Lifting the Barriers: Planning for Increased Mobility and Accessibility through the Adelaide CBD.

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Abstract: Disabled people often struggle with the complexities of our built environment, hindering their full participation in contemporary urban life. With increasing political and media attention being drawn to the rights of the disabled as citizens, there is need to improve our understanding of the barriers faced by the mobility-impaired when accessing and utilising public spaces. Utilising in-depth interviews, this paper explores the role of urban planning in addressing equity of movement and accessibility within the Adelaide CBD. While it was evident that there has been some consideration of disabled-people in planning, this research highlights continuing physical barriers, such as footpaths and disabled toilets, problems with access into buildings, and inadequate and inefficient transport options. Importantly, it was apparent that there is still a strong need to push for more inclusive approaches to mobility planning. Institutional and social attitudes towards disability authorise an approach that can potentially increase social exclusion and stigmatisation. This paper suggests the necessity for a change of attitude and terminology among planners, a need to adopt interdisciplinary approaches to knowledge, and a desire to improve public consultation towards recognising and empowering disabled citizens within decision-making processes about our urban environment. This paper, therefore, argues that barriers faced by the disabled can only be removed by shifting the focus of urban planning activities onto meaningful consultation and collaboration, based around developing an empathetic understanding of the realities faced by the disabled when moving around the urban environment.

Key Words: Disabled community; accessibility; participatory planning

The built environment is a complex, multi-dimensional system (Handy et al., 2002). On observation, disabled people often struggle with the complexities that exist within the built environment of cities around the world. Barriers to full participation in contemporary life have the potential to cause stigmatization and social oppression of the disabled community. This paper explores the realities of immobility and inaccessibility faced by the disabled when moving through the urban environment. Adopting an appropriate phenomenological approach, the research presented here seeks to understand the daily experiences of disabled people moving into and around metropolitan Adelaide. Highlighting the barriers that can render space unusable, the paper will argue that equity of movement can only be achieved through an empathetic understanding that evolves out of meaningful consultation and collaboration.

1. Defining 'Disability'

Within academic literature, the discourse surrounding disabled people utilizes an array of terminology, potentially creating confusion. Often used interchangeably within the same research, terms include 'disabled people' (Burns & Gordon, 2010; Peel & Posas, 2009), 'people with a physical disability'(Church & Marston, 2003), 'people with physical mobility'(Bertolini et al., 2008), 'wheelchair users' (Bromley et al., 2007; Evcil, 2009), 'special needs' (Kailes & Enders, 2007), and 'need for assistance' (Australian Bureau of Statistics, 2006). However it is rare that a direct definition will be provided, instead there is often a reliance on the assumption of understood meaning. The World Health Organisation (WHO) considers disability as 'an umbrella term, covering impairments, activity limitations, and participation restrictions… reflecting an interaction between features of a person's body and features of the society in which he or she lives'(2012). This paper adopts a similar approach, directly relating experiences of the social world with the form of the built environment. In so doing, we consider barriers to participation and interaction with that world as maintaining, or even increasing, disability through immobility and inaccessibility. Following from the definition of the WHO (2012), we utilise the term 'disabled people' or 'the disabled' as this is not only the most widely used within the literature, but it also the most widely used by government agencies (Adelaide City Council, 2009; The Government of South Australia, 2011) and advocacy groups (such as the Physical Disability Council of South Australia, and the Minister's Disability Advisory Council) within the chosen study site of Adelaide. Whilst the term 'disabled people' does have broad boundaries, of primary concern to this paper are people with physical and/or sensory disabilities who face mobility-impairment. The term 'built environment' refers to the extensive and cohesive infrastructure or anthropomorphic spaces that make up our cities. Whilst the built environment encompasses internal and private spaces, this study concentrates on the public and external realm.

2. Planning for the Disabled

Within Australia, those who face mobility barriers in the built environment present as a broad demographic, raising concerns about the need for better planning (Bromley et al., 2007; Burns & Gordon, 2010; Ferri & Gregg, 1998; Gleeson, 1996; Golledge, 1993; Lewis, 2011). In 2009, 4 million Australians (or 18.5%), had a disability (Australian Bureau of Statistics, 2010), with South Australia having the 2nd highest incidence (23% of the population). With an aging population, this number is going to dramatically increase (Bromley et al., 2007; Burns & Gordon, 2010; Davies, 1999; Lewis, 2011; Sendi & Kerbler-Kefo, 2009). In 2009, it was calculated that 40% of Australia's population over 65 years of age had a physical disability, increasing to 88% for people over 90 years of age. This figure calls attention to the need to plan for what is, and will be, a significant section of the population.

Whilst many contemporary urban environments reflect a history of interest in health issues (Bertolini et al., 2008; Northridge & Freeman, 2011), that same built form provides evidence of lack of consideration to issues associated with being disabled (Britton et al., 2006). Early writing (see for example Goldsmith, 1976; Marshall, 1969) recognized that there was little known about disabled people's needs, and how these impacted on their experiences of, and segregation within, the built environment. Whilst there have been attempts to understand needs and problems of accessibility (Imrie, 2001; Park et al., 1998; Williams, 1999), 'disabled people do not, as of yet, have the same civil rights as non-disabled people' (Kitchin & Law, 2001). It has been acknowledged that the literature directly addressing planning for disabled people remains limited (Britton et al., 2006; Burns & Gordon, 2010; Butler, 1994; Gleeson, 2001; Grue, 2011; Hine & Mitchell, 2001; Park et al., 1998; Peel & Posas, 2009; Schuller, 2005). Disabled people are often construed within society as meaningless or below average human beings (Harnett, 2000). Schuller (2005) argues that social segregation of disabled people results in continued intolerance, unjust exclusion and neglect towards a significant part of the community.

The (built) environment can present barriers to everyone in society, however these barriers are magnified for a disabled person (Golledge, 1993). Within the literature, discussions about the barriers to mobility and accessibility faced by disabled people in the built environment identify two main categories: the physical environment, such as steps, slopes, lack of ramps; and communicative barriers, including absence of signs, poor lighting, inadequate signalling (Bromley et al., 2007; Gleeson, 1996, 2001; Golledge, 1993, 2005; Gray et al., 2012; Sendi & Kerbler-Kefo, 2009). The impact of these barriers will depend upon the disability, however almost all disabled people will encounter some negative experiences when negotiating the public realm (Imrie, 1996). Under Australian law, in particular the Disability Discrimination Act (1992), attempts have been made to create a landscape that does not discriminate with regards to ability to move unassisted. Under The Act, consideration is given to both public and private spaces, as well as employment and other areas of participation in today's society. This must be taken into account when designing and constructing our urban environments. The Disability Discrimination Act lists Australian Standards (AS/NZ 1428.1) which provides a standard of design which should be met to create accessible spaces. This Australian Standard is called in to the Building Code of Australia and therefore, accessible spaces are looked at by building officers and not planners. It is however considered that planners should be implementing the Disability Discrimination Act when assessing and approving spaces. The Act and its influences on the built environment are successful when creating accessible new urban spaces. However, the flaw in its application is that many spaces can apply for (and receive) exemptions, meaning that often problems persist.

Poor planning has played a major role in contributing to the obstacles faced by disabled people. Lewis (2011) and Peel and Posas (2009) highlight the lack of consideration given to disabled people's needs in planning policies and implementation. These authors emphasise the naivety of planning professionals who have little understanding of the needs of a disabled person. They argue that disabled planning should be added to the curriculum of planning education to teach about ethics and equality, and to equip planners with the tools to be employed to meet the needs of disabled people (Lewis, 2011; Peel & Posas, 2009). With a large percentage of people already disabled, and increases expected with an aging population, there is now a pressing need in planning to turn its gaze to increasing accessibility and mobility (Burns & Gordon, 2010). When planning has made attempts to rectify these issues, 62% of disabled people feel left out of the decision-making process (Bromley et al., 2007). An extremely curious statement by Church and Marston, 'not all elements need to be accessible, just a minimum number' (2003 pp. 84), begs the question about equality. With the focus of this paper being on the public realm, the authors are of the belief that a quality environment should accommodate all of the population, regardless of their ability.

Improvements in planning for disabled people are evident in contemporary times, with legislations and policies designed and implemented to increase equality of future urban environments. Burns & Gordon

(2010) compare planning policies and standards of the USA and Canada, in which they argue that the USA is doing far more for disabled people's rights than Canada. As discussed by Sendi & Kerbler-Kefo (2009), Bromley, Matthews & Thomas (2007), Church & Marston (2003) and Curtis (2008), recognition that discrimination against disabled people exists is only the first step to change. Park, Radford & Vickers (1998) also indicate that there needs to be a change in research and policy methods, from a scientific outlook to one of cultural concern. Bromely, Matthews & Thomas (2007) discuss short terms goals which can be implemented easily such as dropped kerbs, removal of steps and replacement with ramps, improvement of paving and more disabled car parks. Burns & Gordon (2010) raise the bar by stating that the need for change to be implemented is now pressing, due to a large percentage of already disabled people and a growing number due to the aging population. A greater need is required now.

The key to change however, is understanding that problems can't be resolved by assumptions about disabled people; consultation and a collaboration of knowledge is crucial. Walsh (1997) believes that *'an inclusive vision compels us to extend human rights to every citizen, to set worthy goals and to shape the social policies which pursue these goals'* (pp. 117). Funding by Governments will be crucial to quickly modify built environments to improve accessibility issues (Burns & Gordon, 2010). An integration of services, programs and strategies will be important to see that all aspects and factors are planned correctly and the optimum outcome is achieved (Burns & Gordon, 2010; The Government of South Australia, 2012). Every public transport option should offer disabled access and therefore, workers/drivers of these systems will require training. Thus there is a very contemporaneous movement within planning to consider and implement policies, which strictly focus on the needs required by disabled people, in order to improve accessibility and equality in our cities.

3. Exploring urban accessibility and mobility

Transport and mobility are crucial considerations in the planning of cities today. Bertolini et al. state that 'mobility has become an essential condition for active participation in urban, social and economic life' (2008 pp.70). Hine and Mitchell also recognise that 'accessible transport systems are essential for equality of opportunity for all people in society' (2001 pp.319). This paper does not focus directly on transport, but rather it places an emphasis on equitable mobility through public spaces (Bromley et al., 2007; Church & Marston, 2003; Hine & Mitchell, 2001). It is strongly argued in this paper that this requires recognition that the much used term 'pedestrian' needs to be expanded beyond the assumption of the able-bodied (Foltete & Piombini, 2007; Handy et al., 2002; Lwin & Murayama, 2011; Saelens et al., 2003).

Issues surrounding mobility, accessibility, physical and communicative barriers in the built environment are major contributing factors to social segregation issues faced by disabled people. This research focused on the Adelaide Central Business District, due to its function as a space in which people move through in different ways at different times to complete a variety of activities. Preliminary investigations of existing research and documentation revealed that the exact barriers faced by the disabled in Adelaide were not well known, nor was the level of discrimination or social segregation. The Adelaide City Development Plan (2013) has only two principles relating to disabled people: one stating that access should be provided to and within buildings for all; and another that disabled car parks should be provided. These principles, whilst direct, do not consider broader issues of mobility within the built environment. As far as the researchers were able to discern, disabled people have not been specifically included in the planning process (however we also recognise that this would not be unique to Adelaide). The research therefore sought to broaden the voices heard by conducting in-depth interviews with a broad selection of relevant persons who could offer differing knowledge regarding the uniqueness and individual nature of experiences had by the disabled. Interviews with key informants were chosen as a way of uncovering the issues that mobility-impaired disabled people face on a daily busy when moving through the Adelaide CBD.

Through an Adelaide-based rehabilitation and medical equipment supplier (Equip4Living) occupational therapists, physically disabled people and their carers/supporters were approached for interviews. A snowball sampling method was utilised, with occupational therapists providing the names of people willing to speak with the researchers. Disabled people (4 interviewees) and their carers/supporters (4 interviewees) reported on direct experiences with public space. A limitation of the sampling was that this group was restricted to those who were (or supported) wheelchair users. No blind or deaf (the other significant group of physically disabled persons) were interviewed. However, 2 of the supporters had considerable experience advocating for the blind. Occupational therapists (4 interviewees) were considered key gatekeepers due to their broad exposure and experiences with a variety of disabled people's needs and issues. It was intended that planners would be approached, but as no specific

planning professional (with an interest or expertise in accessibility or disability issues) could be identified, this was not possible. A later qualitative survey was distributed amongst all planners and building officers within the relevant local government authority.

As we wished to engage with interviewees on a 'deeper' level, treating each interviewee as a gatekeeper to knowledge derived from experience, semi-structured interviews were used. An emphasis was placed on conversations and narratives, encouraging participants to share their feelings and stories. Interviews were structured around questions concerning movement through the built environment, disadvantages faced, and understandings of, and involvement in, urban planning. Whilst the line of inquiry was focused on movement through public spaces, mobility and accessibility discussions are spatially fluid. This meant at times discussion related to inhibited movement between public and private spaces, or between the internal and external. However, tangents, which took conversations off into the problems with private internal spaces, did have to be reined in.

The survey, distributed to the planners and building officers, was utilised as a way of assessing the knowledge and attitudes of those responsible for making decisions regarding the internal and external form of urban spaces. Whilst urban designers could also have been considered a logical group to question, they were excluded as they hold no decision making power within the relevant local government structure. Distributed by hand to all planners and building officers within the relevant local government authority, the survey had a 50% response rate with 3 planners and 4 building officers completing the questionnaire. The focus of the survey was to ascertain how they saw the public realm, and later whether, and how, they recognized and considered disabled people in their professional activities. Using several clear and easy to understand short-answer questions, the survey sought to uncover knowledge of the requirements of the disabled community, and awareness of any principles or policies in place to assist and protect this stakeholder group.

4. Accessibility, Mobility, and Disability,

The analysis of interviews, firstly, identified barriers to mobility and accessibility in the built environment, before examining the experiences of social exclusion felt by interviewees. Finally there was an inquiry into the understanding and expectations of the planning process held by interviewees.

4.1 Footpaths: Negotiating 'topography'

The most commonly discussed barrier for disabled people within the urban environment related to footpath materials and footpath maintenance. The 'topography' of footpaths with slopes, irregular heights, and uneven or steep crossovers was of concern for those utilising wheelchairs or other mobility devices. The irregular width of footpaths and obstacles, such as outdoor dining, low umbrellas, haphazard building alignments, and A-frame signs, were also identified as potentially very hazardous and restrictive of movement. The primary shopping district in Adelaide's CBD, Rundle Mall, was identified as having a terrible footpath surface with alternating materials and varying degrees of smoothness. Issues with cracks and uneven concrete and brick surfaces were identified as considerable safety issues for both physically-impaired and vision-impaired people. One interviewee (an occupational therapist) felt that the concept of 'Continuous Accessible Path Transport' (CAPT) was essential. The principles of CAPT expect that the public realm should maintain a safe and accessible path for all users, assisting with equitable use.

4.2 Accessibility into Buildings: 'The Scenic Route'

Movement between internal and external spaces was an issue discussed by all interviewees. Focus was given to ramps or lack thereof, alternate travel routes or back entrances, as well as door width and door types. *'If I had to choose one barrier which causes me the most grief, it would definitely be doors. In my wheelchair, I am at a lower angle and it's much harder to open doors when you're sitting. And often they are so heavy, I can't manage them. I've even come to a door once, up a ramp to find that the entrance was too narrow for my wheelchair, because it's custom made you see, it's a bit wider than the average'* (Disabled Interviewee) Slope inclines of ramps were often criticised as being difficult or dangerous to navigate.

Due to the inaccessibility of spaces there was a strong consensus that physically disabled people were forced to travel longer routes and use back entrances into buildings: '*I often have to go on a scenic tour*' (Disabled Interviewee). Newer buildings were seen as much easier to access than older buildings. However, many buildings in the Adelaide CBD continued to have entrances that created points of segregation and neglect towards the disabled community, demonstrating poor consideration of disabled people during the design and planning process.

4.3 Transit options: "If a city is accessible, a person shouldn't require as much funding or support"

As with able-bodied people, the disabled seek to utilise different methods of travel. The options available were usually determined by their physical capabilities, cognitive ability, and financial situation. As one interviewee indubitably stated, Adelaide's '*transport options are ridiculous*' (Occupational Therapist). All interviewees saw Adelaide's public transport system as a hindrance to mobility due to a variety of reasons. These included:

- Inaccessible footpaths to the transit stops
- Trams and trains provided disabled entry, however buses were unreliable.
- When an accessible bus does arrive, different footpath heights often make the ramp entry difficult
- Bus drivers are under trained on how to help a disabled person on to the bus
- Bus routes are not direct enough and changing buses raises all the above mentioned issues again
- Access Cabs are expensive even with disability-entitled coupons. They are also unreliable and often have extensive waiting periods.

Due to the disadvantages of public transit, all the wheelchair-bound interviewees considered themselves fortunate to own modified vehicles, which provided them with an independent and unassisted transport option. An occupational therapist, who specialises in driver assessment and helping disabled people return to driving, described the process as empowering. However, this should not be considered the only solution, as modification of vehicles was expensive, and those using them were still reliant on finding appropriate parking facilities.

At the time the interviews were conducted the details of the National Disability Insurance Scheme (NDIS - September 2012) was released. The NDIS aims to provide disabled people with funding in order to achieve independent living. One of the interviewees, who was an advocate for the NDIS, commented that it would be interesting to investigate the distribution of funding in relation to urban accessibility, '*if a city is accessible, a person shouldn't require as much funding or support*' (Interviewee, Carer/Supporter).

4.4 Other Barriers: 'vulnerable and at threat to attack and theft'

Other perceived barriers for disabled persons moving through the public built environment included issues with labeling, safety concerns, access to general facilities such as ATMs, traffic light intersections, and, perhaps most importantly, issues regarding disabled toilets. Often signs, intended to be read by a disabled person, were erected at able-body eye level rather than wheelchair level. Similarly, the use of ATMs was difficult for a wheelchair user due to the height of the machine, angle of the screen and light reflections. However the buttons at traffic light intersections were mostly acceptable for use by a wheelchair user, though crossing times were often too quick. Night dangers and safety concerns, particularly around the use of ATM's were spoken of as leaving interviewees 'vulnerable and at threat to attack and theft'.

A final space, which was severely critiqued by many of the interviewees, was disabled public toilets. Representing the blurring of boundaries between public and private spaces, we include this discussion due to the passion with which interviewees engaged with the topic and because they can be viewed as emblematic of many of the other barriers to accessibility and usability which are present in daily life. Issues ranged from labeling of their location, heavy and non-sliding doors, inadequately spaced rooms, low toilets, heights of hand basins, soap dispensers and hand dryers, sharing of space with baby change facilities, locking issues and sometimes time allowances for electronically locked doors. The range of issues drew attention to the negative experiences of disabled people on a daily basis when using the built environment.

4.5. Issues of Social Acceptance: 'second class citizen'

The interviewees approached for this study were asked a range of questions relating to their personal experiences and feelings in public urban environments. All felt that there was social segregation and discrimination as a result of having a disability. One felt like she is '*noticed like I've got a siren on my head*' (Disabled Interviewee). When discussing the use of alternate routes and back entrances, such as going through kitchens to get to dining rooms, there was a sense of being '*second class citizen(s)*' (Disabled Interviewee). However, another whose disability was very '*visual*' (a paraplegic with only one fully formed arm) stated that '*people are very helpful… they push me across at the lights when they see I'm struggling*' (Disabled Interviewee). Although, she still felt she faced discrimination. A more subtle form of social exclusion was the experience of being confined to the home due to barriers in the public realm. One interviewee, who suffers from spinal arthritis, explained that the inadequate and

irregular maintenance of footpaths (creating bumpy surfaces) had previously caused her such a personal issue that, on days when her disability caused her increased pain, she would avoid going out. This meant she was house bound due to the barriers in the built environment, something viewed as unacceptable by all interviewees.

4.6. Planning Process as understood by interviewees: 'if you design right from the start it won't cost you more'

Whilst the general understanding of urban planning possessed by interviewees was at a fairly broad and simple scale, it was understood that the planning process could be a vital tool in benefitting disabled people. As a consensus, urban planning was seen as being concerned with the whole community, incorporating everything in a socially inclusive manner. There was a belief that planning should seek universal design. However, there was also a strong belief that urban planning did not meet the needs of the disabled community, despite improvements and some increased attention over the past 10 years.

Interactions with the planning process had been very limited and mostly initiated by the interviewees, rather than by planning agencies. Where a public disability-related matter was raised to a local government, the common response was "we'll look into it", resulting in little-to-no improvement in the situation. As a result, interviewees felt that the process was generally reactive rather than proactive. However, whilst all interviewees believed that the public environment should be 100% accessible to all, they were also pessimistic that this could be achieved, describing it as a dream, unrealistic, and as a utopian ideal. All interviewees expressed the disappointed view that there was limited funding provided for improving mobility and accessibility within the public realm for all levels of government.

5. Planning for the disabled: 'An aspirational aim'

Respondents to the Survey were firstly asked for their understanding of urban planning. The planners giving the most comprehensive explanations: '*the outcome of urban planning is to ensure that efficient movement of people and goods, the creation of pleasant living environments and conveniently located educational, recreational and other associate zones*' (Planner). Whilst most of the planners focused on the efficiency of the built environment, the building officers focused on the provision of environments which facilitated the lifestyle of society: '*urban planning is to provide a safe, organized and enjoyable environment and work life for residents and family*' (Building Officer).

The surveys then asked for consideration of barriers faced by disabled people in the public realm. These responses confirmed an awareness of many of the issues and concerns raised during the interviews with the disabled and their supporters. In particular, footpath construction and maintenance, as well as obstacles hindering movement along pedestrian routes, were identified as problematic. Despite this awareness, there was clear division between planners and building officers over whether the built environment should be 100% accessible. All the building officers believed that complete accessibility should be the goal, in order to create an equitable and non-discriminatory environment. In contrast, the planners did not believe the built environment should be 100% accessible: '*It is an aspirational aim… but it would place costs upon public and private finances to a degree which is considered to be unreasonable by common consensus. Unreasonable costs would be decided by the population as a whole which needs to come to an agreement as to what price it is prepared to pay in the construction of the public and private realm and loss of economic activity from developments which would otherwise go ahead were it not for the cost of designing for the disabled*' (Planner). From the answers provided by the planning and building officers, it became evident that issues of accessibility within Adelaide's public spaces were not considered in great detail.

The primary reason for the difference between planners and building officers was that the latter needed to work with the National Construction Code of Australia (NCCA 2012), which gives greater consideration to the need for accessibility when compared to the Adelaide City Development Plan (2013). The NCCA 2012 gives standards regarding disability issues from the property boundary, to and within a building, which must be met by all new development. The key problem is the adaptation and retrofitting of older buildings. Trying to improve the built environment to be accessible to the disabled community is something that the building officers considered they were doing to the best of their ability. However, their focus was only on private spaces (within property boundaries). Both planners and building officers felt that the aims and goals of public consultations were not being realised due to inadequate marketing of public consultation and because of a lack of understanding by the public regarding how they can be involved and what they can comment on. This therefore hindered their ability to truly understand the disabled perspective.

6. Discussion: Creating an Inclusive Planning Approach

The results of the interviews and surveys revealed minimal-to-no consultation by local government (or other planning authorities) in relation to disabled access issues. Interviewees felt excluded and unaware of the planning process. Planners demonstrated limited understanding of the disabled experience. As Butler (1994) appreciated, disabled accessibility problems cannot be resolved by assumptions about disabled people's abilities. The remainder of this paper therefore argues that barriers faced by the disabled community require an inclusive planning approach based around meaningful consultation and collaboration across a breadth of experiences, interests and knowledge bases.

6.1 Accessibility to Usability

Many academic articles identify barriers in the built environment that disabled people face. This study contributes to that discussion by affirming, emphasizing and adding to the list. The barriers identified include issues due to footpath materials and obstacles, inadequate transit options, and general infrastructure and services that have been inappropriately designed for access by the disabled.

When considering mobility and accessibility through public space, the ineptitude of disabled friendly transport options is emphasized in this study and in the literature (Bromley et al., 2007; Church & Marston, 2003; Curtis, 2008; Hine & Mitchell, 2001). Whilst not seeking to reiterate this literature, the conversations and narratives of those interviewed for this study suggest that it is the limited interpretation of 'pedestrian' as able-bodied that prevents progress on this matter. This limited interpretation means that the 'non-walking' face unacknowledged difficulties and barriers, such as irregular maintenance and materials of footpaths and inadequate entrances between internal and external spaces. A common planning technique used today is to create shared zones, whereby cars, bicycles and pedestrians share a space. However, as a narrow view of 'pedestrians' as able-bodied was usually assumed, these were often not suitable for the mobility-impaired. Treating footpaths as spaces of fluid-movement for the mobility- and/or vision-impaired could be a tool for decreasing obstacles to access and movement.

In 1993, Golledge recognized that the built environment creates barriers to equal mobility and accessibility for all people, both disabled and able-bodied. The key barriers identified in this study are very similar to those identified by Golledge almost 20 years ago, highlighting the slow progress in addressing these concerns. Whilst public perceptions and social discrimination against disabled people are well understood and have been discussed in some detail within the literature (Bromley et al., 2007; Burns & Gordon, 2010; Gleeson, 1995; Golledge, 1993; Harnett, 2000; Imrie, 1996, 2001; Northridge & Freeman, 2011; Oliver, 1990; Schuller, 2005; Sendi & Kerbler-Kefo, 2009; Walsh, 1997), the results of this study confirm that discrimination of the disabled community has become naturalized. It is now an apparent social norm and a significant barrier within the planning and building process. One respondent felt that it had reached such a blatant state that building owners refused to upgrade their buildings to provide equitable access based on the fact they *'wouldn't employ someone with a disability'* (Building Officer). Not only is the tone of such a claim highly discriminatory, building owners are disadvantaging any business who occupies their buildings, as '*good access means good business*' (Carer/Supporter Interviewee).

Furthermore, this study uncovered the limited understanding that planners have about the barriers disabled people face in the public realm. A very intriguing finding of this study was the belief of planning professionals that the built environment does not need to be 100% accessible to all. Whilst it could be considered that such a finding reflects contemporary planning's focus on mediation and negotiation between stakeholders, it appeared to be based on a belief in creating 'efficient environments' grounded within a cost versus benefit ideology. It was evident within the responses that because there is no requirement (in the planning process) for planners to consider accessibility that it is a maligned area of interest. Disabled people may be gaining attention about their rights as a citizen through politics (The Government of South Australia, 2011) and media (Cresswell & Taylor, 2012; Larsson, 2012; Miletic, 2012), but the people who could play an important role in transforming the livelihoods (through mobility) of this community appear unjust. A change in the attitude of planners is needed and could be achieved through better training and understanding.

With this in mind, perhaps a change in terminology and interpretation may also be the key. Iwarsson and Stahl (2003) discuss in depth the term 'accessibility'. They recommend that it be substituted for the term 'usability'. Iwarsson and Stahl define usability as 'the measure of effectiveness, efficiency and satisfaction with which users can achieve specified goals in a particular environment' (2003 pp.60). If we consider the barriers discussed here with regard to their impacts on the usability of space, then the picture may become clearer. For example, whilst a building may be determined 'accessible' as it has

ramps leading up to entrance ways, it may not be 'usable' if those ramps are steep and arduous or lead to entrance ways that prove difficult to navigate. In other words, while the urban fabric may appear accessible, it can still present significant barriers to a disabled person, and therefore may not be considered 'usable'. Usability highlights both functionality and equality of space, and as such a 'usable' main front entrance would be designed to allow entry by every person.

Compatible with an argument for usability of space would be a focus on achieving 'universal design' (Mace, 1985). The term 'is based on the principle that there is only one population, comprised of individuals representing diverse characteristics and abilities' (Iwarsson & Stahl, 2003 pp.61). According to Bromley et al (2007), universally accessible design has been widely advocated within the literature, and the planning profession should be working to rectify existing barriers that prohibit access by the disabled population and therefore render the built environment unusable. Whilst Disability Access standards, such as Australian Standard 1428.1 (Design for Access and Mobility) force consideration of accessibility when constructing new buildings (under the Building Code of Australia), there are many exemptions which therefore hinder the creation of fluid usable space for all. It is these exemptions which are often the cause of problems within and between spaces and buildings. Currently, the planning system of South Australia does not actively seek to achieve universal design, nor to create inclusive environments, with the results of this study demonstrating that such ideas are often envisaged as utopian and idealistic. If planners (through their documentation, such as Development Plan and the Development Act) were forced to also give more specific and detailed consideration to issues of usability then perhaps the fluidity of space and the mobility of disabled people could be improved. However, without belief in approaches such as universal design, both public and private spaces will remain unusable and immobile to many in society.

6.2 Consultation to Collaboration
A major finding of this study was the revelation that there is a lack of public consultation being undertaken by all planning jurisdictions. Similarly, it became evident that there was a lack of collaboration between those who potentially could address concerns and issues regarding usable and mobile spaces. Interviewees felt ignored and disempowered as a result of a lack of contact with planning authorities. They felt that most accessibility issues should be addressed at the local government level. Planning officers also admitted that consultation was limited to instances where '*council wishes to undertake work in the public realm that requires expenditure of public funds*' (Planner). This means that planning for the disabled would continue to remain reactive rather than proactive, responding to concerns raised, rather than seeking to (re)design 100% accessible spaces at the start. This paper therefore joins the call for a better understanding of the barriers which disabled people face in the built environment, which can only be achieved when those who are directly affected can contribute to the solution (Schuller, 2005).

As part of their research, Bromley et al. (2007) undertook consultation with wheelchair users, contributing valuable information to their study and adding merit to their research. However, it is argued here that it is not enough for researchers studying disability to simply 'understand' the experience a disabled person may face (Valentine, 2003). There must be empowering engagement with the disabled by those who have the opportunity to actively make change (i.e. planners) to produce optimum outcomes towards fairness (Simmons et al., 2010). In a situation where disabilities result in exclusion and disadvantage due to immobility and inaccessibility, consultation and partnerships between planners, the disabled and their supporters can offer opportunities for increased social and civic participation and socially respectful inclusion (World Health Organisation, 2007).

In this study, it became clear that many of the barriers faced by disabled people in the built environment could be partly due to an ignorant and disconnected approach to the study and urban planning of this issue. All fields of expertise need to collaborate their knowledge in a hope to truly rectify the various and amplified barriers in the built environment. This includes an integration of ideas, bringing together practical experience and knowledge and seeking participation, partnership and collaboration from several fields (Burns & Gordon, 2010; Iwarsson & Stahl, 1999; Schuller, 2005). Recognition by planners that all people in society have the right to use the public environment in dignity needs to be addressed. As Walsh (1997) and Kitchin & Law (2001) argue, an inclusive method to planning could be the key to rectifying the social justice issues which the public environment currently presents to the disabled community.

7. Conclusion
The relationship between people and their environment is extremely complex (Handy et al., 2002; Iwarsson & Stahl, 2003). This paper has explored the accessibility and mobility of the public realm with a view towards equality for disabled people. A barrier that was identified in this study was that the

attitude and documentation used by planners does not support equitable planning methods. With a variation to the State Development Regulations 2008 (introduced 6 September 2012), South Australian planners now have little influence or need to give much consideration to disabled people's needs, as these are now considered at the Building Rules consent stage of a development application. Whilst the builders surveyed for this study, appeared to be more aware of the need to cater for a key stakeholder group, there are now several loopholes where disabled access is not required to be considered (i.e. conversion/renovations of older buildings; instances where the building is not fully occupied by the applicant). Outdoor spaces, building entries, transport options and social exclusion have all been identified as continual barriers to the usability of urban space in metropolitan Adelaide. Many of the problems which arise from these loopholes and lack of involvement by planners could be fixed by shifting the focus of planning from 'accessibility' to 'usability'. This could emphasize the need to create functional spaces (i.e. spaces of movement, such as footpaths), and therefore increase opportunities for social participation by disabled people. Similarly, changes in approval processes that require planners to once again consider the usability of urban spaces would also greatly benefit the mobility of disabled people through urban spaces.

With a significant disabled community, and other factors, such as an aging population, increasing this number, there is a real need to look more closely at the needs of disabled people from a planning perspective. Disabled people should no longer be seen as a minority group, but their problems with mobility, accessibility and usability should be recognized as common to mainstream society. Urban planning could and should play a vital role in improving the built environment to remove existing physical and social barriers to benefit the disabled community. We should create 'a more inclusive society in which every citizen, regardless of impairment, has the right to access public spaces in dignity' (Kitchin & Law, 2001 pp.225).

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