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E-MAP. INVESTIGATING METHODS FOR MAPPING EXPERIENCES

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1. Summary

In spring 2001 an investigation was conducted at the University of Westminster intended to analyse personal experiences of the London Underground as a review of current techniques for recording and mapping ideas. This was carried out by a group of students in collaboration with PDD Ltd., a leading London Innovations consultancy. The work was intended as a pilot study, and forms part of a larger research investigation. The project is funded by the government through the TCD.
The project analysed the success of particular methods of categorising research and a review of methods of mapping and communicating observations. Some of the primary issues under consideration were: How can designers begin to understand the structure of people's experience of the world and map the results effectively? What mechanisms are available to effectively communicate experience? How can a model help designers work collaboratively around a shared language? The work focussed specifically on exploring different ways of observing and capturing information for subsequent application to design. The methods needed to be suitable for subsequent communication and application to cross-disciplinary design teams.

2. Introduction

2.1 Overview

The University of Westminster together with PDD Ltd. have received government funding for a two-year collaborative project with the aim of integrating theoretical and academic approaches into industry. The work was primarily focussed on creating a generic framework for people-centred design methods and a philosophy to underpin the approach. The impetus for this project comes from the desire to create product or system designs from a position of knowledge about the people who will interact with them by analysing and understanding their experiences of the world. In recent years we have seen increasing significance being placed on this kind of awareness. The perspective of the "user" would ideally be considered at all stages of the encounter; the users life context and their physical, social, emotional and cognitive requirements would be included throughout the history of a products use. Methods from ethnography have been integrated into design; [Suchman 1983] and thus fieldwork methods have been included in the process to study users environments and life context. The project is intended to help consider the users "experience" and avoid the term becoming another buzzword for design, directing it towards becoming a useable strategy for developments. [Nahktsen, 1997][Overbeeke 1999]

2.2 Defining an Experience

PDD Ltd. has found the idea of identifying "experiences" a useful concept for their user research operations. The term is a useful one in that it suggests consideration of both practical issues of use and more aesthetic concepts like enjoyment and pleasure through the senses. (Jordan 2001]

To further define the idea of experience, we can consider the work of the American philosopher John Dewey for whom experience was a central topic of philosophical reflection. Dewey states '…any normal experience is an interplay of objective and internal conditions'. Describing this as an 'interaction'. Dewey employs the term interaction to characterise the relation between the individual and the environment that results in experience. But says Dewey; not all encounters between the individual and the environment result in an experience. An experience must have a narrative coherence that "carries with it its own individualising quality and self-sufficiency". (art as experience).

2.3 Introducing Objectivity

When understanding a context for a design, PDD Ltd. have found that designers can be inspired much more by direct contact with their users in situ, where there is a relationship with their own environment. It introduces user concerns in their own language, provides additional clues in the form of background visual and auditory or other sensory information and provides an objective basis for developing designs. This idea adheres to the emerging field of 'research through design' which proposes the development of research techniques that are incorporated into design practice. This is contrary to the notion of establishing research and design as two distinct activities.

3. Project Challenges

3.1 Team approach and integrating communication

The new approach requires participants to have the ability to integrate a broad range of gathered knowledge and information about the user and clearly to share it with other members of a team. Collaboration has been problematic however, for some design teams; communication across disciplines, and designers joining the discovery stage too late in the process has been noted as a challenge to creating a shared vision. The new design team needs to include individuals with strength in their respective disciplines but who share a common language. This project has been applied to a group of product design students, but will subsequently be applied to graphics, psychology, anthropology and other groups of students to investigate further the "common language" issues.

3.2 Commercial Constraints

Thus far most research methods have been adaptations from social science disciplines, including ethnographic field techniques for studying groups in society. These techniques have not surprisingly developed into thorough methods of understanding people. According to Chris Conley [Conley2001] ethnography has become a common method in industrial design for studying culture and human behaviour. Designers, however, do not need to be trained social scientists, but are simply aiming to adopt an empathy, with users and must therefore adapt the techniques. There are commercial constraints on time-scales for field work and sample sizes; it is also difficult to sort all the available information and convert it into design issues. It was postulated that it might help to reach conclusions more rapidly if the information is sorted, or codified through **categories** into relevant themes for understanding. These categories were to be general enough that they could be applied to any design situation and communicable through different disciplines and yet, would provide a prompt for observation and provide a richness of information. It was also vital to pick themes, which do not dictate or pre-empt the results. As a starting point, the keywords "physical, understanding, social, and emotional" were chosen, as they appeared to represent aspects of experience. These are random choices, based on areas of teaching Product Design from an Ergonomic, Cognitive Psychology and Semiotics perspective at Westminster, and need further refinement to decide the "best " categories for multi-discipline teams. Rothsteins a(x4) categories were deemed useful for combining ethnographic approaches with scenario building to describe user experience. [Rothstein 1999] It was also necessary

to find a visual and creative approach for communicating ideas clearly for design and investigation of this was also an aim of the experiment [Pink,S 2001]

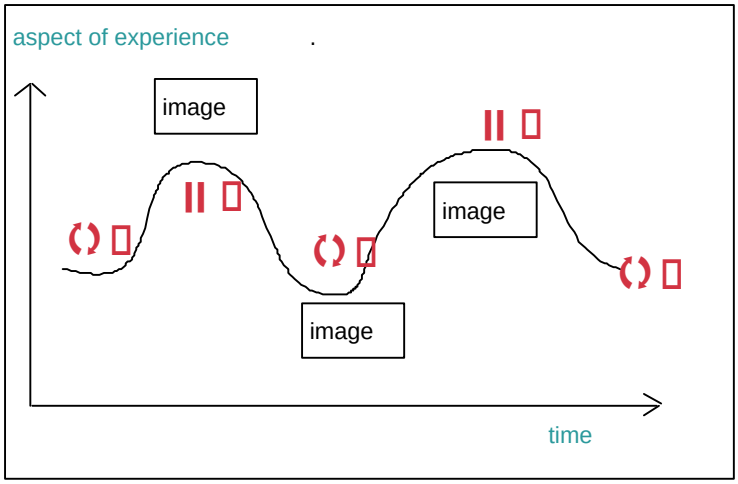

Figure 1. Chronological approach to record information.

4. Method

A group of 20 students were asked to map their own experiences of the London Underground. Some were to employ a random approach for comparison and others the mapping methods under investigation. The students were deemed to represent actual day to day users, however, it was necessary to introduce a method that would allow them to step back and analyse the experience objectively, leaving their normal design approach behind. They were to consider a journey that they normally take and to try to be as observant as they could about the good and bad parts of it. It was suggested to all groups that they should record their experiences using video and photographic material and that they s

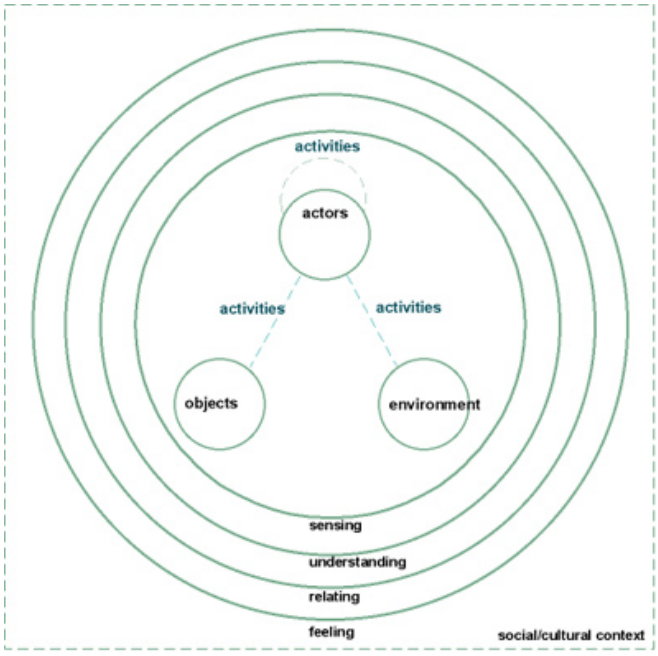

Figure 2. Suggested mapping for summary of research

4.1 Suggested mapping

The experiment group were asked to record events in a **chronological** sequence to start with, they were shown the diagram figure 1 and given a description which includes the categories under review. Following that they were asked to use a **spatial** method for sorting their findings and we used as a starting point the diagram in figure 2. We also requested the experiment group should each, consider a different aspect of their journey, broken down into the categorised physical (issues of comfort, safety and simple use), cognitive (could they understand how things worked and use interfaces successfully?), social (interaction with people and animals) and emotional issues

5. Results, by group

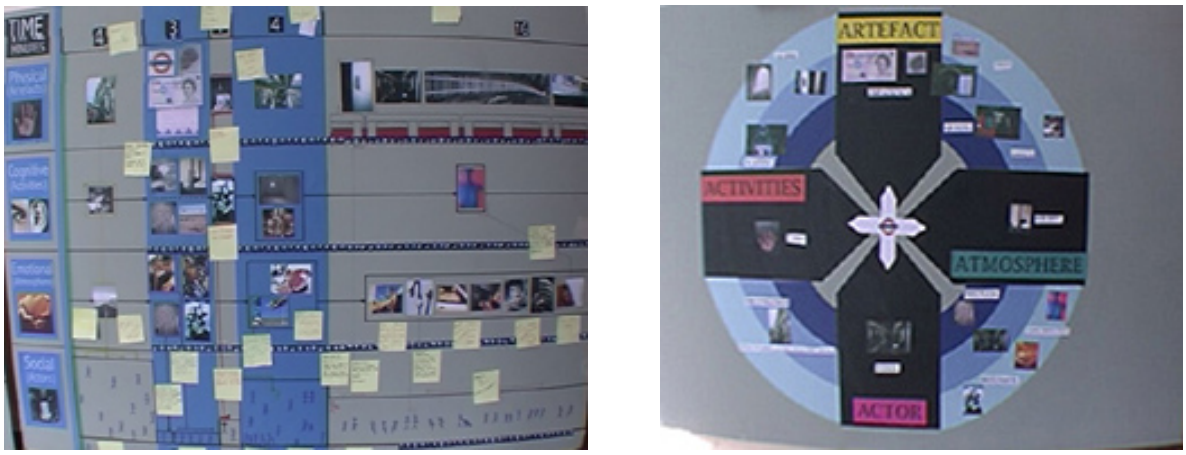

Figure 3. Examples from the Experiment Group

5.1 Experiment group

The students recorded the time throughout the process of travelling through the tube and recorded information and experience against it. This served as a thorough personal record of events and impressions, and was found to be the most thorough method tried of recording data and, later, recalling information. It served as an effective mind map for the whole group. However, it was more difficult for those external to the group to see where one was in the process of travelling than with other, more visual methods of sequencing the experience. Some students had used a large central visual of the tube with a narrative to indicate their point in the process, which provide a focus. The spatial method (right hand image fig 3) turned out to be a good way of **summarising** the information and seemed like a good **second** stage for analysing the information with a view to communicating for design. (In diagrammatic terms only, of course other methods using multimedia , summarising video clips, using cartoons are very communicative). The students found that they were more aware of different aspects of their journey when they divided effort to consider the categories of their experiences separately. From an external perspective it appeared that the group had been more thorough than the control ones in terms of the nature and volume of observed material. The groups made it quite clear, however, that it was necessary to make checks with each other and to swap roles at different times to get a “full picture”. “Feelings” and emotional responses were always found to be a reaction to the other issues and could not be separated.

5.2 Control Group

It was clear that in the absence of a given model for recording experience, that there was a lot of confusion about which methods to use and how to follow through the process of presenting ideas. Figure 4 shows a variety of different diagrams, which are ambiguous and difficult to cross-reference. The resounding impression was one where teamwork had been sporadic and difficult. The second observable point was that, in the absence of the categories the data was not as thoroughly observed or recorded. For example, at particular junctures of the journey whilst considering an ergonomic issue,

ambience or more ethereal qualities might be ignored. On the positive side, however, without constraints, some creative ideas about presentation and visually coding ideas came from these groups, which might be useful for developing future mapping processes. One group used a larger photographic image of the location where the information was recorded as a central theme in the process. As mentioned above, this was an effective supplement to a chronological, account, in fact the actual time of recording is relatively irrelevant.

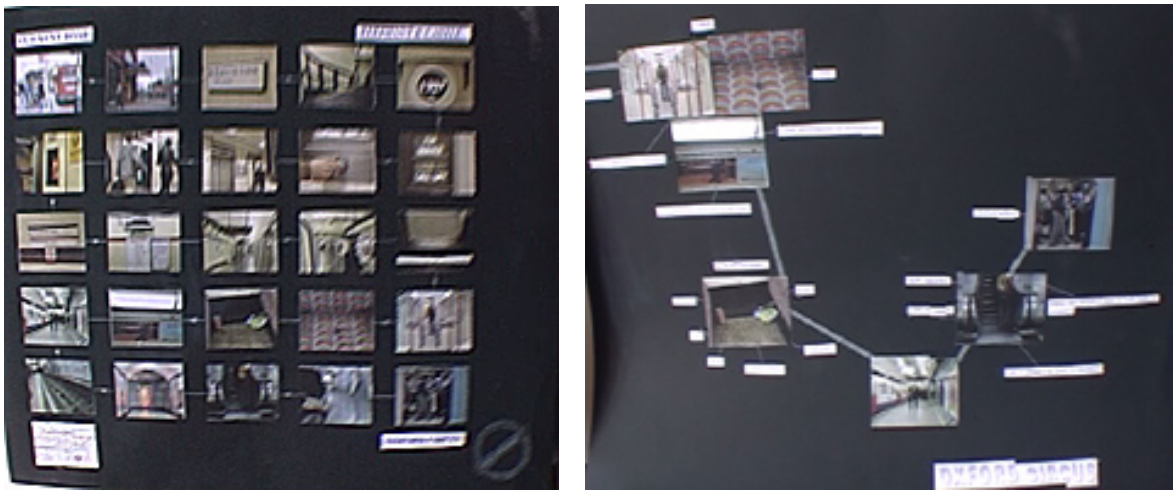

Figure 4. Examples from the Control Group

6. Conclusions

It seemed that the project allowed the students in the test group to take a more objective view of their work. They appeared to look through a different lens at the issues and were focussed on identifying problems, rather than rushing to solve them. Having an established mapping procedure before beginning the project clearly helped to organise the group and create a team effort so that all could understand their point in the process. The model allowed them to transcend professional boundaries and how to ask questions about their work and their approach to it. It may be helpful to ensure in future that sorting categories are directly relevant to design issues, allowing information to reach the right members of the design team in an appropriate format.

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