wood afford physical activities. The physical context also plays an important role – room size, location, noise, and other artifacts afford different activities and possibilities. As Bødker and Buur discuss (2002), care must be taken in choosing materials for collaborative processes since they mediate different kinds of relationships in user activities as well as between users and designers. Again, as we have discussed, these artifacts *travel* through the process in such a way that material artifacts are influenced by others artifacts. In this way the institutional embedding in our case, combined with the verbal instruction that the participants could use whatever medium that suited them, and the availability of lined paper and pens gave rise to the situation of the participants using longhand writing in the workshop.

CONCLUSION

User-centered design has been instrumental in moving the human users of information systems to the center of attention in systems development. As we have argued there are still many implicit assumptions within the general framework of UCD. In this article we have challenged the assumption that the concept of the user in UCD is stable and well understood. Followingly we argue that the methods we apply when performing UCD has a profound influence upon the ways in which we derive knowledge from these practices.

This paper has presented one possible analysis of a small set of empirical data. This has shown us the

feasibility of analysing user involvement and UCD activities in material-relational terms, noting how verbal, non-verbal and material artifacts are constantly interweaved in the process of creating data from a workshop. In the relational perspective on UCD, the subject is no longer “telling it like it is”, but constantly *enacted* through choices, materials, talk, institutions, and expectations.

REFERENCES

- Buxton, B (2007): *Sketching User Experiences: Getting the Design Right and the Right Design*, Morgan Kaufmann, 2007
- Bødker, M, Nielsen, Janni (2008): *Vision Labs: Seeing UCD as a Relational Practice*, in *Proceedings of OZCHI 2008*, December 8-12, 2008, Cairns, QLD, Australia
- Bødker, S, and Buur, J (2002): *The Design Collaboratorium—a Place for Usability Design*, *ACM Transactions on Computer-Human Interaction*, Vol. 9, No. 2, June 2002, Pages 152–169
- Hollway, W., Jefferson, T (2000): *Doing Qualitative Research Differently: Free Association, Narrative and the Interview Method*, Sage Publications 2000
- Hult, L, Irestig M, Lundberg, J. (2006): *Design Perspectives Human-Computer Interaction*, Volume 21, Issue 1 March 2006
- Michael, M (2004): *On Making Data Social: Heterogeneity in Sociological Practice*, in *Qualitative Research*, Vol. 4, No. 1, 5-23 (2004)
- Snyder, C. (2003): *Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces*, Morgan Kaufmann Publishers, 2003
- Webb, B.R: *The role of users in interactive systems design: when computers are theatre, do we want the audience to write the script?* (1996), in *Behaviour and Information Technology*, 15, 2 (1996), 76-83