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PROBING ELDERLY PEOPLE'S DAILY LIFE:
AN EXPLORATORY PATH TOWARD
THE PRACTICAL DIMENSION OF HOSPITAL MOOD

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The paper describes the use of cultural probes in a design process that involves elderly people and it explores some their implications and effects. We describe a project where probes were used in a different way compared to their first description by Gaver. We show the way we build our probes and our use of them and we highlight some interesting effects that we experienced in the field. This experience suggests that Cultural probes might help in establishing a proper hospital mood in the adoption and acceptance of new technologies yet to be implemented. This point help us look at the concept of hospitality in a much practical way and it suggests the idea that hospital mood can be – if not engineered – at least favoured, triggered and established by diluting the “visit of the stranger”.

Keywords: Cultural probes, elderly people, design process ,hospital mood, hospitality

1 OPENING PROLOGUE

How to design a good design¹? As we start thinking of sustainable design and technology, the problem of how to organize, to manage and to inform the design of a new product or service become crucial. This paper is aimed to explore some methodological and organizational aspects of a design process in the field of gerontechnology design that we are experiencing in these very months. The paper can only focus on the first part of the project that is still running.

2 GENERAL CONTEXT

Within the field of e-Health, the *research on* and *design of* technology for elderly people is rapidly increasing. It is in fact well established that western society is experiencing a general ageing and that within two or three decades almost a third of the population will be over 65. The cost of public, clinical and health assistance will therefore increase dramatically. One challenge is then to take advantage of the many ITC possibilities in order to limit those costs and to support elderly people's health, security and well-being in their own home environments. Such new scenario envisions a new generation of elderly people remotely assisted dealing with novel daily exigencies and technologies that concur in the definition of their new status in modern society.

In this context, we have been asked to participate in a project whose intention was to test a series of wireless sensors (such as accelerometers or presence sensors) and video remote assistance through TV with eight 80yo elderly women in their own home environments. Our role - as social practice designers - was that of providing a preparatory understanding of the user and supporting the design intervention by generating design guidelines for sustainable solutions.

The specific focus of this paper is to better understand the role of cultural probes in sustainable ITC design and more specifically in Social Practice Design (Jacucci, this volume): how we think we should use them and how they turn out to be used in practice.

Cultural probes, since first proposed and described by Gaver, have been appropriated and adapted within different design contexts. Probes have been oriented towards understanding the nature of everyday life in order to inspire the design and generate possible requirements for new technology. CPs have been used with elderly people (Gaver, 1999, 2001), children (Wyeth, 2006) and family (Hutchinson, 2003). They have been applied to explore sensitive settings (Crabtree, 2003) and intimacy (Kjeldskov, 2004) and have been aimed at collecting data on technology use by the use of mock-up in the field (Tuuli, 2005). Nowadays, cultural probes is a popular techniques used in both academic and industrial research.

In our experience, we have matured the fact that the quest for sustainability goes beyond its fundamental ecological spirit and it has to pass throughout the social, the organizational and the existential realms of user, host organizations and social relation. In this sense, we believed that cultural probes could be a good starting point for exploring elderly people life, triggering a little participation and emotional involvement and generating rich outcomes to inform technicians and their design.

3 PROJECT DESCRIPTION & OUR INTENTION OF USING PROBES

The project - upon which we reflect in this paper - is part of a wider EU project on gerontechnology and it is about finding effective solutions for supporting elderly people in their own environment. Many technological possibilities are in the process of experimentation and the market is already capable of offer a variety of components that goes from a wide range of sensors (motions s, presence s, falls s, gas s, security s ecc...) to technological smart artefacts (alarm bracelets and necklace, wearable sensors, video communication kits).

¹ Pelle Ehn, keynote talk at the 1st Mediterranean Conference of Information Systems, Venice 2006

While it seems clear how this technology work *per sé* it is much less easy to understand how to better made them accepted and regularly use and to arrange them as effective services that really support users' needs. Our task, as social practice designers, was to understand user needs, moods and lacks and to provide guidelines in order to inform the building of the eight pilot sites in eight elderly people's houses.

A team of geriatric and social assistants was also part of the project. They help selecting the users and facilitating the contact with them. The eight old ladies were supposed to be in need of the expected service because they share a partial autonomy, they all live alone and they are all over 80.

When we suggested using cultural probes², we knew we need to use them in a slightly different way from their first description. We did not only need probes to inspire some design of our rather we needed probes to also inform and support a better design made by other technicians (not us). This difference made us think that we needed to use probes' results as boundaries objects (Star and Griesemer, 1989) circulating among the actors of the process facilitating and supporting the design process. In this sense, we thought that probes were means to inform both the result and the process of the design. We also thought that in order to have probes performed richly we need to provide assistance for the old ladies who might find the tasks too demanding. This extra-attention of us shape the way we first present our probesto the users that is as an occasion to play together rather than games to play alone. In this sense, we moved from the original inspiring cultural probes (as in Gaver) used alone to *assisted informing probes*.

3.1 Intervention description

Our intervention took place each Monday and Tuesday for a couple of months. The first encounter with the old ladies was mediated by the presence of one geriatric assistant who already know the ladies. In the first meeting, she first conducted a brief interview about home habits and then introduced us as sociologists that deal with technological innovation and that are: "...*here with their own methodology to help to understand how to better support elderly people's lives at home*". During this first meeting, probes were introduced and described and so was our will to come back and play with them together. Starting from there, we stayed in touch with the ladies by making weekly phone calls and one hour visits (one after a week, the second after two weeks and so on). Probes were kept for three weeks. Probes were used without assistance for a good part even if assistance guaranteed a far richer engagement and production of result and story-telling moments. We received five kits back out of eight (one ladies was definitely too weak to even think to play with probes, another one just return them back untouched while another one get sick and went to the hospital). Almost all the games were played.

² This was initially motivated to the technicians by the fact that ethnographical observation would have been impossible and that to rely only on interview would have provided only weak results.

4 OUR ENGINEERING OF PROBES

According to the context I have mentioned thus far, our engineering of the probes ranged from explorative and open games to more rationalist ones. Space precludes a detailed description of probes here, but a short overview of our pieces. Starting from a set of 11 proposed games, we decided together with the technicians and the geriatric assistants to provide the following series of eight games (fig.1):

- | | |
|--------------------------------|---------------------|
| • Sets of thematic postcards | • House Map |
| • Saint Antonio's holy picture | • Photo Album |
| • Quasi-open freehand drawing | • Disposable camera |
| • Relationship's map | • Media diary Log |



pic.1

4.1 Sets of thematic postcards



the picture was just inspirational;

Three sets of thematic postcard were developed in order to:

- ask the user to send a message to already prefigured receivers such as the social and geriatric assistants, the technicians and us;
- ask the user to image to be in the depicted place and to send a message to anyone;
- ask the user to reply to particular questions where the content of



4.2 Saint Antonio's Holy picture

Saint Antonio's holy picture simply asks the user to image the Saint coming into a dream asking for a miracle to have realized once awaked.



4.3 Quasi-open freehand drawing

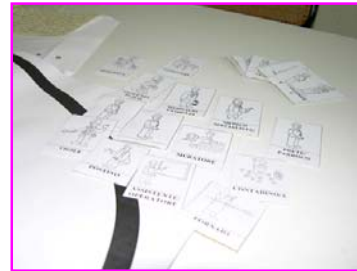
The drawing asked to complete two freehand sketches of a remote control and of a house.

4.4 Relationship's map



The map of relation ship was inspired by a popular design games by Brandt (2006) and adapted on the basis of a person centred psychoanalytic approach (see Folghereiter, 2004). The map shows a series of concentric circles with a picture of an old lady in the center. A large series of sticks

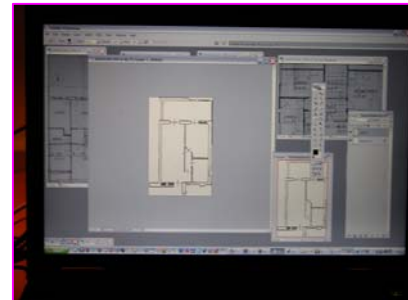
representing actors (ranging from family members to different kind of public actors) was also provided together with the map. The game was to select relevant actors and to stick them all around the central picture according to their relevant importance and presence in their lives.



4.5 House Map



House map was based on authentic house plans from the land register. The map was equipped with a red and a green pencil and the request to mark safe and dangerous zones in the house by the use of the two colours.



4.6 Photo Album



The photo album was a white album with specific requests. Requests were base on comparing old and fresh pictures already in possess of the user. Themes were about family, holidays, home village, pets and arts.



4.7 Disposable camera

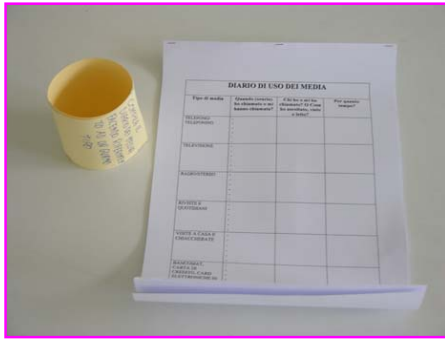


Disposable camera, one of the most popular probes ever, was pretty much based on the traditional model. More than 15 requests have been written in a paper container asking people to mark (in a space that is wider than a disposable camera's rear!) the ones they shoot. We asked to shoot favourite places, electronic appliances, objects and things that require care. We

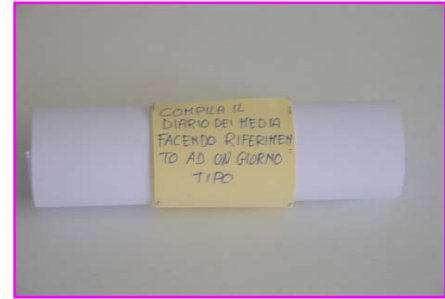
also asked to shoot too complicated appliances, dangerous areas in the house, useful and useless piece of furniture.



4.8 Media diary Log



The media diary log aims to have a picture of the use of the traditional media such as TV, Radio, Magazines, Phone, face-to-face visits and e-card. When, who or what and for how long were the three dimensions that aim to a clear picture of the media consumption (its quantity and its quality).



As I have mentioned, probes were assisted one hour per weeks for three weeks. Five out of eight were returned almost fully completed; three were not used at all. The assisted version of the probes turned out to generate a higher response. It is also quite simply note how to play together with these probes triggers a huge amount of story-telling associated with the specific contents emerged while playing.

5 FIRST PRACTICAL OUTCOMES, QUESTIONS AND DISCUSSION

In accepting our task, we were initially moved by general questions such as: how to understand lonely elderly people needs without performing intrusive observations? How to create ways to interact and cooperate with technicians? As we thought of probes we start asking ourselves how to use them in a setting that do not ask only for inspiration but also for what we might call visions of sustainable solutions and the need of a little more intelligible outcomes³. In addressing this question we realized we needed not only inspiration, but information and rich communicative means to manage our future cooperation with the technicians. We needed to be focused on some aspects rather than only be exploratory.

As designers and scholars of Social Studies of Information Systems we always try to seek participation, to act as ethnographers, but also as counsellors supporting practical changes in daily life and as action-researcher acting actively in the process of design and development. In our aim probes should act as catalyst supporting and enabling a process of co-construction that take advantage of the many different voices involved in the design. We believe their circulation would trigger a more participated accumulation of decisions and facts toward a more sustainable solution and that probes would act as drivers for a deeper mutual understanding.

Unfortunately, we did not have the chance yet to explore this interesting dimension because we are withdrawing probes in these very days. Fortunately, we have instead evidence that match with our interest in a sustainable design. This has to do with a much useful concept that needs to be further explored and put into practice that is Ciborra's hospitality (1997, 2002). We believe, in fact, that sustainable design has to promote hospitality among the users. As good designer we need to be able to create a hospitable mood within our future users. Participation and emotional engagement are certainly good starting points. The probes we used turned out to be surprisingly good in generating this kind of mood.

³ In a recent article Gaver discuss the way cultural probes have been used in industry and research after their first appearance in 1999. He complains the tendency to rationalize probes in order to have more applicable results to be easily turned into technological requirements. He stresses the value of uncertainty and reaffirms the need of inspirational means. This might be true, but as described our context and our role was different. We needed to use probes results to better inform the design of a service that was implemented by other actors and we needed to provide guidelines about how to better arrange the many available component for tele-assistance.

After a first stage of uncertainty, diffidence and closeness, the ladies have started to trust us more and more. This was favoured by the presence of already known assistants and by the constant contact made by phone calls and weekly visits. We also believe that this was favoured by way we introduced the probes, that is as means to let them participate in the project actively, a way to provide a contribution to better understand their needs and to better find solutions to their problems. We tried to make them feel important in the project and we acknowledge their status of absolute experts in their daily practices and exigencies⁴.

Probes turned to be playful enough and they generate a very good range of spontaneous answers (more than an half of results were generated lonely). Some of the ladies were concerned not to be able to perform some games correctly and they were waiting for us in order to accomplish the task together. They started talking about sensors and about how nice would be to have the chance to use television to talk with people and assistants. In three weeks, their attitude toward the projects and the technology to come turns from suspicion (about privacy, about usability, about intrusiveness of the technology and the installation process) to enthusiasms and will to be part of it. Also family members, show interest and sustain the ladies with the probes. Probes turned out to be funny, interesting, and useful; the whole process becomes clearer for them who started to acknowledge the reasons why of all this and the importance of their active engagement.

According to this we believe that probes, the assisted informative probes we developed, but probably any probes carefully presented, can act as hospitality enablers that dilutes the technological impact (maybe cultural in general) and allowed the establishment of a proper hospital mood for the 'unknown technology' yet to come.

6 HOSPITALITY, CAN IT BE DESIGNED?

The concept of Hospitality has been an important and even sacred institution able to establish a bridge between the nomads, the pilgrims, and the settlers of the cities; more in general sense, between the inside (known, balanced, familiar) and the outside of a settlement, a house, and a persona (unknown, disrupting, unsaid)(see Levinas, 1969; Derrida, 2000; Ciborra 1997, 2002). Hospitality has worked over the centuries as a device to cut down the time needed to merge cultures, and to integrate alien mindsets and habits.

Ciborra proposed this concept in his brilliant and successful attempt to reframe what is conceived as strategic alignment in organizational chance and innovation. He wrote: *Alignment presupposes acceptance and hosting* (Ciborra, 1997, pp. 74). Within this refreshing framework, the technological innovation and its logic act as a guest (an alien, a stranger) in the host territory whose balance is therefore compromised by this new presence. Hospitality becomes then a framework where host and guest have reciprocal rights and duties, expectation and prohibitions.

However, hospitality seems (at least in my reading) to be described as something that has to do with an unexpected, unavoidable upcoming presence. It seems to me it has to do with a 0/1 threshold between 'the normal' and 'the sudden and unexpected presence of a visitor', between the purity of a territory and a new reconfiguration of the balance due to the guest. Hospitality seems to lie in the tension between something that 'is not' and something that *ex abrupto* 'is'. Nothing seems to lie in the middle.

I believe that this might reduce the powerfulness of the concepts and might weaken any attempts to its practical application. It seems to me that with cultural probes (and maybe with participatory approaches in general), the guest (the stranger yet to come and to be known) is not only present or absent.

According to what I have testified in my experience about this project, the assisted probes we tried acted as hospitality enablers and drivers because they anticipate the upcoming visit of the stranger without being definitive *other* as a stranger is. Thus the stranger, in order to act more respectfully, sends some-thing which precedes its visit and prepares the ground for the upcoming

⁴ We took advantage of a collaboration with a pedagogues - who work with adult - to better prepare the first contact with the ladies and our strategy has been to be extremely clear, trying to let them understand our intentions.

encounter. Before to be hospital, the host might be pre-pared and get acquainted with the new. In our experience, cultural probes not only gather information or inspiration or whatsoever requirements with uncertain use (see Boehner, 2007 for a critical review) . Cultural probes create a specific mood where positive expectations, wishes, curiosity and wait can consolidate a good hospital attitude toward the innovation.

In this way, it seems to us that it would be easier to put the concept of hospitality in practice if we think of it not as a ‘yes or not presence problem’ but as a process, a path populated by objects and events, a continuum where hospitality (what we believe to be as a sustainability value) can be enabled piece by piece. Bits that act as anticipatory ambassadors showing up in advance in order to dilute the impact of the sudden appearance of the guest. It follows that we believe hospitality can be encouraged, constructed and supported.

The role of probes needs to be assessed in different contexts but maybe their role as enabler of hospital mood can be generalized. Certainly, it has to be further examined. How to translate probes’ results in order to inform sustainable design is certainly another open question and so it is how to promote and activate co-construction and mutual understanding. This paper did not really help on these last mentioned aspects as expected but maybe it has helped to look at a practical dimension of the concept of hospitality and the idea of supporting the emergence and maybe even the construction of hospital moods.

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