Inclusive Design: Towards Social Equity in the Built Environment

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As this special issue of *Built Environment* on Inclusive Design was coming to fruition, an article in *The Guardian* posed the question 'what would a truly disabled-accessible city look like?' (Salman, 2018). The piece identified that globally by 2050, 940 million people with disabilities will live in cities (this equates to 15 per cent of all urban dwellers) resulting in the United Nations declaring that the inaccessibility of our built environment is a 'major challenge'. Salman's article also presented an economic value to poor access – in the UK this is estimated to be £212bn (known as the purple pound), with an accessible tourism market estimated at £12bn. The article then presented a series of cases from around the world to highlight how greater access to the built environment was being achieved through design. This included the 'traditional' focus of inclusive design in considering the needs of our ageing and disabled populations (with an emphasis on mobility and sight), as well as considerations for citizens (or city/sens – citizens of urban environments who experience sensory barriers) on the autistic spectrum.

While these innovations should be welcomed and celebrated, they also require a degree of careful consideration. The critical access theorist Aimi Hamraie has challenged many inclusive, universal and 'design for all' responses that have sought to include 'everyone' by asking 'who counts as everyone and how designers can know?' (Hamraie, 2017, p. 261). All too often an inclusive approach can consider the needs of one group of users to the detriment of another. This has been most commonly adopted within our built environment in the design of streets and public spaces in the generic use of textured, tactile or 'blister' paving as navigational direction for blind and vision impaired people but which has delivered a further barrier to accessing many curb cuts (in themselves a defining symbol of access to the built environment (Haimraie, 2017) for older people, people who use wheelchairs or scooters (Omerod *et al*., 2014) or have artificial lower limbs (Bichard, 2015). Often many of the interventions in the built environment that are considered 'inclusive' such as tactile paving, ramps, hearing loops, and even the accessible toilet should be considered more in line with design for 'special needs' (Hanson, 2002). Hence the inclusive design project for the built environment continues to be an urgent and ongoing priority that offers opportunities for innovation and collaboration but, more importantly, extends access beyond being merely a function of the built environment, but rather as a crucial element to incorporate human diversity and potential within our *natural* environment.

Inclusive design within the UK initially focused on the needs of the ageing population (Coleman, 1994); this was then extended to include disabled people (Keates *et al*., 2000). More recently, wider social factors including economic exclusion have also come into the inclusive design framework, and this has included extending user participation from 'extreme users' (Coleman, 1994), user groups (Dong *et al*., 2005) to wider cross community participation (Bichard *et al*., 2018) to incorporate and develop design knowledge of functional access in more creative and innovative forms.

The contributors to this issue of *Built Environment* represent a series of researchers

who are extending inclusive design knowledge, in teaching, practice and thinking. What this issue does not include is consideration of user engagement. Inclusive design has tended to assume that mere consultation will result in favourable design outcomes, but often this consultation itself requires careful consideration and creative engagement for both the users and the designers. Methods for engagement have become the focus of their own specific design discourses including participatory and co-design, and are context led. While offering a wide spectrum of creative engagement for users and designers, such narratives are worthy of their own publications and special editions, and therefore have not been included in this special edition.

Instead the papers presented here represent a series of wider considerations for readers of *Built Environment* (the users). The first paper by Scott, McLachlan and Brookfield lay the foundation of this issue where many built environment professional careers begin; training in architectural schools. Scott *et al*. describe three innovative projects from the architectural school that not only engage key levels of the education but also actively extend inclusive design engagement from the older user to the citizen. The first two cases identify how communication between designer and user are essential, requiring the designer to step back from the education bubble of design school rhetoric. Their third example illustrates how the regulation and design code that informs design for access, such as Building Regulations and British Standards, can be seen as tools for innovation – therefore meeting the legislative requirements and extending the design codes whilst offering creative engagement for designers and innovative potential outcomes for users.

The second paper of this issue introduces the inclusive design paradox. Heylighen and Bianchin show how the uptake of inclusive design has been limited, and whilst some of this might be considered a lack of engagement of inclusive design within the education of built environment professionals (Scott *et al*.), there is also the consideration of wider conflicting issues and the influence of design on users. Heylighen and Bianchin present this as the paradox which focuses on a question of justice and which the authors navigate through the work of moral and political philosopher John Rawls to explore questions of justice in design and how the architects of the built environment might extend design for fairness. The authors present a series of specific design outcomes they consider as having challenged this paradox of inclusive design.

The third paper introduces 'auraldiversity' as a specific oversight within inclusive design of the built environment. Renel shows how design has focused on an auraltypical perspective. This can be extended within inclusive design to suggest that an element of 'typical' user-centred design has focused on specific disabilities. By introducing auraldiversity, Renel reveals the complexity and richness of hearing, and highlights that maybe this has been difficult to focus on within inclusive design research and that such diversity cannot be met by a single-issue response such as the hearing induction loop. Again, the focus on a specific aspect of human physical diversity can be extended to consider shared commonalities across spectrums and incorporated into a wider inclusive design investigation between disciplines. By introducing the reader to three aurally diverse participants, Renel highlights how negative and positive aspects of the built environment can impact their lives.

From a focus in a specific diversity, a specific element of the built environment is investigated in the fourth article in this issue. Ramster, Greed and Bichard present the challenge of toilet provision as essential for mobility in the built environment, but facing current challenges with regards to perceived legitimate access to provision. This case illustrates how, without wider consultation, design considerations regarded inclusive can become exclusive. This was manifested most recently in the emergence of gender neutral toilet provision:

signage change rather than wider design consideration and possible innovation resulted in news headlines and controversy at the most basic of design intervention requirements of the built environment.

In their book *Building Access: Universal Design and the Politics of Disability*, Aimi Hamraie challenged the origins of universal and inclusive design as the result of specific progressive legislation (such as the American with Disabilities Act) to reveal the politics and discourses that contribute to knowledge making of design and the specific bodies design responded to. The work has been described by leading inclusive design in the built environment theorist Rob Imrie as a major text that will reconstruct how 'we think about access, disability and design'. In their essay for this issue Hamraie presents new research that extends the lens of inclusive considerations to explore wider discussions of health and wellness/wellbeing that pervade many city design projects, highlighting that certain design rhetorics that masquerade as sustainable (and by association inclusive) are essentially designing the exclusion of certain socio/economic populations. This is especially explored in the notion of making areas of cities 'liveable' that suggests these current spaces are unliveable, despite people living there. In line with the critical access approach outlined in their book, Hamraie shows, maybe somewhat uncomfortably for inclusive design practitioners, how the focus of this design approach has predominantly centred on making bodies more productive with no critical consideration of the wider neoliberal ideology that drives city redesign. Hamraie's critical access studies can be considered an active companion to inclusive design.

The final paper in this issue focuses on one of the most horrific incidents of built environment design to have occurred in the UK. The fire at Grenfell Tower in 2017 resulted in the loss of seventy-one lives. Evans continues his previous work on the challenges of designing sustainably *and* inclusively to show how these design approaches continue to be mutually exclusive, in which due to government targets, sustainability and a buildings performance is often a higher priority than the requirements of the users of the building. Evans also shows that an inclusive approach – especially in the design of housing, does not necessarily mean the creation of new knowledge, but that a previous legacy of innovative inclusive design can be re-examined.

The papers in this issue aim to present wider considerations of inclusive design, for the practitioners, educators and theorists behind this specific people-centred engagement. They are not intended to be solutions to the problem, rather they reveal the complexity of inclusion that requires greater research and engagement with populations in recognition of the diversity of those who inhabit the built environment.

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