City Space Architecture

Re-framing Built Environment Practice: Towards an Accessible City

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Abstract

As practising architects in Victoria, Australia, we have observed significant, systemic industry failure, impeding the development of accessible and inclusive cities. Contemporary built environment design practice and design values push 'accessible design' to the margins, often considered as an after-thought and only in terms of technical and regulatory compliance. Built environment practice needs to be challenged into deeper ways of thinking – ones that stimulate professional discourse and heighten industry awareness of both its control over built environment accessibility outcomes and, critically, its accountability in serving the public good. Cities invariably comprise neighbourhoods. To begin to understand built environment inaccessibility at the neighbourhood scale, the built environment mindset must change to properly engage with complex, socio-ecological, public-realm (public space) built environments. Design practice must improve its neighbourhood site analysis approach, going beyond private, contractual site boundaries and immediate physical surrounds, to understanding end-user experiences, neighbourhood journeys, and the broader scale of (in)accessibility. Industry attitudes, practice approaches and the way disability is positioned by industry must change to embrace processes that necessitate diverse actors working together across multiple disciplines and sectors with people with disability being core actors in decision-making.
We believe that opportunities exist in building industry interest and capacity. Research-informed built environment practice embracing systems-thinking, human rights-based approaches, and transdisciplinarity can be effective for aggravating industry change and the way industry positions disability. This paper adopts an analytical, collaborative autoethnographic approach, examining case studies of neighbourhood-scale accessibility assessment, outputs from activities questioning why built environment practitioners believe inaccessibility exists, and self-reflection on 10– 35+ years of working in architectural practice. Importantly, this paper argues that in working towards achieving universally accessible public spaces for all, built environment practitioners, and architects in particular, must accept accountability for the impact of their actions on people with disabilities' lived experiences.

Introduction

Notwithstanding decades of built environment accessibility legislation and policy advancement, including the globally supported United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), the ideal of a 'fully accessible' city remains elusive well into the 21st century. As architects, with 10–35+ years of professional experience in private sector practice in the state of Victoria, Australia, all authors have come to understand that systemic industry failure is impeding the development of inclusive cities. At the outset of our careers, armed with conventional architecture qualifications, none of us conceived the power of built environment design to exclude (Hamraie, 2013) nor the complexities of the built environment 'production system' (Hürlimann et al, 2021). We have subsequently understood that built environment production must be shared across many sectors, disciplines, and actors, experts and non-experts, to achieve equity of access, particularly at neighbourhood and/or city scale. Hence, our pragmatist-informed (Dewey, 1929) belief that it is both imperative and possible that built environment practice can be re-framed, towards achieving accessible cities for all.

This short paper adopts an analytic, collaborative autoethnographic approach using ourselves as windows enabling reflection upon profession-wide practice (Chang, Ngunjiri, and Hernandez, 2013). While bringing to the table outputs from activities questioning why other built environment practitioners believe inaccessibility exists, as with any auto/ethnographic exploration, the work is qualitative and sample size limited. Nonetheless, collaborative autoethnography is appropriate to the task as it 'can be utilized in building community for the purpose of collective action and agency, particularly in the context of the search for more equitable social and institutional arrangements' (p145, Chang et al, 2013). Literature review is followed by analysis of data collections ranging across neighbourhood-scale built environment accessibility assessments 2011-2017, reflections on Melbourne Design Week 2021's Participatory Urban Aesthetic (PUA) mini-symposium, outputs from theory of change activities[1], reflective journaling of approximately four weeks of professional practice[2], and collaborative autoethnographic exercises. Lastly, conclusions are drawn regarding both achieving universally accessible public spaces and the worth of analytic, collaborative, autoethnography in that endeavour.

Systemic industry failure

Our observations of systemic industry failure align with the findings of Rachele et al (2020) who investigated relationships between people with disabilities' built environment accessibility experience and urban policy making in Melbourne (Victoria's state capital) and Tucker et al (2021), investigating 'what is required to overcome entrenched obstacles to implementing accessibility and inclusivity in the built environment' in Geelong (Victoria's second city). It is obvious to us that built environment practice needs to be challenged into deeper ways of thinking that acknowledge, specifically, its historical control over built environment outcomes (Habraken, 1987) particularly that of accessibility (Imrie, 1998; Jackson, 2018), and critically, its accountability in serving the

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[1] PUA mini-symposium and Theory of Change activities designed and facilitated by the authors.
[2] Mechkaroff journal entries from late 2021.

public good (Bristol, 2018). When we say 'industry' and 'built environment practice' in this early part of the paper we mean all the apparatus and actors responsible for built environment production, including all those involved 'in legislating, shaping, funding, forming, making, and researching the built environment' (Jackson, 2018). Using such terminology does not imply cohered entities. Undoubtedly, fragmented tacit knowledge, uneven distribution of capacity, and embedded hierarchies complicates professional development (Klerkx and Proctor, 2013), but a complex problem is not necessarily a wicked problem (Alford and Head, 2017).

Beyond being collections of buildings contained within titled boundaries, cities invariably comprise neighbourhoods. Understanding built environment inaccessibility at the neighbourhood scale requires a mindset that engages with complex, socio-ecological, public-realm (public space) built environment systems (Portugali et al, 2012; Totry-Fakhoury and Alfasi, 2016; Jackson, Wilson, and Marcello, forthcoming). Totry-Fakhoury & Alfasi, (2016) state that "[t]*he order of the built environment, similarly to other complex systems, emerges from the multifaceted interactions between the numerous inhabitants, landowners, community leaders and other stakeholders that share it and act in it*" (p. 28). It makes sense then, in complex, people-environment systems, to also consider people-people interaction. Henceforth, in the remainder of the paper unless noted otherwise, industry more specifically means 'architecture design industry' and within that, architects and building designers.

Expanding mindsets?

We believe that, as with climate change, decarbonisation, and reconciliation, those practising design must stretch their professionally habituated thinking (Shrubsole, 2018; Klinsky and Mavrogianni, 2020; Ness and Xing, 2017; Jones et al, 2016). However, in Australia, practising architects primarily operate from within small/ sole practices in the private sector (AACA, 2018), a sector conventionally understood to be a site of time/cost-efficient production. Therefore, expanding mindsets, now constrained to private, contractual site boundaries and immediate physical surrounds, to consider end-user experiences, neighbourhood journeys, and the broader scale of (in)accessibility is, potentially, problematic. Nonetheless, industry attitudes, practice approaches, and particularly the way disability is positioned by industry, needs to change so that people with disability are core actors at all scales of built environment decision-making. This will require diverse experts and non-experts working together across multiple disciplines and sectors, an integral constituent of transdisciplinarity (Jackson, 2018; Jackson, Wilson, and Marcello, forthcoming).

An enduring legacy of the historical charity (institutional) and medical models of disability is the schism between the built environment and disability domains (Martel et al, 2020). This schism, outsourcing ideologies of small government (Aulich and O'Flynn, 2007), and the 'specialisation turn' (Hürlimann et al, 2021) have all contributed to pushing 'accessible design' to the margins of contemporary built environment design practice and design values. It is often considered as an after-thought and only in terms of technical and regulatory compliance. Tucker et al (2021) note that a 'core reason identified for lack of progressive development was a focus on minimum standards'. On the other hand, Rachele et al (2020) found that people with disabilities' built

environment accessibility experience is often compromised by built environment practitioners' lack of attention to basic compliance.

Inaccessible Melbourne

Assessing 'compliance' is, however, a multi-facetted issue. Australia's Disability Discrimination Act (DDA) dates from 1992 (three decades past) and its subordinate legislation, known as the Transport, Education, and Premises Standards in 2002, 2005, and 2010 respectively; the UNCRPD was adopted in 2006 and Victoria's Equal Opportunity Act (EOA) in 2010. Devising accessibility assessment methodologies that quantify *existing* accessibility and prioritise rectifications is a feature of Visionary Design Development's work. Albeit employing differing methodologies, investigations in (predominantly) inner north and/or west metropolitan Melbourne demonstrate that 'new' legislation does not magically transform 'existing' conditions, see *Table 1: Accessibility assessment metropolitan Melbourne.*

Table 1: Accessibility assessment metropolitan Melbourne
Source: compiled from Visionary Design Development project work 2011-2017

Project	Findings
1No. Neighbourhood	Universal Mobility Index (UMI) pilot. Built Environment Component Score 0.48 (out of 1.00).
50No. Strip Shopping Centres	Average Accessibility Score 0.40 (out of 1.00) ranging from 0.17 to 0.68.
50No. Homes, home Modifications	Due to existing internal layouts of housing and severe funding constraints, <20% of bathrooms would be 'significantly' improved, even with suggested recommendations. Over 90% of homes have health and safety issues and over 70% require level-entry shower and/or ramp access. (Note: results are similar to that encountered in over 1000 home visits.)
On- and off-street 'accessible' car parking	328 locations (430 bays total). 0% (0) Best Practice (Category 1) locations, 31% (103) Category 2 – 4 locations (varying modifications required), and 69% (225) Category 5 locations (deficient and, due to physical constraints of existing surrounds, *unable* to be upgraded to best practice in-situ).
Council Complex	47 discrete parts of building and surrounds. 0% (0) completely satisfactory, 53% (25) 'easily' modified, 26% (12) 'difficult' to modify, and 21% (10) 'extremely difficult' or 'impossible' to modify.
4No. Neighbourhood Tennis Clubs	One club viable for modifications enabling wheelchair tennis. Only general accessibility modifications viable at two clubs. Achieving accessibility at the remaining club would require complete demolition and rebuild.

Train Station	Busy interchange station, multiple platforms. Achieving accessibility would require comprehensive demolition, reconfiguration and additional facilities.

How then might existing built environment inaccessibility be redressed? The UNCRPD (Australia is a signatory) recognises that people with disability have the right to an accessible built environment and, furthermore, obligates duty-bearers to provide accessible built environments. Given Australia's privatised system of built environment delivery, duty bearers are not limited to state actors but encompass all built environment practitioners. The following paragraphs, however, highlight the built environment domain's lack of understanding of this concept.

Just Melbourne?

Four built environment pracademics, well known for working within a participatory design paradigm, presented at the PUA mini symposium. Group discussion sessions followed; *In   participatory design who 'holds RIGHTS and who bears a DUTY' in urban design. How can this affect the urban aesthetics?* being the most salient to this paper. During this session presenters and attendees unanimously objected to using the term 'right-holders'. From the multiple conversations within the room, it was clear that 'rights' represented 'entitlement'. This counterpoint to the accessibility 'bubble' in which Jackson and Kaushik work was thought-provoking. Participants further suggested that the term 'justice' is more suitable than 'rights'. Our intention as organizers, however, was to understand built environment practitioners' viewpoints about the roles and responsibilities of 'rights-holders' and 'duty-bearers' within the participatory process of designing and delivering urban change. The major take-away from the session, correlating with Rachele et al (2020) and (Klinsky and Mavrogianni, 2020) writings, was that the built environment domain considers the term *justice* more empowering and is uncomfortable with *right-holders.*

Changing Melbourne?

In late 2021, the authors facilitated a workshop and an online survey inviting architects in Victoria, at any career stage, to participate in an adapted Theory of Change (Green, D., 2016) activity, the nucleus of which Jackson had devised for her PhD studies. At the outset, we stated the Ultimate Goal to be 'a fully accessible built environment' [facilitating social, environmental, and economic inclusion …]. With respect to their daily practice, participants were asked to identify driving and restraining forces in developing accessible built environments, issues surrounding or contributing to those forces, and elaborate why they thought this was so.

Regulatory compliance emerged as the dominant framework informing participants' discussions or implementation of built environment accessibility in their practice, with some limited discussion of Universal Access. Dependence on (DDA and BCA – Building Code of Australia) 'compliance' was generally identified as a "rigid" and "prescriptive" type of activity and acknowledged by some as a negative force restricting creativity, with other participants seeing compliance as essential to accessible design. Within this

divergence of viewpoints, the process enabled discussing why some forces and practices have considerable agency in contemporary architectural practice. As facilitators, our interests lay in sustaining processes of active listening, collective dialogue, knowledge sharing, and stakeholders' journeys in developing a deeper understanding of the 'whys' (Dreier, Nabarro, and Nelson, 2019; Vogel, 2012). We believe that through more knowledge comes empowerment and the potential willingness to act on the why. Some survey participants noted that "empathy" and "understanding" were lacking [across the industry]. These insights into implied undervalued and uncommon professional-interpersonal qualities may, subject to deeper interrogation, reveal a systemic industry issue regarding currently supported personality traits and the way the industry serves clients and the greater public good. Additionally, capitalist influence on the private sector and resultant prioritisation of profitability and time efficiency over the 'common good' was seen as a negative force. Explicit practice values built around human rights models (of disability, see Jackson, 2018) and recognition of (duty-bearer) obligations were not apparent.

When invited to share thoughts on the ultimate goal of 'a *FULLY ACCESSIBLE*' built environment, responses included "broad", "vague", "a difficult proposition" or, very tellingly in our opinion, there was no response (from half the survey respondents). Given the lack of survey participants' engagement with the question in its current form, perhaps this proposition should be reconfigured to engender a wider, intersectional conversation within the profession? Notwithstanding the rejection of the notion of 'full accessibility', but moving beyond compliance, there was an encouraging level of interest supporting change in how accessibility is currently understood, designed for, and delivered in the architecture profession. Workshop and survey participants' commentary indicated that opportunities do exist in improving professional and personal leadership capabilities, strengthening processes for accountability within design, and enabling more focus on embedding inclusion and equity imperatives in the design process.

Practising Melbourne

Nonetheless, Mechkaroff's journaling further reinforces the compliance theme; practising architects' first introduction to built environment accessibility is often through an access consultant's checklist received during the process of a building permit application. Such checklists are invariably restricted to ascertaining whether the project satisfies the technical requirements pertaining to the relevant building classification as set out in the Building Code of Australia (BCA). Mechkaroff found transitioning into working on government-funded education projects and, specifically, collaborating with pedagogical planners on special development schools, particularly illuminating. These educators are profoundly aware of students' needs, desires, attitudes, and expression preferences. Various collaborative processes employed highlight that workshop settings engaging user groups, various representatives, and wider stakeholders enables recognition and documentation of the broader desires and issues of the students. Collaborating with user groups to convey the design process and intent has enabled the learning of new communication methods:

'My interaction with pedagogical planners exposed me to a lot of new important mapping and diagramming techniques - investigating and showing how sites were accessed and operated, revealing area relationships that were complementary or not, and understanding material sample studies, bringing all this into a collective discussion. This was before even thinking about architectural form.'

While the experience of collaborating with users meaningfully contributes to design discussion and is insightful, collaborating with various project consultants for project delivery remains very technically oriented. Mechkaroff's journaling echoes Visionary Design Development's consultancy dealings with fellow practitioners and issues raised in the Rachele et al (2020) and Tucker et al (2021) articles. Within the architectural profession in Australia, accessibility is inherently considered in terms of DDA *compliance* and/or BCA requirements, even in initial design phases. Changes made to the design within a project's documentation phase are also re-assessed against DDA and BCA requirements. Thus, DDA/ BCA requirements are a core part of any commercial architectural project discussion. But, to our minds, these discussions are somewhat superficial, remaining at this compliance level rather than deeply delving into the lived experience of people with disability using the built environment.

Although people with disabilities' work-life situation has rarely been considered in urban policy and research responses to COVID-19, pandemic-induced remote working conditions have changed white-collar work (Martel et al, 2020). Although it is true that much white-collar work can be done remotely, it is also our experience that remote working tends to increase project delivery time and effort. In the face of lack of access to high-powered, inclusive, technological solutions, collaborative working, including liaising with access consultants, is more difficult. We all expend much energy and time chasing project stakeholders. Employee burnout is rising (Chan and Clarke, 2021). It is our observation that capitalist-informed, privatised, project delivery pressure prior to the pandemic had already burnt out many mainstream architects and designers. Thus, the day-to-day messiness of project management within architectural practices (Borson, 2017) along with working remotely are restraining forces on the broader conversation of accessibility; DDA and BCA technical compliance checklists remain de rigueur. While an understanding of the regulatory fundamentals is a necessity, our experiences indicate that more collaboration with users through, for example, workshopping would enable the profession to better understand people with disabilities' built environment accessibility needs, thus going over and above regulatory compliance.

Shifting professional identities
We have not encountered opposition to the professionally non-threatening concept of 'improving built environment accessibility' but it seems clear that restraining forces are more strongly maintaining the status quo than driving forces are achieving the ideal of a fully accessible built environment, see Figure 1.
How, then, does the profession move forward to a more self-aware position? Although professional behaviour is not the intention of the phrase, 'emotionally charged and sensitive topics' (Chang et al, 2013) architects and designers generally do find critique emotionally sensitive. Can supposedly ingrained professional traits be re-framed?

THE ULTIMATE GOAL

A fully accessible built environment.

DRIVING FORCES

RESTRAINING FORCES

Common drive to improve built environment accessibility

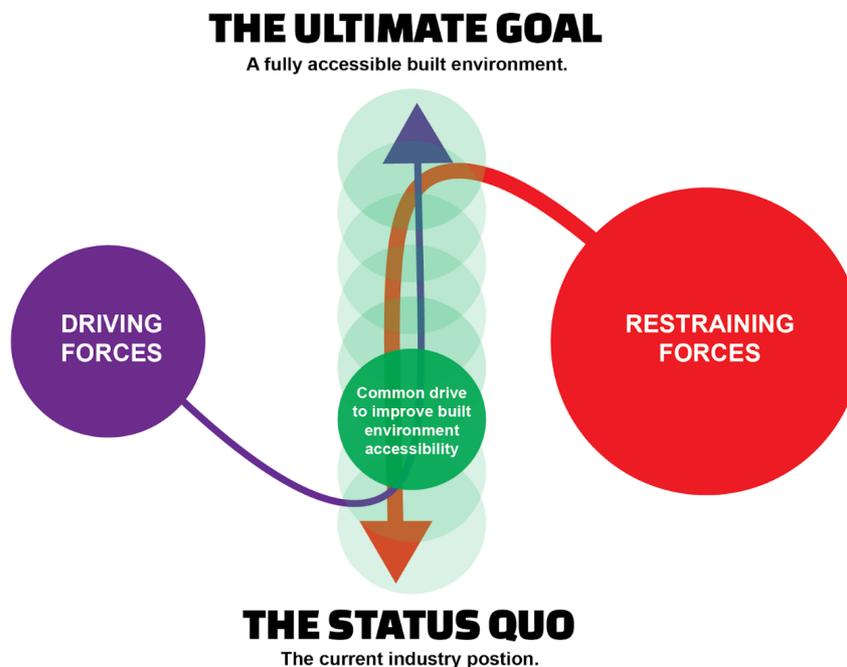**THE STATUS QUO**

The current industry postion.

Figure 1. The initial approach to the theory of change process was to understand the current industry context for change.

Hopefully, by briefly delving into our own personal and professional identities, we are able to give some pointers.

Whilst all authors are female, currently resident in Victoria, and registered architects working in private practice in a profession operating in English, we are at different life stages, from varied cultural backgrounds, with diverse professional experience. Our mapping exercise also established that while some aspects of self are integral to being, our multiple primary and secondary personal and professional identities change over time. All authors share ongoing interest in collaboration across sectors, either professionally or through volunteering; we are all Architects for Peace 'alumni'. Momentarily putting aside profession-wide gender equity issues we all understand the privilege of attaining tertiary education and wish to use our skills and participatory mindset to bring together experts and non-experts for the wider public good. Due to personal and professional experience of built environment inaccessibility and/or chronic illness, all authors have an appreciation of the entwining of disability, health, and wellbeing. Visionary Design Development's social enterprise orientation facilitates close professional relationships to revolve around built environment accessibility. On the other hand, despite private-sector-employment pressure, Mechkaroff's trajectory of professional and personal development has resulted in her inclusion-centred approach to project delivery; extracurricular activities are around social change, particularly professional change. We all share a commitment to change, particularly of our profession. But, how to most effectively achieve this across mainstream practice remains somewhat of a mystery still, hence our explorations.

Conclusion

We hope that by telling our interwoven personal and professional stories we encourage fellow built environment practitioners, fresh graduates and senior executives alike, to pay attention to this arena; we certainly find it enriching. We reiterate that none of us remember encountering the 'built environment + disability intersection' in our supposedly formative years, ie, at university. But, as demonstrated in this paper, professional identities do, and can, change. Concurring with Chang et al's (2013) 'research as activism' position, we hope that employing collaborative autoethnography in the small, pilot way we have will be a catalyst for that change.

There is no doubt that the existing condition of Melbourne's built environment (in)accessibility impacts people with disabilities' experience of daily life. We believe, however, that opportunities do exist in building industry interest and capacity; invited speaker Jackson's stated desire for a fully accessible built environment was not rebuffed at Parlour's Design for All event (Parlour, 2021). Research-informed built environment practice embracing systems-thinking, human rights-based approaches, and transdisciplinarity can be effective for aggravating industry change and the way industry positions disability. Importantly, this paper attempts to communicate to our fellow practitioners in a new way, through collaborative autoethnography, that in working towards achieving universally accessible public spaces, we, architects in particular, must accept accountability for the impact of our day-to-day professional actions on people with disabilities' work-life inclusion.

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