Artefacts as a Cultural and Collaborative Probe in Interaction Design

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Abstract. This paper presents a summary analysis of observed case studies within two design network groups. Designers with different backgrounds created some artefacts which permitted to argument that design can be understood as a dialogue approach. The interaction among designers mediated by the artefact allowed to find cultural markers and a collaborative circle especially significant within the design process. A social methodological perspective followed by semioticians was undertaken for the artefacts analysis.

Keywords: Interaction Design, Culture, Collaboration, Artefacts/Arteworks

1 Introduction

Interaction design has been associated with computing and technology, but the focus of interaction design must also be on designing the way people interact with any artefact, be it an object, a system, an environment, or being a consequence of the use of digital technologies or not. The aim is to support an interaction among designers that is mediated by the artefact. Much of what is understood about the design of digital artefacts is also applicable to non-digital artefacts. So, it seems that there is no reason for the discrimination between them.

This paper presents a synthesis of the analysis carried out within a research about designers with different backgrounds producing artefacts.

Designers create culture, as they create experiences and meaning for themselves and others. These experiences were reflected in the presented artefacts in the case studies and their analysis and interpretation was given by the objects meaning or what the objects meant in the different things to different people.

The collaborative circle consisted of designers who shared similar goals and who, through long periods of dialogues and collaboration, negotiated a common vision that guided the work. The vision, in general, consisted of a shared set of assumptions about the artefact/artwork, including what constituted good work, how to work, what subjects were worth working on, and how to think about them. The engagement with design was entertaining and expanded the notion of the very nature of participation, of taking part in and of itself.

Artefacts/artworks are expressions with different signs on different levels of design language. Just as semiotics, the study of signs, helps us to understand practices of description, which in turn reveal how meaning is communicated, so does it enable us

to understand the creativity of the designer, design being a method of the communication of meaning. The conveyance of those meanings and the designer's input, but to consider what the designers actually said and how they behaved during the design process, and to describe the outcome they produced was regarded as of high import in this research.

2 The Study

The data was collected within two design network groups: the Leonardo Network group and the White Rose Network for Affective Communication in Consumer Product and Exhibition Design. There were about twenty institutions in the former and four in the latter; and about 55 artists and technologists that took part in the study. The methods used to collect data for this research were centred on a qualitative study, a combination of research methods was used to collect the data, literature review, including documentation, records of individual and group's experiences and behaviours, case studies, interviews and observation.

3 Artefacts Analysis

The approach followed, in the analysis, was a social semiotic one as well as a multimodal social semiotics one. From a methodological standpoint, social semioticians analyse images according to three main metafunctions. Halliday recognise three main kinds of semiotic analyses that are always performed simultaneously [1]. This idea was also extended to images, using a somewhat different terminology: representational, interactive and compositional [2]. The approach allows deconstructing texts into these three main types of meaning.

Figures or texts were analysed within this perspective and also describing a 'thing' and its qualities and the 'context of the things'. The qualities referred in this context are related to the object properties such as colour, shape, weight and size.

The analysis to follow is an exploratory process involving a visual analysis of a dialogue through a series of drawings that were made in a dialogue context. Far from being a subjective experience, the researcher considers to be a profound dialogical achievement. During the visual analysis of the designers' interaction, the form of dialogue observed was: vocal and sketching in that they engaged in dialogue via both words and images.

The artefacts developed within some case studies were drawings and words, from this point, all called texts [2]. The artefacts analysis could be carried out in different deepening degrees. We due to the large amount of data selected some examples and did a 'snapshot analysis'. However the goal was attained because it could be argued that each artefact reflected the dialogue that occurred during the design process.

3.1 Artefacts Description and Interpretation

In this study, two types of interaction were understood: interaction of designers with the artefact and that among designers mediated by the artefact, this paper refers to the latter one. Table 1 presents the main features considered for the analysis.

Table 1 - Meaning Analysis

Representational Meaning	Compositional Meaning	Interactive Meaning
Syntax (qualities of the artwork - lines, shapes, colours, textures) and **Materials**	**Semantic** (forms, purpose, and meaning)	**Pragmatic** (relationships).

In each group composition a diversity of designers' background was observed, this being the case study that contained the highest variety of participants from different disciplines. This had a reflection on the designers' behaviour: they were very engaged in the design process, however they were more critical. Some of them considered that they had gone for systems solutions rather than personalisation and they concluded that they were approaching products as systems in affective design in some way. Also, concerning culture, this group was formed by designers from a variety of national cultures which influenced in the way they talked and in the considerable amount of ideas each team presented until a consensus was achieved defining the one to follow. Referring to creativity, the challenge was conducive to creativity in the way that the designers found solutions.

All the drawings were executed within a limited time and also using a limited range of media in order to make their productions as simple as spontaneous as possible. They were executed using paper and pens, with only black, blue and red ink. Some "drawings" were cut out magazine pictures, some sketches were accompanied with words.

In the Human Beans challenge, teams were assigned scenarios and asked to identify the top three emotions to design environments that would mitigate these emotions. From another case study groups were challenged to identify interactive technologies that in some way could respond to a problem set by another team. This took a form of relating to a social issue, a context or setting and a technology in order to produce a bid. In the Chindogu case study, the irony of the design solution arose from the dialogue established between designers during the design process. The proposal was to develop an artefact that could be an interaction device following the chindogu tenets and using the available materials. Throughout the design process stages, communicative practice, collaboration, the demonstration of different levels of creativity and the expression of the designers' attitudes, interests, beliefs (culture) could all be seen to have had an effect on the conception of this humorous solution.

All the artefacts described and analysed had a common denominator: social interaction. Under this encompassing umbrella, in the artworks from the Human Beans workshops, subjects included were: online networks to facilitate social cohesion: exploration of how technology could facilitate more appropriate communication between people and their loved ones; the use of technology to

preserve cultural memory; comfort associated with concepts of production; affective communication in design.

The resultant artworks of the Chindogu challenge must be understood within the context of uselessness. However, in the three resulting outputs, interaction was the overall concept and the preoccupation with communication between humans/humans or humans/animals were the underlying aspect.

Both conversations and artefacts/ artwork practice were understood in this research as forms of dialogue intimately linked through meaning and, as meaning and interpretation are inherent in the relationship between the verbal and the visual, the practical and theoretical elements involved in the investigative process of the research were mutually dependent.

4 Conclusions

Culture was an important component of the design process. During the design of the artefacts/artworks, the opportunity to integrate cultural and geographic qualities into designed objects was provided. There was a cultural context of design and it was this that gave meaning, and also provided the values reflected in the objects' form and function.

The influence of the designers' own cultural dimensions of values in the design of objects was noted as being very important during the observed design processes. The design of artefacts and artworks was addressed as a response to a need, a desire or a challenge. This response in turn was influenced by the interplay of several factors including designers, the context and other participants in the design process. Also diverse cultural values, such as where the designer was born and has lived, influenced the way s/he designed an object during the design process.

Designers' relationships were frequently made within an atmosphere of collaboration which means that those involved work together, shared an interest in the design goals and chosen problems, either to find a common solution or to exchange experiences aiming at a better understanding of the situations. Design as dialogue involved experiences: experiences of designers, experiences of the sharing, and experiences during dialogue.

The semiotic analysis of the artworks, which contained many messages – some more obvious than others, was complex but very interesting, beneficial and also surprising. It was clear that artworks are much more than designed objects - they are structures of meaning and "*an intersecting point in a network of relations*" [3].

References

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