

Empowerment Games: Empathic Design Probes for User Participation in Community Housing

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ABSTRACT

This paper documents the empowering process of a group of public housing residents through different design probing exercises. These exercises worked along with existing social processes without any involvement of designers. This paper shows how a design researcher devised a series of probing tools called “empowerment games” with a group of active users. These games are self-learning tools for making the abstract language of design legible to users. The main purpose of this initiative was to change the preconception of governmental bodies and professional designers of the passivity of the users with regard to their designed environment. This was the first case of the application of a participatory design process in Hong Kong subsidized housing. Design empathy is a central skill when working with users throughout the whole design research project.

Keywords

Concrete space vs. abstract space, design empathy probes studies, community housing, participatory design games.

1. INTRODUCTION

In the 1970s, the French philosopher Henri Lefebvre introduced the concepts of ‘concrete space’ and ‘abstract space’ to explain a disturbing urban problem: “*the extraordinary passivity of the people most directly involved, those who are affected by projects, influenced by strategies*” [7]. Concrete space is the space in which we live and experience. Abstract space is the space of vision and geometry, typically used by architects/designers to interpret cities, and projected back onto our lived environment in their designs. There is a lack of common ground between these two spaces. Designers create abstract space and users live in concrete space.

One of the recent responses to Lefebvre’s critique about the separate spaces of designers and users is the encouragement of design empathy by leading human factors and design research centres [1,6,8,11]. “*Design empathy means that people are seen and understood from where they stand, not as test subjects but as persons with feelings... It has two directions: towards the participants to create an empathic and respectful dialogue and towards the designers to support empathic understanding.*” [8]

User researchers have developed many ways to achieve empathic design. Sanders [9] divides user research methods into three

types: SAY, DO and MAKE. The SAY and DO methods refer to more traditional user study methods such as interviews and observation. The MAKE method is a relatively new one, which relates to making tools for users to probe and express their expectations. This area has been development into different probe studies [4,8,10].

One of the most famous probe studies examples is the “Cultural Probes” study [4], which was developed by a group of design researchers from the Computer Related Design Department at the Royal College of Art, London. The aim of the probe tools was to understand the private lives of the elderly in different cultures. Packs containing disposable cameras, maps with instructions, stickers and pre-stamped postcards were sent to different focus groups in different parts of the world, to be used in recording the subjects’ daily lives and returning the records to the researchers. Designers used the collected information from the probes as inspirational materials to develop new design concepts for information technology. Although the “Cultural Probes” were criticised for a lack of formal analysis [5], they set a good exemplar of how to draw the attention of designers to the importance of user involvement. However, the interaction of the users and designers is limited and the role of users is passive.

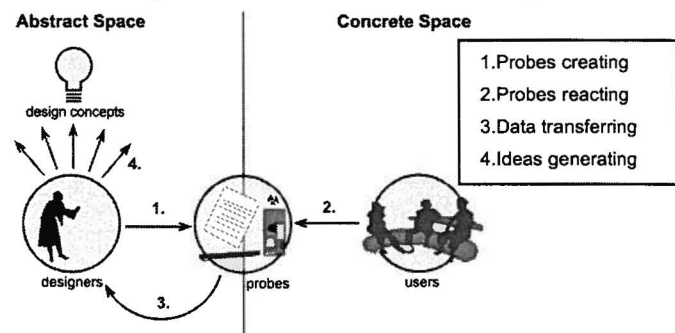


Figure 1. Designer-user diagram of the Cultural Probes

Compared with the simple designer-user relationship (Fig.1) of the “Cultural Probes” method, the “Empathic Probes” [8] applied in another research is based on a more complex research framework (Fig.2). A heart rate monitor manufacturer, Polar Electro in Finland, employed a group of design consultant. The design consultants designed the probes kit, which included a small diary booklet, a sheet of stickers, a disposable camera with a list of photography assignments and illustrated cards with open questions. The probing process aimed at understanding the experience of well-being and exercise from a wider perspective in order to develop design briefs for new products. After interacting with the probes, all the participants attended individual interviews

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in which they used the probes to describe and express their life. Finally, every participant was invited to build a collage from magazines images to summarise their ideal well-being and exercising situation. Although there is no direct relation to the design process, this exercise resulted in some new design viewpoints for the manufacturer to develop. There are more levels of user input and the relationship with users is more interactive and empathic than in the previous case. An important limiting factor, however, is that the probed data cannot be transferred directly into a real design process to directly influence the viewpoints of designers.

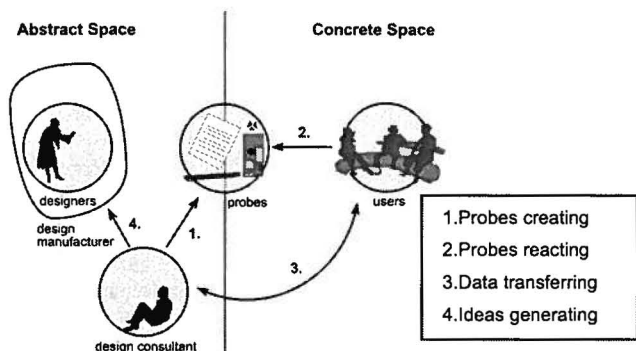


Figure 2. Designer-user diagram of the Empathic Probes

2. THE CASE: USER PARTICIPATION IN A COMMUNITY HOUSING PROJECT

The Hong Kong Social Welfare Department stated at their website: “to promote social relationship and cohesion within the community, and to encourage the participation of individuals in solving community problems and improving the quality of community life.” The Hong Kong government has adopted community participation as one of the main social welfare strategies to improve the quality of life in the city through measures aimed at restoring a lost sense of community. Although many of these community participation projects which aim at improving people’s lives by involving specific users in the process of creating their living environments have been developed through the hard work of many non-governmental organisations (NGOs) with different local communities, the involvements of governmental bodies and design communities are still at a low level.

2.1 Who are the users?

In response to Lefebvre’s critique, it is important for architects/designers to rethink their roles in the design process. This pursuit inspired us to become involved in a community housing project in Hong Kong as volunteers. The Lower Ngau Tau Kok Estate (LNTK) is one of the oldest public housing estates in Hong Kong. The estate was built in 1967, comprising about 4,500 households, with a combined population of 11,000. Over 30% of the residents were elderly, living either alone or as couples.

The residents from this estate were distinguished by activeness and passion, a strong sense of community and articulate views about their needs and demands. Under the Comprehensive Redevelopment Program of the Hong Kong Housing Authority, LNTK estate was to have been demolished by 2004 and residents displaced to different newly-built subsidized public housing estates in Hong Kong. After two years of negotiation with many

governmental departments with many protests, residents meetings and self-motivated surveys, the residents achieved their first success: a resolution that the whole community will be moved together to a nearby reception estate, rather than a site distant from their current home.

After choosing the site of their future estate, the residents wanted to know more about the design of their future home. It is at this point that they felt the need for the advice of a design professional. Lee, a trained architectural designer, then joined the team and worked intensively with social workers and residential group members to define the problem and find the solution together. Working as a design researcher, Lee takes on the role of a catalyst for this ongoing social process. Her approach is an empathic one in which her intention is to work with users and not for them.

2.2 What are the issues?

Although all the residents will move as a whole community and remain in the local area, it is hard for the residents to imagine how their lives will change in the new housing estate. Most of the LNTK residents have lived at this estate since it was built in the 1960s, in the middle of the phase of public housing construction spanning from the 1950s to the 1970s, when “the greatest need was to provide a large number of rental housing units with basic facilities to accommodate those cleared from squatter areas, those left homeless by fires, and those with low incomes.” [11] Over the past forty years, the residents have tried to adapt their lives within a fixed physical environment, built to the Hong Kong 1960s public housing standard: a single room with no partition, 14-27 metres square average unit floor area for families with 4-8 persons, single slab blocks with central corridor access and 32-58 units at each level in 8-15 storeys. With improved space standards and quality of design, their future estate will have various standard units to suit different sizes of households, between from 17 to 52 metres square ranging from a one-person unit to 3-bedroom unit. This design represents the new model of Hong Kong public housing in the new millennium. Figures 3 and 4 compare typical public housing design in Hong Kong in the 1960s and 2000s.

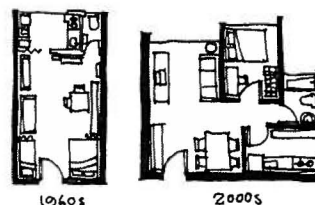


Figure 3. A comparison of Hong Kong public housing flat design - 1960s typical 4-person flat and 2000s two-bedroom flat

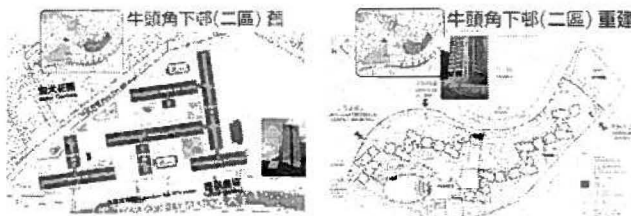


Figure 4. A comparison of Hong Kong public housing layout design – the LNTK estate designed in 1967 and the new LNTK estate designed in 2004.

The main purpose of the project is to help the residents to relate their daily life experience in the concrete space to architects' abstract depictions of space such as drawings and models. Since the future has not yet been built, all the information is still in the realm of the abstract space. It is important for the residents to understand the authorised architects' representation skill in order to participate in a discussion of the future design.

2.3 How do the probes work?

According to Jim Burns (1974) [2], there are four categories/experiences/phases of participation: 1. Awareness, 2. Perception, 3. Decision-making and 4. Implementation. This classification indicates that the first and most important step in encouraging user participation is to raise the users' awareness of their own importance. In this project, we followed this logic by designing a series of community workshops called 'awareness workshops'. The aim of the workshops is to initiate a representative group of current residents of the LNTK estate, who will be the future users of the new estate, into the language of design to an extent that enables them to get involved in the design process of their future estate. The workshop took the form of a self-learn exercise in reading abstract architectural drawings (Fig.5).

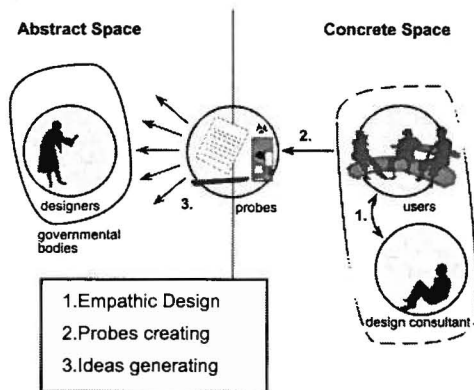


Figure 5. Designer-user diagram of the LNTK community housing project (compare with Fig. 1 and Fig.2)

The workshops employed a series of game-like tools/probes called 'empowerment games' to enable participants to understand the complicated architectural design process by association with their everyday life experience. Different scales of urban living problems were tackled through different games. Association was the main method employed. The aim of these community workshops was to help the resident group members to envision the housing design and construction process. Through such new experience, knowledge of design is transferred from designer to resident group members and, through them, to other residents.

2.4 What are the probes?

Game 1 (Fig.6) aimed at enabling participants to anticipate problems and opportunities in their future home by associating their perception of positive and negative environmental factors in several newly built housing estates in Hong Kong with issues that may possibly play a role in the design of their own future homes. The aim of this first simple awareness workshop was to provoke participants' interest in the workshops. The result was that participants were actively involved in the process and many useful dialogues about environmental issues were developed. A

discussion about the design of the rubbish collection system is an example of an interesting dialogue from this game. Participants generally identified the built system as a good design but also identified opportunities for improvement.

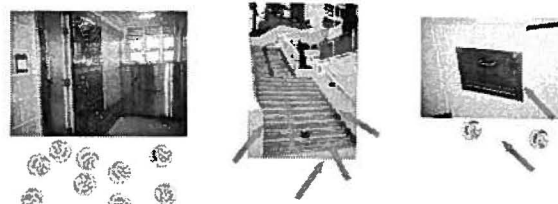


Fig. 6 Game 1: Problem Identification and appreciation

In awareness workshop 2 (Fig.7), participants arranged icons representing the furniture and items of their day-to-day life within a plan of their future flat. These individual flats were then placed within the context of the overall layout of their future building block. This is **game 2**, which allowed participants to gain an understanding of the relationship of their private space to the communal space and overall building ensemble, as well as encouraging projection of the patterns of their daily existence into the space of their future flats, leading to insights about spatial division and organisation. At the beginning, participants were confused about the concept of two-dimensional floor plans and they did not have a clear idea of the relation of plan scale to actual scale. Then they started to associate the cartooned icons with their mental maps of their existing home. After many collective conversations, all participants overcame those problems and made the game become a useful tool for them to design their future home. Many creative spatial use scenarios were developed.

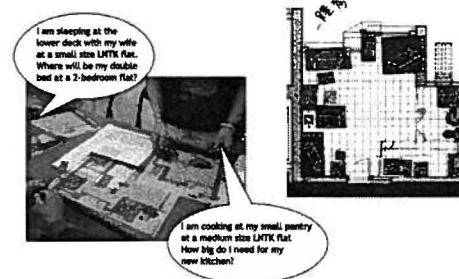


Fig. 7 Game 2: Usage Association

Awareness workshop 3 (Fig.8) tackled the most complicated issue of the project – the overall design of the estate. It is very difficult for end users to associate the tremendous scale of an entire estate with their daily experience on the basis of plans alone. Therefore, **game 3** was designed based on a conceptualised construction process, intended to give the participants an understanding of the constructive logic of their future estate. Another aim of this game was to create a chance for participants to experience the transformation from two-dimensional architectural blueprint to three-dimensional conceptual model. This collective learning experience encouraged more conversations about the overall planning. Through this conceptualised process, the main aim of games 2 and 3 was to give the future users a conceptual understanding of the design of their future Housing Authority estate.



Fig. 8 Game 3: 'Build our estate together'

2.5 Next step

Through this new experience, knowledge of design was transferred from designer to resident group members and to other residents. As one of the collaborators of the project, sociologist Dr. Ku [3] concluded: "The project is one of the pioneers in Hong Kong's housing development, which has opened the channel for the local groups to voice their view on the urban planning and renewal process of the living environment, as well as their housing preference. The findings of these projects also have enriched our greater understanding on the need of the underclass citizens and uncovered the problem of government's planning and housing policy."

Actually, this is not the conclusion but rather just the beginning of a long-term process. The participatory design process is influenced by the relationship between designers and users. Now that the users have been empowered, the next step is to involve the designers of the future housing estate in the participatory process. Currently, the designers of the processes are devising the participatory design process that will be employed. Empowered by their experience in the pre-participatory design exercises, the users will participate as collaborators in the next step. These next steps in the process will provide a valuable opportunity for a comparative study of the same situation and issue with different stakeholders. Whereas the workshops discussed in this paper were organised by the users and a design researcher without the involvement of the designers, the next planned workshops will be organised by the designers with the collaboration of active users and the help of an experienced design researcher.

3. CONCLUSION

In conclusion, design empathy is a crucial element in implementing participatory design into conventional design practice, making for a more reflective design process. This paper presented the personal experience of a design researcher engaged in challenging the current conventional practice of public housing design in Hong Kong. Her empathic approach first empowered the users, and then inspired the authorised design group. Further user participation exercises are planned for the subsequent stages of the design of this specific public housing project in Hong Kong. The process and methods used in this project will be documented to provide an exemplar that will hopefully influence the way future public housing projects are designed in Hong Kong. The pursuit of increasing user participation in the design process implies a new, more profound role for designers as generators of processes and not merely as producers of objects.

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