Organizational Probes: Exploring Playful Interactions in Work Environment

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ABSTRACT
Playfulness, with non-intrusive elements, can be considered a useful resource for enhancing social awareness and community building within work organizations. Taking inspirations from the cultural probes approach, we developed *organizational probes* as a set of investigation tools that could provide useful information about employees' everyday playful experiences within their work organizations. In an academic work environment, we applied our organizational probes over a period of three weeks. Based on the collected data we developed two design concepts for playful technologies in work environments.

Keywords
Organizational Probes, HCI, Design, Cultural Probes, Playfulness

INTRODUCTION
Play undoubtedly is a multi-faceted phenomenon. We in our everyday lives intentionally or unintentionally convey playfulness or become part of playful acts. One cannot limit the idea of playfulness to specific aspects. Johan Huizinga (1971) in his seminal text *Homo Ludens* argues that "play is older than culture" – suggesting that play has been in the world even before humans and their civilizations. Playfulness can be observed in animals too and human civilization has added no significant features to the very idea of play. To Huizinga, play is a part "of culture" rather than part "in culture". He extensively discusses the importance of play element of culture and society and explores how far culture itself bears the character of play.

Since the industrial revolution, 'work' is seen vastly different from 'play', as the praise for efficiency and rationalization has increased (Zuboff, 1988). However, a recent article in Business Strategy Review suggests that a playful work environment can help in evolving creativity and innovation processes of a company (Mainemelis et al. 2008). Historically, the role of play in organizations has been evident. Successful companies like Disney, Ferrari, Harley Davidson, Apple and many others were born not from sophisticated business plans but from the pure passion of play. With the growing business competition from others, companies like Google, Gore and Motorola encourage their employees to use up to 20% of their work time to play freely with new ideas.

The field of Human-Computer Interaction (HCI) has embraced playfulness in the last few years. In fact several concepts related to playfulness exists, e.g. computational humour (Hulstijn and Nijholt, 1996), ludic design (Gaver 2002), funology (Blythe et al. 2003), ambiguity (Gaver et al. 2003), provocative and curious interactions (Battarbee et al. 2002). Within HCI, Gaver (2002) describes that playfulness is about creating new perspectives, ideas, and goals, and exploring new ethical and aesthetic standpoints, and is not limited to games, entertainment or spending time. Playful systems allow users to express their own creativity to establish curiosity, exploration and reflection as key values.

This paper aims at utilizing the notions of playfulness as an integral part of people's everyday life. We attempt to understand the playful side of people's social lives and how playfulness constitute their social practices – an issue that is central to Huizinga's (1971) conceptualization in Homo Ludens. Specifically, we explore people's everyday interactions within an academic department to understand the role of playfulness in it. Our goal is to design technologies to support people's playful interactions and enhance community building in the work environment.

In a previous work (Vyas et al. 2007), we carried out contextual interviews and observations within different public spaces of an academic department. However, since these observations could only tell us about what people do and less about how they feel, we developed a set of *organizational probes* to understand employees' everyday experiences – a technique inspired by cultural probes (Gaver et al. 1999). We sensitise our approach to suit work organizations in order to explore current social practices and play aspects within this setting. Organizational probes are a set of participatory investigation tools that could provide useful information

about employees' everyday experiences within their work organizations. We applied our organizational probes over a period of three weeks, in an academic department. Based on the collected data we developed two concepts of playful technologies: Interactive Globe and Recording Ball.

In the following sections we introduce our organizational probes study and discuss its results. Based on the results of the study, we develop two inspirational design concepts to support playfulness.

ORGANIZATIONAL PROBES

Cultural probes (Gaver et al. 1999) are a collection of specialized tools containing open-ended, provocative and oblique tasks to support participants' engagement with the design process. It is an interpretive approach to generate design inspirations rather than a data collection method (Boehner et al. 2007). Our goal to build on an approach like this was to explore playful practices of people in a work environment and to enable them to participate in the design process in a readily accessible way and reflexively trigger a design dialogue that correlates with their everyday experiences and needs.

The organizational probes package (figure 1) consists of a) My Blog and b) My Logbook. The package also includes tools such as a disposable photo camera, postcards, maps of the building, a set of grid paper, 5 colored pencils, glue and scissors and 3 popular magazines. We selected 10 employees from our own academic department and asked them to complete both assignments utilizing these tools.

Figure 1: Organizational Probes

In the "My Blog" assignment, the staff-members were asked questions to give an account on their everyday experiences and feelings in the department. In the "My Logbook" assignment, the staff-members were asked to log their activities and feelings about these activities.

To sensitize our probes, the My Blog assignments had pre-attached postcards, department maps and creative metaphors to gain insights in employees' experiences within their work environment. The postcards were specifically selected to understand employees' social status, impressions about the overall department, and their feelings about working in academia. The department maps were provided to understand what places were really lively, annoying and productive from an employee's point of view, as well as to identify the most visited and least visited sites. The creative metaphors were used to understand employees' conceptualization of their groups and their own position in it.

In our study, the staff-members were given the organizational probes to be completed over a period of 3 weeks. The collected data was then analyzed to generate design inspirations for new technologies.

RESULTS

Eight staff-members out of ten returned the probes completing both assignments. In the following, we provide a glimpse of the factors that played a role in staff-members' playful practices within the department.

Space and Place

Using maps and describing their everyday life in camera pictures, staff-members reported several aspects of their playful practices where both 'space' and 'place' played an important role. Here space refers to the spatial and geographical locations and place refers to socially meaningful and experienced spaces. Figure 2 provides indications of this distinction.

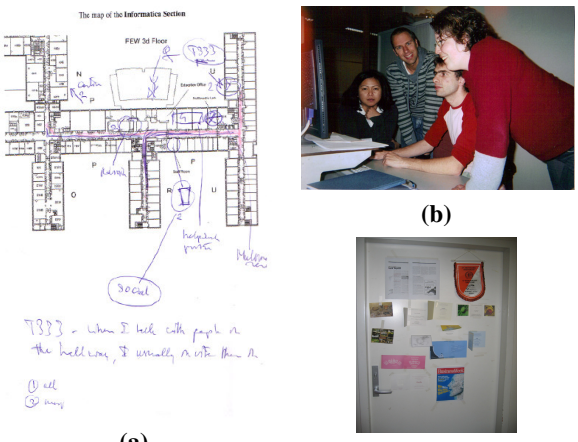


Figure 2. Examples of space and place. (a) A staff-member's representation of daily activities on a geographical 'space'. (b) An example of meeting 'place', and (c) Office door of the staff room.

In the geographical maps of the department (figure 2a), members provided details of their everyday activities, routines, meeting spaces and frequently visited locations within the department. Amongst the most common was the staff-room, where things like coffee machines, post boxes and fax machines were situated. There were several indications where the spatial layout of different work spaces influenced the structure of staff-members' interaction. As one can see in figure 2b – a picture taken by one of the participants, a staff-member's office could become a meeting "place". Here the physical space was transformed into a place through social means.

We also came across several instances where staff-members utilized the physical environment as a 'tool' to support their social interactions within the department. Figure 2c shows the staff-room door full of postcards and announcements. Here the physical space and objects are used as markers of playful practices.

The notion of space and place was observed to be multi-layered. I.e. staff-members identified several space and

place aspects within an office, a floor, a building and the whole environment. Interestingly, a majority of staff-members tied the notion of physical location to privacy issues. For example, staff members would typically make a strict distinction about where and what kind of messages and images to leave on the shared corridors, and what to keep within their own private or partially-shared office space.

Space and place aspect also facilitated the 'forms' of interaction between the staff-members. A physical location (space) and its situatedness (place) allowed members to interact with each other in an asynchronous way, where one can leave things like poster, conference call, post-it notes and so on in a specific environment and interact with others in a physically-mediated way.

Social Aspects

There were several indications where social aspects played a role in supporting playful interactions. Two patterns of social interaction were explored from the study: self-reflections and casual encounters. Self-reflections are the asynchronous patterns of activities where staff-members attempt to let others know about their identity by providing information about their preference, achievement, status or announcements. Staff-members left personal information like announcing the birth of their new born child on the staff room office door to make others aware and establish curious and evocative interactions amongst the fellow staff-members. Casual encounters are the synchronous patterns, where staff members during their routine activities interact with other members and objects within the surroundings through which they encountered playful acts.

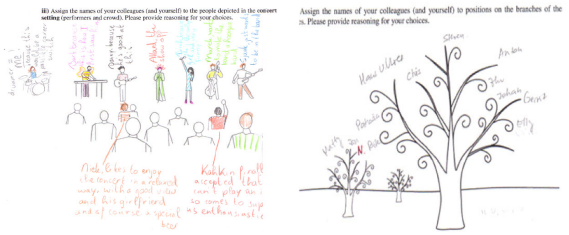


Figure 3. Two examples of group representations. A musical concert-like playful environment (left) and a tree-like hierarchical environment (right).

Staff-members also provided indications about their social status and relationships with others (within the organizational structure) in a playful manner. In the probes package we provided several group-oriented metaphors to understand different levels of social and organizational structures, i.e. conceptualization of the organization by staff-members and their own situation in it. Figure 3 shows two of the metaphors filled out by staff members, providing details of their working group and their own position in it. By providing this kind of evocative dialogue with the members, we could draw important conclusions about how the department and research groups where seen by the employees.

Staff-members also gave their accounts on playful incidents with other people in the department at places like the coffee room, printing room and canteens. E.g. one staff-member described his card playing activity with other colleagues as an essential remedy to get rid of stressful situations.

Interpersonal Aspects

Interpersonal aspects played an important role in structuring the playful practices of the staff-members. For example, on the staff room office door (figure 2c), there were indications about staff members' personal achievement (e.g. winning in a city marathon), announcement of an event (e.g. music concert), provocative educational clips from magazines (e.g. Business Week), sharing some personal experiences (e.g. holiday postcards) and postcards announcing birth of newborn babies.

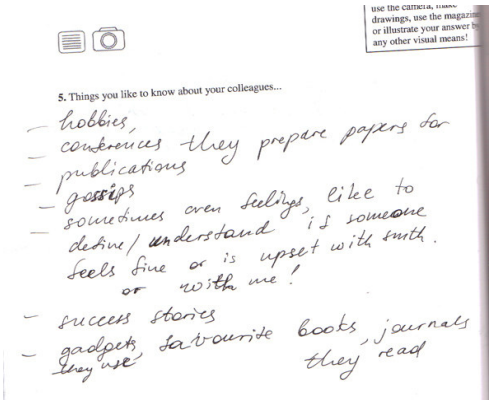


Figure 4. An example from the My Blog assignment.

Throughout the study we observed that staff-members were interested to establish social interaction with others though heavy workload and time clashes were impeding it. Figure 4 shows an example where a staff-member wrote a list of aspects that were interesting to know about others. Staff-members also invited colleagues to enjoy birthday cakes in the staff room. We believe that this need for sharing the interpersonal aspects of one's life urged staff-members to interact with others in a playful way.

Instrumental Aspects

Staff-members' instrumental and work-related activities influenced their everyday playfulness. We observed that time-management, notifications, appointment making, networking and official announcements were done in a playful manner.

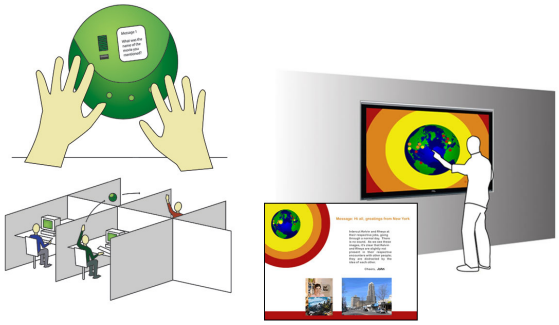
Staff-members advertised conference calls, research posters and group profiles (Figure 5a) in public spaces to initiate networking between different groups. Figure 5b shows an inside view of an office door of a department secretary. She used these post-it notes to manage her own time and notify others where she was, as she was managing the work of several research groups. Staff-members also applied playful ways to remind others and inform colleagues about their work-related information, e.g. putting a post-it note on the office door to suggest temporary absence. This playful way of broadcasting information helped staff-members to support their instrumental activities.

(a) (b)

Figure 5. A poster describing work activities and projects on a notice board (a) used for networking purposes, and a door full of post-it notes used for notifications (b).

DESIGN CONCEPTS

Utilizing the data and information received from our organizational probes study, we developed two inspirational design concepts to support playfulness in work environments: Recording Ball and Interactive Globe.



(a) (b)

Figure 6. The design concepts: Recording Ball (a) and Interactive Globe (b).

The noted usage of physical space and place to mediate information via, for example, post-it notes and the physical proximity of the staff-members spawned the inspiration for the Recording Ball concept. Recording Ball (figure 6a) is a playful content (video, photo and text) recorder that can be thrown or rolled to colleagues in an office environment or placed at a central location. Members can add personal or work-related messages, in textual, image or video form and throw or pass the ball onto the others. The ball metaphor, which we think is automatically associated to sports and play, adds to the playful exploration of otherwise sensitive work life. Office members can add important files and record important instructions to the recorder with its USB sockets and throw it to a colleague that is working on a related task, for example.

We noted that our work organization was multi-cultural and multi-national and conference visits, project meetings and other location based information was important. We designed a concept of Interactive Globe (figure 6b) that allow staff-members to share and explore geographical locations and experiences related to different places and the activities undertaken therein. Interactive Globe allows staff members to upload text, images and movie clips onto an interactive, touch-enabled world map. It allows others to view staff-members' experiences related to conference visits, holidays, official trips and experiences related to these.

CONCLUSION

We believe that Huizinga's notion on homo ludens is as relevant in the work organizations as it is elsewhere. Experiential methods like organizational probes can provide rich insights of participants' experiences within their specific work environments. Our study showed that space and place, social, interpersonal and instrumental factors played a role in staff-members' playful practices in the department. Staff-members' tendency to convey presence and getting involved in playful acts shows that technologies supporting non-instrumental aspects can be a success in work environments.

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