‘Do I Look Like an Object?’ A Quest of Exploring Person – Place Relationship of Disabling

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Abstract

Researches on enabling places have been done by measuring physical environments. The disabled researched tends to be ‘object of study’ and struggles are ‘neutrally out there’. Its outcomes tend to fail to meet their needs. To what extent the methodology help understandings of people-place relationship. The discussions based on an experiment and an exploration one wheelchair user negotiating socio-spatial impediments in daily life. A small physical barrier can be solved by design solution in the quantitative approach. However, it is more complicated in another. The paper invites rethinking roles of socio-cultural factors and positions of the disabled in the process.

Keywords: Disability; accessibility; research methods; lived-experience approach

1. Introduction

Studies on environment and behaviour have long been conducted under empirical research which seeks to ‘prove’ and achieve ‘fact’ in accommodating good design (Sahachaisaeree, 2011). Likewise in the last decade, scholars in this research arena have contributed great deal of learning methods. Lantrip (1999:140), for instance, suggests that the environment-behaviour research requires a new unit of measurement and analysis in which has both physical and psychological attributes. This paper reflects research process in both qualitative and quantitative approach in the last ten years of the author. It is

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expected the discussions can extend the development of the disabled people and accessible environment knowledge. The paper is based on the quasi experiment and the lived-experience exploration. This does not mean to compare/contrast such two, but it is important to demonstrate how they can fulfil one another. It then raises a question: to what extent the process of research can help understandings of people-place relationship in enabling built environments. What is more, the writing here wants to underline that selection of methods can directly and indirectly impact on the researched’s self perceptual in various degrees (in this case the disabled).

I discussed elsewhere that access issues in Thailand so as to other developing countries still be seen as individual problems (Sawadsri, 2010). Furthermore, accessibility as well as disability issue have been discussed heavily that it connects with complex socio-cultural elements (Birenbaum, 1979; Oliver, 1990; Dear and Wilton, 1997; Kitchin and Law, 2001). Social and cultural issues have rarely been addressed through researches which measuring physical requirements and designs. Access issue, therefore, requires study more on complex social and cultural aspects. Exploring such an issue critically in a wider approach could expand and deepen the understandings of people-place relationship, as Laws (1994:7) notes;

“Urban places are not neutral in their impacts on people’s lives. Some environments are oppressive and in certain cases this oppression is contested as people struggles to improve their day-to-day lives”.

The paper consists of five sections. The immediate following discusses on the theoretical perspectives behind understandings accessible environments from two paradigms (2.1 and 2.2). The third section provides two methodological approaches which influenced and shaped research strategies and role of the disabled participants. The forth discusses critically on the methods used and shows how the selection of method effect the perceptual and position of the research participants. The final section concludes by emphasising the needs to complement research methods from both quantitative and qualitative approach in studying disabled people and accessible environments.

2. Thoughts underpinned the research approaches

This section provides key ideas about how disability and access issue have been perceived and how it affects the process of research about disabling built environments. The following two subsections discuss theoretical background in both quantitative and qualitative approach.

2.1. (In)Accessibility as an individual problem

This approach places the problems and therefore its solutions at the individual level. Hence, it pays less attention to society at large. Corker and Shakespeare (2002:2) extend the assumption that the unity of humanity assumes the individual with impairment is a deviance from the modernist idea of ‘normalcy’. That is a person with a perfect bodily and mental function is viewed as a ‘norm’ of human being. An explanation of disability as a problem located within individuals also underlies explanations of the cause of problems arising from the individual’s functional limitation, or as Oliver (1996:32) calls it, “the personal tragedy theory of disability”. This perspective regards disability as well as inaccessibility issues as a problem for the person who carries the disability and it is based on the assumption that persons with impairment have something inherently wrong with them. Oliver (1986:6) further points out the false assumption in policies for care is that the population can be divided up into 1) dependent citizens or disabled people and 2) independent citizens or non-disabled people. By dividing the care system and providing care in institutions, it fails to provide the emotions and feelings needed between the giver and the recipient. Accessibility in the built environment, therefore, is seen as the responsibility of the individual, both in traditional and modern eras, engenders remedies for disability problems which also revolve around individuals’ responsibility.
In this model, people with sickness are excused from the ‘normal’ obligations of society. For instance, people with impairments do not need to go to school, or take a job or take on family duties and so on. Therefore, a key role falls to the authorities to issue policy regarding the ‘special’ needs of disabled people. Consequently, solutions in this approach are often associated with medical and healthcare intervention. The key actors to solve problems within this approach tend to be medical professionals e.g. physicians, physiotherapists, rehabilitation consultants, and so on. According to this perspective, which lies in a positivist ideology, disabled people are often viewed as ‘objects of study’. Additionally, in industrialized society, the notion affects the agenda of disability policy. People are evaluated within the binary opposition of useful/un-useful or able/unable.

A person who has amputated legs, for instance, requires assistive equipment help for moving, such as crutches or a wheelchair. However, physical barriers inherent in built environments range from little cracks in the pavement to steps when accessing buildings. Those barriers limit the mobility of such individuals with impairment. A solution through this model tends to end up based on the individual such as special medical interventions (artificial legs or surgery which helps the person to cross those barriers), or providing the state monthly allowance if the person cannot go back to workplace. Shakespeare (2006) unfolds disability in this individual approach that tends to disregard the built environment as a disabled people’s struggle. He gives an example of the work of disabled writers whose study is based on compassion for the disadvantage faced by disabled individuals. Such work views problems embedded in an individual’s functional limitation and disconnected from social and physical environments:

“when wheelchair users encountered problems getting around, they did not interpret these environmental barriers as the problem: [quoted] [c]entral to the life experiences of these civilian pioneers was the belief that individuals needed to adapt to existing environments and that wheelchairs were obstacles to participation, not steps and curbs.(ibid.:17)”

In sum, within this approach, a person with impairment is viewed as an individual who carries the disability. It clearly contains the assumption that removing physical barriers in the built environment is irrelevant in solving for disability problems. This can be linked to the research approach that emphasizes on measuring impaired bodies movements and functions. Within this perspective, the unit of analysis focused on individual’s functional limitations. The solutions are often ended up within design techniques, otherwise optimal physical space, size and shape.

2.2. (In)Accessibility problems as a social construct

As the medical or individual model was criticized for the way it is practiced, the new idea was brought into a more diverse society. The focus of this perspective is not only on individuals that have different needs, but also on the problems that creates limits for people within the environments. The social model of disability is the name for this perspective. One of the key drivers making up the social model of disability was the academics’ ignorance of inaccessibility issues because they have been viewed as a personal tragedy. In this regard, Oliver (1986:6) contends that major obstacles are not only caused by impairment, but also by the social restrictions imposed upon impaired bodies by society, leading to the view that “[...] disability is therefore a particular form of social oppression”. This approach suggests that disability is no longer perceived as a mere natural misfortune which randomly happens to individuals. The social model of disability not only recognizes the social exclusion of disabled people, stemming from existing social conditions, but also their economic exclusion and inequalities (ibid.:7).

The social model highlights two key elements which cause ‘disability’. They are both visible and invisible: the physical and attitudinal barriers. The social model clearly teases out the problems of disability that, in fact, are embedded in the way social and physical barriers are systematically organized in society, outside the body and mind of impaired persons. There have been attempts to promote the idea
that physical barriers are the key problems in the lives of impaired bodies. However, Butler and Bowlby (1997:411) argue that, in fact, barriers in the built environment cover only a small proportion of disabled people’s concerns; it is the social environment, social attitudes and behaviour towards disabled people, which requires change.

As Verbrugge and Jette (1994:9) highlight, “disability is not inherent in a person [...] it denotes a relationship between a person and her/his environment”. The physical environments in this approach are significantly constructed through social processes. Hall and Imrie (1999:409) refer to “obstacle courses characterised by a range of social, attitudinal, and physical environments”. The ways disabled people become excluded within society cannot be understood without an appreciation of the experience of disability as well as recognition that life and society are situated, contextualised and reproduced in space (Kitchin, 1998:343-344). Therefore, insight into how those socio-spatial factors affect disabled people’s lives is produced by studying daily life experiences in built environments.

3. Methodology

This section discusses two research procedures related to an exploration spatial behaviours and needs of disabled people. The first is based on quantitative approach. It lines in the thoughts that ‘disability’ and ‘inaccessibility’ connected to medical/individual aspects or as disability studies community called ‘individual model of disability’. The unit of analysis is therefore the personal physical limitations in which mutually effect the surrounded physical constraints. The research process tend to be emphasised on measuring and providing physical evidences in order to prove and validate spatial size and shape required by the subjects of experiment. The latter method is in the qualitative approach. It is based on the idea that ‘inaccessibility’ strongly links to the social process where the disability issue is situated. The unit of analysis focuses on wider social and cultural dimensions. By engaging with the research participant, the research process is able to provide deeper understandings of the relationship between disabled people and her/his daily living environments. This approach seeks to understand the meanings of (in) accessible environments through the eyes and experiences of the disabled participant.

3.1. Quantitative approach: Measure the behaviours and needs in quasi-experiments

The first case utilized three stages, each using different techniques, which are;

- A Post-Occupancy Evaluation (POE) of the satisfaction of the domestic environment with the behaviour of disabled dwellers;
- A quasi experiment to evaluate the optimal spatial size and shape of the wheelchair users; and
- Structured, closed-end questionnaires to determine the level of satisfaction among co-residents for housing modification in accordance with design for all guidelines.

The POE assessed the area and user satisfaction to identify the need for spatial modification. The characteristics of spatial size and shape that affected the living behaviours of wheelchair-bound users are focused. The analysis revealed the type of spatial behaviour that affects the spatial sizes and needs. The simulation experiment investigated optimal spatial size and shape adopted Lantrip’s (1999:145) Body Motion Envelope (BME) to measure movements in living areas of wheelchair users. It examined different human body sizes and shapes to ameliorate the fit between the human body and space in the built environment. For example, body size impacts the width of entrance doors as well as the height of counter tops. Biomechanical measurement determines the power-used level needed to control equipments, such as the range of reach needed to open a door, the level of energy used while accessing a ramp by wheelchair, and so on (Steinfeld and Danford, 1999).
This study created mocked-up environments to measure the actual spatial needs of experiment subjects. The mocked-up spaces involved video recording the movements of people doing tasks from above, observing constraints, and using questionnaires to find their perceptions of safety and difficulty while doing given tasks. The questionnaires, adapted from Steinfeld (2004)'s Enviro-FIM (Environment Functional Independence Measurement) used a five-point Likert scales to define the users’ comfort levels (i.e. from very easy to very difficult; or from very dangerous to very safe). This stage also obtained measures of the area that disabled people occupied and needed to perform their activities. The BME method assessed characteristics from the video recording and traced the area around human bodies when moving while they did activities such as shifting from wheelchair to furniture, washing hands in a basin, and moving objects between two opposite sides of furniture. The BME encompasses an area that provides enough space to finish an activity. Figure 1 shows an example of the BME measurement. It shows the envelope drawn around the occupied space of each person with an impaired body while performing a given task.

Fig. 1. Examples of the contour of envelope around the space in the BME experiment, a volunteer shifting himself from his wheelchair to a bed; Source: Author, partial mock-up experiment, December, (2002)

The questionnaires explored in depth the attitude toward home modification of co-residents who live with wheelchair users. The options used semantic differential scales, with referred to the satisfactory level of acceptance of the proposed home modification guidelines derived from the experiment. Figure 2 shows the sequence of the BME method.

Fig. 2. Four-stage sequence of the BME method; Source: Author, partial mocked-up experiment, December, (2002)
After the first two phases described in Figure 2 (top right and bottom left) show the optimal space required by a wheelchair user, and bottom left and bottom right show the optimal kitchen space proposed to co-residents to ask for their acceptance of home modification. Respondents indicated their acceptance (from completely reject to completely accept) of the modification.

3.2. Qualitative approach: Explore lived experience in daily living through observer as a participant

Hitherto, the social model of disability has been criticized for lacking a focus on bodies with different impairments’ needs and suggesting concentration on embodiment in space (Thibodaux, 2005; Shakespeare and Watson, 2002). For instance, Freund (2001:690) argues that although disability has been understood as a social construct, “at least partly, reside in an ‘objective’ impairment and not just the context in which a person is situated”. In addition, scholars in this approach seek to distinguish explanations of impairment and disability. Impairment is simply a bodily state, which defies the physicality of certain bodies with different capacities. For Gleeson (1996), impairment is a form of certainly embodies a given set of abilities which then affect real social capacities. The analytical frame is in line with the idea that both disability and accessibility are part of the social process. This conceptual is associated with the way people critically rethink ‘reality’.

“If there are really no such things as ‘fact’ about the way people are treated, then there is no such thing as discrimination or oppression. [The post-modernist perspective] drives the enforced injustices of social inequality into the personal cupboard of privately experienced suffering” (Oakley quoted in Oliver, 2002:16).

However, it is unavoidable that such a ‘fact’ assumes the presence of a person, the researcher, who “constructs a reading of the meaning, making process of the people he or she studies” (Wang and Groat, 2002:186). Through this perspective, inaccessibility is the result of a disabling environment. This approach contributes to investigations of significant elements such as attitudes toward disability, and other socio-cultural, socio-politico-cultural and socio-economic factors.

Furthermore, there have been a number of access studies in Thailand that are heavily focused on law implementation and design guidelines (such as Kutintara et al., 2010; Kulachon and Dankittikul, 2005; Jarutach, 2005; Mamee and Sahachaisaeree, 2010). The solutions to achieving an accessible built environment in such research orientations tend to be as seen through the eyes of policy makers and physical environment professionals. While there has been debate as to whether the social model is the best way to include disabled people in research about disability, the bio-medical and functional approach continues to be the main basis of disability studies (Dewsbury et al., 2004; Shakespeare and Watson, 2002). Perhaps the lived experience approach may be considered as a research approach that brings together the individual and social models of disability. In the lived experience approach, where self-perception about impairment is conveyed through a subjective perspective, this can reflect how external conditions have shaped individuals’ worldviews toward ‘disability’. The ‘subjective experience’, as it was called in the interpretivist perspective — whereby it is held that reality is socially constructed — is the key component in understanding what are elements that facilitate or hinder disabled people to cope with the disadvantages that affect their ways of life. As Crow (1992) contends, although disabled people have been oppressed by external barriers, their experiences from a subjective viewpoint are an integral part of their everyday reality.

Within this perspective the author explored the lived experience of person living with mobility impairment. The informed consent was given by Miss Tum (29 years old), a disability activist, who volunteered to join in this process.
The participant proposed the idea to demonstrate how she lives alone as a wheelchair user in Bangkok. The agendas of observation were shaped together by the researcher and the participant. The observation took place on a journey from her living space to public places, transport and the workplace, during weekdays and weekends. The observation was undertaken across a total of two months. It aimed to take in a variety of activities, places, and modes of transport alongside exploring spatial and social encounters. The author followed the participant during she perform daily activities in and out of her place (Figure 3 above). The digital voice recorder as well as note taking and digital photographic were used alongside the exploration. The transcriptions were done in form of verbatim and sent back to the participant to revise and feedback. The study also engaged with the participant in the data analysis process.

4. Discussion on the method used

4.1. Understanding the dimension of inaccessibility problems

There are different levels of solution for the physical barriers. In one respect, findings from experiments shed light on design solution at the technical level. For instance, according to the design guideline the ramp’s slope is recommended at a ratio 1:12 (Thailand Government Gazette, 1999) while the majority of experiment subjects satisfied at 1:8. The research can suggest the optimal slope in numeric and pictorial format. For another aspect, studying physical barriers through an experience of wheelchair user found that a small barrier can lead to bigger problem. A little crack on public footpath which the small front wheels of wheelchair can easily get stuck led to serious injury. The solution tended to be beyond providing a smooth pavement, but involved the wider social, political and economical levels such as how to get the local authorities informed and fix those seen as individual problem.

Through the BME technique, it greatly helps to visualise spatial requirements in details. In the partial mocked-up experiments, wheelchair users were told to demonstrate how they adapted their movements within the given physical barriers. Their actions and optimal size and shape were recorded. Whilst in the in-depth observation in daily life found that a small physical barrier can be read in different way. For instance, Miss Tum in wheelchair has to pass the street in her village to go to work. She was struggled by
the street hump. Every day Tum rolled her wheelchair through her neighbourhood and eventually the
concrete speed hump was removed by one of her neighbour (Figure 4). As she recounted;
“I usually walk pass the garage out there. Passing those street humps is so difficult. People there
always ask if I can make it. One day, there’s a mechanic told me he’ll knock them away. Another
morning, those humps had been removed to the width of my wheelchair.”

Fig. 4. shows the speed hump in Tum’s village which was removed by her neighbour; Source: Author, field study, July-August ,
(2007)

We have learnt through this experience in the latter method that disabled individual is able to be an
active agent for inaccessibility solution. Although we realised that the physical barrier can be easily
removed, by turning the opportunity to act as agent as in Tum case can change both physical and
attitudinal (of non-disabled people) barrier. Her spatial experiences have shown us that when the public
see more disabled people negotiating with spatial struggles, the understanding grows that disabling
physical barriers, not their impaired body, are the problem.

In addition, although the spatial simulations sought to control the variables, it is a challenge to do so
with its affect on feeling and emotion of the research subjects. The test on getting on and off the given
slope is an example. The wheelchair participants attempted to demonstrate that they were able to
complete the given task. However, the ability of participants was varied. As a consequence, when ones
failed to do so, the result can reinforce the feeling toward the self as disable or unable. Hence it is vital to
take the personal subjective experience into consideration in investigating disabled people interact with
their environments.

4.2. Position of disabled people in the research about accessibility issues

The research process which asserts its quality assessment in an objective manner and derived
visualised evidences, in one respect, can lead to the lacks of subjective experience which related to
feelings and meanings assigned by the researched. Throughout the lived-experience approach, I realised
that by listening to the participant’s reflection on environmental experience can not only understand
deeper the physical struggles, it also revealed the impact of the research process on the participant. In a
case of travelling by public express train without accessible facilities, Miss Tum was lifted up and down
the stairs by the security guard (Figure 5). By being stared at, the disabled passenger felt oppressive, as Tum share her feeling;

“Do I look like an object? I feel like I’m a thing that is being carried. It was so scary! My life was in their hands. I must contract my body and act as if indifferent...so tiring.”

Fig. 5. Miss Tum was lifted up and down the stairs in reaching to the elevated train platform while the other passengers were waiting and some stared at her; Source: Author, field study, July-August, (2007)

In this light, it reminds rethinking about the experimental research in which the disabled participants’ movements and behaviours were observed, recorded the video, took a photo, and measured. To a certain extent, the disabled participants were ‘object of the study’. Likewise, the in-depth interviews and daily-living observations may lead the conversations to reach stories of oppression, revisit the negative feelings toward the self. To complement the quality of both quantitative and qualitative research methods, it is important for the disabled participants to have their opportunities to decide their position in the research process.

This paper invites reconsidering the positions of disabled participants (Figure 6). The flexible research methods and tools which took a variety of different forms of experiences and voices of disabled participants into account help to generate disabled people’s knowledge which is often posited as less important in academic arena. The lived experience approach, for instance, is significant in building individual autonomy by including the voices of the participants who find it difficult to articulate in words their everyday struggles and personal requirements (Barron, 2001:432).
Recently, Chouinard et al. (2010:2) commented on approaches which emphasise individual limitations as a consequence of impairment faced in the built environment that “failed to address the inherently ‘disabling’ nature of the socio-spatial environment”. Gathering personal experiences in research projects and advocacy should be done “‘with’ rather than ‘for’ disabled people”. Furthermore, they suggest ‘critical’ research on disability and the built environment that centres on the significance of the social and cultural environment in shaping disabled people’s lives. The research ‘about’ access for disabled people, which represents an image of struggle and inability to do things as a result of inaccessible facilities, potentially reinforces the tragedy model of disability.

5. Conclusion

In the past decade, there have been a number of research enterprises working on disability and accessibility issues in a variety of socio-cultural contexts. The role of impaired participants can still be seen little important in academia. Oliver (1992:103) suggests changing the social relationships of the researchers and the researched to “offer the possibility of developing a social research enterprise which is relevant to, and significant in, the lives of those people who are the subjects of this enterprise”.

Recognising the knowledge of disabled people in the academic arena is empowering to disabled people. Thus the built environment discipline should integrate the spatial experiences of disabled people into its research agenda. Design studies could go further than focusing on the ergonomic or technical aspects, and should add consideration of the social aspect in the curriculum, course syllabus and pedagogical approach. Design students would then be able to understand the conditions surrounding problems of physical inaccessibility.

When we understand that the disabling built environment is embedded in the social process and disablement is its outcome, the study of architecture, planning or built environment related disciplines would not necessarily be divided up into ‘accessible/inaccessible built environment’. The design curriculum and pedagogy in architecture schools may not necessarily address ‘accessibility’ as a specific or special course. Rather, there should be a course of ‘architectural studies’ that considers the whole range of people, regardless of their different bodies, ages, capabilities and other forms of identity.

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