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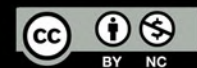
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City Space Architecture

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*Cover image: opening of 'Triumph and Lament', art work by William Kentridge on the Tiber riverfront
in Rome, April 2016. Picture by Tom Rankin.*

THE JOURNAL OF PUBLIC SPACE

City Space Architecture

EDITORIAL

The resurgence of public space: from the Charter of Athens to the New Urban Agenda

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Abstract

This paper serves as an introduction to the December 2018 edition of The Journal of Public Space, and a reflection on the new importance of public space in international research, policy and practice. Nowhere is that more evident than in the New Urban Agenda, the ambitious new international agreement for the normative goals of urban development in the next two decades and beyond. In that document, public space is treated in no fewer than nine paragraphs – and that new emphasis constitutes a historic reversal of highly influential normative models of prior urban practice. Herein we examine the seminal 1933 Charter of Athens, and we draw out major differences between the two documents, with particular attention to urban form and public space. We conclude with an assessment of the challenges ahead for implementation, particularly as we face significant "lock in" of the older model.

Keywords: Charter of Athens, New Urban Agenda, public space, co-production, affordance

THE JOURNAL OF PUBLIC SPACE

Introduction
In December 2016, the New Urban Agenda, the outcome document of the United Nations Conference on Housing and Sustainable Urban Development, also known as Habitat III, was adopted by consensus by all 193 member states of the United Nations. As such, the document represents a historic international agreement on urbanisation and urbanism for the next two decades and beyond (United Nations, 2017). Notwithstanding this achievement, it is widely recognised that there are many challenges remaining in implementing the New Urban Agenda. For example, Joan Clos, the Secretary-General of the Habitat III conference, expressed his belief that essential knowledge about the relation of public space to buildable space must be recovered in order to proceed with implementation:

> *In general, the urban community has become lost in strategic planning, masterplanning, zoning and landscaping … All these have their own purposes, of course — but they don't address the principal question, which is the relationship in a city between public space and buildable space. This is the art and science of building cities — and until we recover this basic knowledge, we will continue to make huge mistakes. (Clos, 2016)*

Sociologist Richard Sennett, a collaborator with Clos in preparing a series of documents on the implementation of the New Urban Agenda called *The Quito Papers* (UN-Habitat, 2018), has placed considerable blame for this loss of basic knowledge at the feet of the architect Le Corbusier, who was enormously influential in formulating the urban planning practices of the last half-century:

> *Not only is Corbusier's architecture a kind of industrial manufacture of buildings. He has tried in the 'Plan Voisin' to destroy just that element which, as we will see, creates open-ness in a city. He got rid of life on the ground plane; instead, people live and work in isolation, higher up (Sennett, 2017).*

Le Corbusier's project, said Sennett, was a form of over-determination of the structure of the city, comprising a "closed system," whereas cities are, and should be treated as, "open systems." For Sennett, this is a necessary change in our thinking about cities, and one that is embodied in the New Urban Agenda and its implementation.
No less crucially, this open ground plane is in fact the arena of a city's public space, whereas the higher levels of the city – and other physically segregated realms – are increasingly private spaces. As Clos suggests, the implications for the treatment of public spaces are profound.
Perhaps most crucially, however, in Le Corbusier's project, it is technical experts – especially planners and designers – that are the agents of creation of a modern city. In Clos' conception, and in the New Urban Agenda, the city and the urban fabric are always co-produced by the people and place. Without this interface, integration and interplay, the city becomes a kind of lifeless machine that cannot address fundamental human needs for sociality, equality, movement, and autonomy.
In this article, then, we look more carefully at Le Corbusier's ideas, and less directly, the ideas of his influential colleagues, as they were formulated in the famous 1933 Charter of Athens – a document whose influence on modern planning practice can scarcely be under-stated (Jacobs and Appleyard, 1987). We then turn to the New Urban Agenda and

its humanistic and social justice goals, emphasising the central role of people and their practices as integral co-producers in the planning and design process.

This analysis will proceed as a point-by-point comparison of key areas in the two texts, the 1933 Charter of Athens and the 2016 New Urban Agenda. We highlight six subject areas where there are significant divergences – the most significant between the two documents. We consider in particular the implications for the role of public space in the city and look at broader issues to be confronted in implementing the New Urban Agenda. The six subject areas are:

1. The structural relationship of the parts of the city to one another and to the whole.
2. The design of streets and the organization of types of movement and activity along them.
3. The relation of public spaces (including streets) to private spaces (including private buildings).
4. The perceived value of older parts of the city.
5. The role of technical specialists and their institutions, in relation to citizens and small organizations, as potential co-creators of the city.
6. The process of evolution and change within the city.

After comparing the differences between these subject areas in the two documents, we turn to a broader subject area that is not directly addressed in the Athens Charter but is forcefully asserted in the New Urban Agenda: the essential need for public space. We argue that public space, including certain essential characteristics, must play a central role in achieving the over-arching goal of "cities for all," social justice and social inclusion. Above all, this public space must afford "co-production," that is, the opportunity for many people and entities operating within many scales of space and time to interact, and to produce together the structures of the city – and especially those within or adjoining its public realm. We then conclude that a co-production model of planning and design accommodates the kinds of social, physical and environmental changes that are required in this period of unprecedented urban growth, especially within rapidly urbanising regions of the developing world.

The 1933 Charter of Athens

Although today we commonly refer to the "1933 Charter of Athens," the actual printed document by that name was written by Le Corbusier and published in French ten years later (Le Corbusier, 1943). A somewhat competing document was published in English a year earlier by Harvard's Jose Luis Sert, *Can Our Cities Survive?* (Sert, 1942). Both documents incorporated similar material and took similar positions, largely influenced by a seminal meeting that did in fact occur ten years earlier (Gold, 1998).

This famous meeting was held by a leading group of architects known as the *Congrès International d'Architecture Moderne*, or CIAM, a highly influential early 20th Century movement that largely set the blueprint for modern city design. Many of the document's key concepts had already emerged from a previous series of CIAM conferences, culminating in the fourth plenary conference in 1933. The meeting took place aboard a cruise ship, the SS Patris, traveling from Marseilles to Athens — the latter city giving the document its name.

There are notable divergences and changes of emphasis between the discussions on board the SS Patris and the document a full decade later by Le Corbusier, as has been discussed extensively by Gold (1998) and others. In fact, as Gold demonstrates, the evidence shows that the outcome in 1933 was merely a series of discussion points, drafts and drawings, and not a single agreed "charter." Le Corbusier later compiled his own interpretation of the points of discussion, covering the planning of cities in an exhaustive series of 95 points – perhaps intentionally echoing Martin Luther's historic Ninety-Five Theses, the declaration that launched the Protestant Reformation.

As Gold describes, one of the most significant points of divergence is the more restrictive definition of "functionalism" given by Le Corbusier, whereas some others preferred a more generous definition that included intellectual, emotional and spiritual "functions" as well as physical ones. Le Corbusier's definition focused upon a mechanical efficiency of ordered parts that responded to the dictates of standardized production (Gold, 1998, p. 228). Underneath this technical agenda also lay a political agenda: his goal was to develop an explicit consensus between actors at the international architectural congress that included unionists, Italian fascists, collectivists and technical experts, by linking antagonistic social and political programs (Holston 1989).

In any case, it is Le Corbusier's formulation that has been recognised as the authoritative formulation of the "1933 Charter of Athens" – and it is this document that has had the most profound effect upon urban development in the following decades.

The Social and Political Goals of the Athens Charter
Le Corbusier and the CIAM movement were committed to introducing the philosophy and pragmatics of modernism, by employing Russian and European sociopolitical models through architecture and planning (Holston, 1989). Only in this way could their vision of social equality and rational social and political development be achieved.   Based partly on then-current views on public health promotion, especially with the advent of dense, diverse and dirty cities posing a barrier to human well-being and technological innovations in industries including construction and design, the Athens Charter also sought to reorganize the public and private domains for social life. With this turn away from the historical and cultural patterns of cities that had evolved in often organic and interdependent ways, this new architectural and planning manifesto set out to reform not only the form of the city, but the way that citizens would socially organize, encounter one another and interact with their governmental agents. Their ideal was to eliminate and erase the preindustrial city in order to create new social and physical entities through modern architecture, and ultimately produce a new kind of city and citizen (Holston, 1989).

Interestingly, like the 2016 New Urban Agenda, the goals of the Athens Charter were idealistic in their desire to address the social pathologies created by the form and design of the largely informal preindustrial city and the looming problems of the rapidly growing industrial areas. Similar to Haussmann (1853) who redesigned Paris by opening up broad boulevards to facilitate circulation as well as to destroy the political power of dense and socially intricate working-class neighbourhoods (Harvey, 2003), the goal of creating the "city of tomorrow" (Le Corbusier, 1924) also had revolutionary as well as capital-driven intentions. The modernism that the Athens Charter proposed was intended to produce

a utopian future where the machine, factory and automobile as well as the house would produce human happiness.

The post-World War I ideals of CIAM held sway in the struggle to revitalize the war-torn and aging cities in Europe, to reorganize transport systems, build factories, schools and hospitals and to address the growing disparities and dislocations of the new conditions of industrial production (Harvey, 1989). According to Holston (1989), the CIAM principles consolidated ideas about the city, synthesizing anti-capitalist and egalitarian ideals and a model of the city as a machine, with ideas about building typologies and planning conventions as instruments of social and political change. Sadly, this progressive agenda was marred by a superficial and naive understanding of the nature of social relations, the importance of an organic and open plan city and the complex realities of urban life – as we will explore in more detail later.

One of the most complete examples of the impact of this manifesto was the new capital of Brasilia designed by Lúcio Costa and Oscar Niemeyer, begun in 1957. The plan drew upon the prototypes for the Athens Charter, Le Corbusier's *Radiant City* of 1930 and *A Contemporary City for Three Million Inhabitants* of 1922 (Le Corbusier, 1937). James Holston (1989) has written in detail about the struggle to build this modernist city in Brazil and how the planning and design ignored cultural and social needs and excluded the workers by building segregated towns on the periphery and creating homogeneous neighbourhoods of middle class civil servants with broad open spaces and roadways that could not be crossed and were designed at a monumental scale.

Further, as our analysis below will show in more detail, the Athens Charter model radically separated the street from home, as well as the home from work and school, disrupting the normal course and social mixing of everyday life. The consequences of this fateful segregation are evident in Brasilia. Volumes have been written about the pathology of the Brasilia plan and its aftermath (Epstein, 1968; Peattie, 1969; Holston, 1989), but the critical takeaway is that at its most extreme, this architectural manifesto, intended as a critique and a proposal to offer better housing, health and social equity to the working masses, instead created alienating spaces deprived of any social, cultural, historical or political context and framing.

The Structure of the 1993 Athens Charter

In the Athens Charter, 95 points were organized into an outline form integrating the key urban objectives of providing housing, work, recreation and transportation with a public core of administrative and civic activities:

1. Generalities: The City and Its Region
2. The Prevailing Condition of Cities: Critical Examination and Remedial Measures
   a. Habitation
   b. Leisure
   c. Work
   d. Traffic
   e. The Historic Heritage of Cities
3. Conclusions: Main Points of Doctrine

Each of the sections was further organized into "observations" and "requirements."

Following our framework of six subject areas outlined previously, key elements of the Charter of Athens can be summarized as follows:

1. *Function-based zoning.*

Work, home, recreation and transport were to be segregated into zones carefully planned according to a rational scheme of spatial allocation. Further separations were to be made between office, industrial and other commercial uses. These zones were to be organized into large functional units, including pedestrian-only "superblocks".

> *Zoning is an operation carried out on the city map with the object of assigning every function and every individual to its rightful place. (Le Corbusier, 1943, para. 15)*

and

> *By taking account of the key functions – housing, work, recreation – zoning will introduce a measure of order into the urban territory. (Ibid.,para.81)*

2. *Functionally restricted streets.*

The use of streets as mixed public and pedestrian spaces was to be banished (expressed in Le Corbusier's famous pronouncement, "we must kill the street"). Instead, pedestrians were to be removed to their own circulation network (typically within superblocks, or in grade-separated crossings). Streets, now for vehicles only, were to be widened and spaced farther apart, with fewer intersections and access points. A functional classification system was to be introduced to allocate separate lanes and roads based on vehicle speed.

> *Traffic channels must be classified according to type and constructed in terms of the vehicles and speeds they are intended to accommodate. (Ibid., para. 60)*

and

> *The first effective measure in dealing with the congested arteries would be a radical separation of pedestrians from mechanized vehicles. The second would be to provide heavy trucks with a separate traffic channel. And the third would be to envisage throughways for heavy traffic that would be independent of the common roads intended only for light traffic. (Ibid., para.60)*

and

> *The width of the streets is inadequate…There is no uniform standard for street widths. It all depends on the number and type of vehicles they accommodate. (Ibid., para.55)*

3. *Segregation of buildings.*

Buildings were no longer to line or enclose streets to form continuous urban fabric; rather, each building was to be set far back from streets, and set away from other buildings in a clear functional layout. Residents were to have access to fresh air and light afforded by tall buildings and grade-separated pedestrian paths.

> *The interior condition of a dwelling may constitute a slum, but its dilapidation is extended outside by the narrowness of dismal streets and the total absence of those verdant spaces, the generators of oxygen, which would be so favourable to the play of children. (Ibid., para.10)*

and

The traditional alignment of habitations on the edges of streets ensures sunlight only for a minimum number of dwellings…. And so we come to this dismal result: one facade out of four, whether it faces the street or the courtyard, is oriented to the north and never knows the sun, while the other three, owing to the narrowness of the streets and courts they face and to the resulting shadow are half deprived of sunlight also. (Ibid., para.17)

and

The alignment of dwellings along transportation routes must be prohibited. (Ibid., para.27)

4. Demolition of historic fabric and pattern.

Apart from a few exceptional cultural relics, historic buildings and neighbourhoods were to be torn down to make way for more hygienic and functionally efficient architecture that was more appropriate to the age of machinery and industrial production. Under no circumstances must any stylistic features from the past be re-used in the new architecture, as it would amount to "mingling the false with the genuine."

The destruction of the slums around historic monuments will provide an opportunity to create verdant areas. In certain cases, it is possible that the demolition of unsanitary houses and slums around some monument of historical value will destroy an age-old ambience. This is regrettable, but it is inevitable. The situation can be turned to advantage by the introduction of verdant areas. There, the vestiges of the past will be bathed in a new and possibly unexpected ambience, but certainly a tolerable one, and one from which the neighbouring districts will amply benefit in any event. (Ibid., para.69)

and

Unsanitary blocks of houses must be demolished and replaced by green areas: the adjacent housing quarters will thus become more sanitary. An elementary knowledge of the principal notions of health and sanitation is sufficient to detect a slum building and to discriminate a clearly unsanitary city block. These [70] blocks must be demolished, and this should be an opportunity to replace them with parks which, at least in regard to the adjacent housing quarters, will be the first step toward improved health conditions. (Ibid., para.36)

and

The practice of using styles of the past on aesthetic pretexts for new structures erected in historic areas has harmful consequences. Neither the continuation of such practices nor the introduction of such initiatives will be tolerated in any form. Such methods are contrary to the great lesson of history. Never has a return to the past been recorded, never has man retraced his own steps. The masterpieces of the past show us that each generation has had its way of thinking, its conceptions, its aesthetic, which called upon the entire range of the technical resources of its epoch to serve as the springboard for its imagination. To imitate the past slavishly is to condemn ourselves to delusion, to institute the "false" as a principle, since the working conditions of former times cannot be recreated and since the application of modern techniques to an outdated ideal can never lead to anything but a simulacrum devoid of all vitality. The mingling of the "false" with the "genuine," far from attaining an impression of unity and from giving a sense of purity of style, merely results in artificial reconstruction capable only of discrediting the authentic testimonies that we were most moved to preserve. (Ibid., para.70)

5. The city as a technical creation by specialists.

Cities were to be rationally planned through a top-down process, with speed, efficiency, and economies of scale and standardization as over- riding goals. Technical specialists armed with statistical information must control the design and management of the form of cities, through a centralized control process. The rights of private individuals must be subordinated to collective need, as defined and enforced by these specialists.

> *The program must be based on rigorous analyses carried out by specialists. (Ibid., para.86)*

and

> *The principles of modern urbanism, evolved through the labours of innumerable technicians – technicians in the art of building, technicians of health, technicians of social organization – have been the subject of articles, books, congresses, public and private debates. But they still must be acknowledged by the administrative agencies charged with watching over the destiny of cities…. (Ibid., para.74)*

and

> *To accomplish this great task, it is essential to utilize the resources of modern techniques, which, through the collaboration of specialists, will support the art of building with all the dependability that science can provide, and enrich it with inventions and resources of the age. The machinist era has introduced new techniques which are one of the causes of the disorder and upheaval of the cities. And yet it is to those very techniques that we must look for a solution to the problem. Modern construction techniques have established new methods, provided new facilities, made new dimensions possible. They have opened an entirely new cycle in the history of architecture. The new structures will be not only of a scale, but also of a complexity unknown until now. In order to fulfil the many-faceted task that has been imposed on him, the architect will have to join with many specialists at every stage of the undertaking. (Ibid., para.90)*

and

> *Private interest will be subordinated to the collective interest. (Ibid., para.95)*

and

> *To pass from theory to action still requires a combination of the following factors: a political power such as one might wish – clear-sighted, with earnest conviction, and determined to achieve those improved living conditions that have been worked out and set down on paper; [and] an enlightened population that will understand, desire, and demand what the specialists have envisaged for it… (Ibid., para.91)*

6. The city as a fixed end state design rather than an open, evolutionary, form-creating process.

The goal of design was to create a static solution, rather than to engage a dynamic process. On the contrary, cities were seen as too chaotic and messy, and there was not enough clarity of order.

> *Plans will determine the structure of each of the sectors allocated to the four key functions and they will also determine their respective locations within the whole. (Ibid., para.78)*

and

> *It is a matter of the most urgent necessity that every city draw up its program and enact the laws that will enable it to be carried out. Chance will give way to foresight, and program will replace improvisation. (Ibid., para.85)*

and

> *The absence of urbanism is the cause of the anarchy that prevails in the organization of cities and in the equipment of industries. (Ibid., para.94)*

The Athens Charter as technical implementation of a fixed political condition
We see, then, that the Athens Charter was heavily focused on a machine-like conception of the city, in which clearly identified and segregated parts operated smoothly to produce a desirable urban order. Underlying that conception was a political and economic ideal that was largely static. The role of technical specialists – especially planners and designers – was to execute that agenda, and thereby to achieve the static ideal.

Notably missing from that agenda was a conception of a dynamic co-production of the city, involving other kinds of actors and structures. Once the structure of the city was determined, it would be left to other people merely to populate these spaces, adding their own subsidiary pieces but not fundamentally engaging with the structure of the city or its production.

Unfortunately, while many cities around the world did indeed implement most of the principles of the Athens Charter, many of these interventions were not successful. Especially in the Global South, rapidly urbanising cities with rich historical traditions and cultures were damaged by the inability of modernism to consider how differently people and places are co-produced (as we saw in the example of Brasilia). Even cities whose structure and form as well as culture were appropriate to this socially segregated European imaginary, and found moderate success with the tall building in a park, there are numerous examples of low income towers in the park housing projects that have deteriorated and been torn down (Low 2003, Fennell 2016). Relatively successful examples include Parkchester, a planned middle-class housing complex built in 1939 in New York City's Bronx borough, featuring separated housing areas set in a park setting with functionally separated commercial and transportation corridors.

Another phenomenon is the emergence of informality in previous examples of CIAM-inspired plans, such as the previously discussed Brasilia. Although the heavy hand of the original plan restricts what can be built, residents attempt to fill in the vacant spaces between the building and the road, creating small stores underneath the vast towers that allow, and encourage, social interaction on the ground plane. This is an interesting example of the emergence of co-production in spite of, and not because of, the intentions of the original planners.

Most applications of the modernist model, however, have fractured and even in some locations destroyed the historical, indigenous and architectural frameworks of existing cities inserting elements of the Athens Charter to the detriment of citizens and their governments. This has been especially prevalent – and especially troubling – in the developing world. In reaction to the continuing rapid urbanisation in these cities, the New

Urban Agenda began as a process to reconsider these modernist principles, and replace them with ideas that would foster social justice, equity, and cohesion, as part of a more sustainable form of urbanisation, in what are often culturally and social diverse locations around the globe.

Ironically, given its original socialist aspirations, the CIAM model frequently found its most robust successes within capitalist and neoliberal economies, often among those with decidedly anti-socialist political views. One of the most important initial successes of the CIAM leadership was in the United States, under the patronage of the Rockefeller family of New York, the Armour family of Chicago, and other private interests. At the same time, American companies including Shell Oil, General Motors and others, ran a relentless advertising campaign to promote the car-centred vision of the CIAM model. Clearly these companies also had a strong interest in controlling the outcome of urbanisation, and there was little scope for concepts of co-production in their aspirations (Peattie 1970).
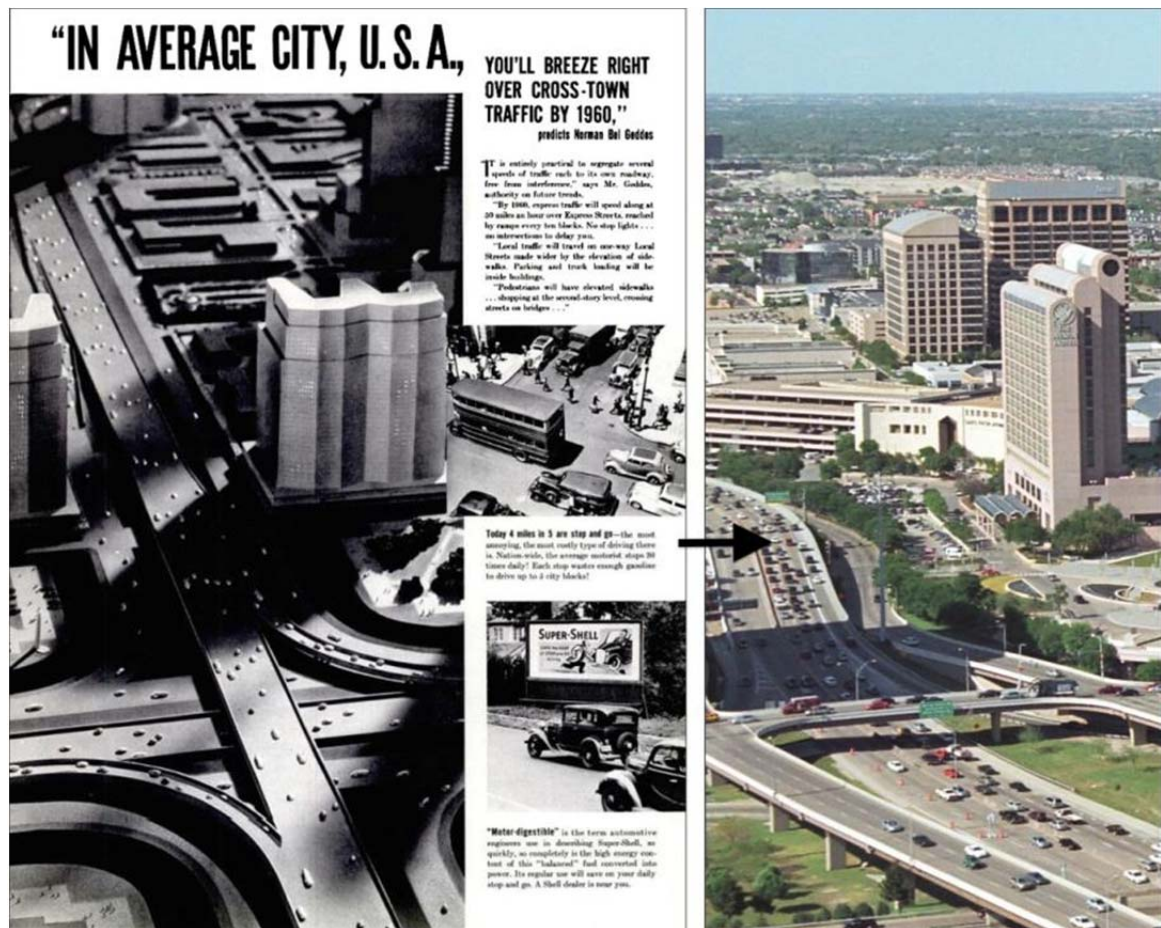
Figure 1. (Left) 1935 advertisement in Life magazine by Shell Oil Company, promoting the CIAM model of urbanisation, which was later built in American cities like Dallas, Texas (right).

Co-production and public space in the Athens Charter
As we have seen, a notable commonality across the six key points is a singular conception of the public spaces of cities, as static receptacles for discrete activities with no affordance of interaction. No longer could public spaces rely upon different uses and interactions at different times of the day, thanks to function-based zoning. No longer did the street serve as important site of mixing public spaces in its own right, since pedestrians were to be segregated from traffic and indeed, largely removed from the ground plane (Sennett, 2017). Public spaces associated with set-off buildings tended to take on the characteristic of semi-privatized spaces rather than spaces of social encounter, commerce and sociality. Public spaces as layers of the present and the past were largely eliminated, since there was a clear separation of those public spaces that are historic monuments, and those that are newly built on demolished sites. Ultimately, both the design by specialists of a fixed and planned "end state" excluded the ongoing participation of residents as participants in the public space.
The architect and the planner along with those who financed, governed and managed the city – whether capitalist or socialist – became the sole authorities in what would make a good and just city.

The 2016 New Urban Agenda
In October 2016, The United Nations convened Habitat III, the third "United Nations Conference on Housing and Sustainable Urban Development". The outcome document of this conference was titled "New Urban Agenda: The Quito Declaration on Sustainable Cities and Human Settlements for All." This document is intended to govern international urban development policy for the next two decades (United Nations, 2017). The first Habitat conference took place in Vancouver, Canada in 1976, and focused primarily on issues of rural poverty (United Nations, 1976). Habitat II, in Istanbul, Turkey, focused more specifically on sustainable urban development and ecological issues (United Nations, 1996). The focus of Habitat III was more specifically on the quality of cities, particularly in the context of rapid urbanisation, and in particular, issues of segregation, inequality and environmental deterioration. As the New Urban Agenda notes in its introductory passages:

> *Since the United Nations Conferences on Human Settlements in Vancouver, Canada, in 1976 and in Istanbul, Turkey, in 1996, and the adoption of the Millennium Development Goals in 2000, we have seen improvements in the quality of life of millions of urban inhabitants, including slum and informal-settlement dwellers. However, the persistence of multiple forms of poverty, growing inequalities and environmental degradation remain among the major obstacles to sustainable development worldwide, with social and economic exclusion and spatial segregation often an irrefutable reality in cities and human settlements. (United Nations, 2017, para.3)*

Like the Charter of Athens, the New Urban Agenda is long and comprehensive, comprising 175 paragraphs and over 14,000 words (whereas the core declaration of the Charter of Athens is closer to 16,000 words). The New Urban Agenda is less formally structured by topic than the Charter of Athens, but it does have an overall structure of parts, as follows:

- Quito Declaration on Sustainable Cities and Human Settlements for All (Introduction) (10 paragraphs)
- Our shared vision (3 paragraphs)
- Our principles and commitments (2 paragraphs)
- Call for action (8 paragraphs)
- Transformative commitments for sustainable urban development (39 paragraphs)
    o *Environmentally sustainable and resilient urban development* (18 paragraphs)
- Effective implementation (4 paragraphs)
    o *Building the urban governance structure: establishing a supportive framework* (8 paragraphs)
    o *Planning and managing urban spatial development* (33 paragraphs)
    o *Means of implementation* (35 paragraphs)
- Follow-up and review (15 paragraphs)

The New Urban Agenda recognizes the challenges of implementation, even as it also recognizes the great opportunities that cities represent for human development. As the document states in its introductory section:

> *We are still far from adequately addressing these and other existing and emerging challenges, and there is a need to take advantage of the opportunities presented by urbanisation as an engine of sustained and inclusive economic growth, social and cultural development, and environmental protection, and of its potential contributions to the achievement of transformative and sustainable development. (Ibid., para.4)*

The key elements of the New Urban Agenda that differ most significantly with the key elements of the Charter of Athens can be summarized as follows:

1. Mixed use instead of function-based zoning.
Work, home, recreation and transport are to be integrated within mixed-use neighbourhoods.

> *We commit ourselves to promoting the development of urban spatial frameworks, including urban planning and design instruments that support …appropriate compactness and density, polycentrism, and mixed uses (Ibid., para.51)*

and

> *We will promote integrated urban and territorial planning, including… mixed social and economic uses (Ibid., para.98)*

2. Mixed streets instead of functionally restricted streets.
The design of streets aims to create pedestrian-centred public space with mixed multi-modal transportation centred on the pedestrian. Streets are critical public spaces that allow the mixing of diverse peoples.

> *We commit ourselves to promoting safe, inclusive, accessible, green and quality public spaces, including streets … that are multifunctional areas for social interaction and inclusion, human health and well-being, economic exchange and cultural expression and dialogue among a wide diversity of people and cultures, and that are designed and managed to ensure human*

development and build peaceful, inclusive and participatory societies, as well as to promote living together, connectivity and social inclusion. (Ibid., para.37)

and

We will support the provision of well-designed networks of safe, accessible, green and quality streets and other public spaces that are accessible to all and free from crime and violence, including sexual harassment and gender-based violence, considering the human scale…(Ibid., para.100)

3. Integration instead of segregation of buildings.

Urban design must create coherent public spaces by fronting and activating the edges of buildings, and thereby avoid what Jane Jacobs derisively called the "project land oozes" of CIAM-based planning. This is critical to achieve a successful, active pedestrian and public realm:

We will support … measures that allow for the best possible commercial use of street-level floors, fostering both formal and informal local markets and commerce, as well as not-for-profit community initiatives, bringing people into public spaces and promoting walkability and cycling with the goal of improving health and well-being. (Ibid., para.100)

4. Adaptive re-use, not demolition, of historic fabric and pattern, including informal areas.

The first priority is to re-use existing assets, including regeneration of historic buildings and informal urban patterns. The tangible (buildings) and intangible (knowledge) forms of heritage are not relics of the past to admire from afar, but a living resource that contributes to social participation, value creation, and sustainable development today:

We commit ourselves to the sustainable leveraging of natural and cultural heritage, both tangible and intangible, in cities and human settlements… to safeguard and promote cultural infrastructures and sites, museums, indigenous cultures and languages, as well as traditional knowledge and the arts, highlighting the role that these play in rehabilitating and revitalizing urban areas and in strengthening social participation and the exercise of citizenship. (Ibid., para.37)

and

We will promote planned urban extensions and infill, prioritizing renewal, regeneration and retrofitting of urban areas, as appropriate, including the upgrading of slums and informal settlements, providing high-quality buildings and public spaces… while preserving cultural heritage…. (Ibid., para.97)

and

We will include culture as a priority component of urban plans and strategies in the adoption of planning instruments, including master plans, zoning guidelines, building codes, coastal management policies and strategic development policies that safeguard a diverse range of tangible and intangible cultural heritage and landscapes, and will protect them from potential disruptive impacts of urban development. (Ibid., para.124)

and

> *We will support the leveraging of cultural heritage for sustainable urban development and recognize its role in stimulating participation and responsibility. (Ibid., para.125)*

5. The city is co-created by all citizens, and is not merely a technical creation by specialists and their institutions.

The city is seen as a kind of public platform that offers its citizens the opportunity to engage in a diverse range of private and public actions that shape the city, its structures and its life. The public and private spaces of the city are "socially produced," that is, generated through social processes, and not solely through the actions of specialists and their institutions.

> *We commit ourselves to promoting national, subnational and local housing policies that support… enabling the participation and engagement of communities and relevant stakeholders in the planning and implementation of these policies, including supporting the social production of habitat… (Ibid., para.31)*

and

> *We envisage cities and human settlements that: (b) Are participatory, promote civic engagement, engender a sense of belonging and ownership among all their inhabitants, prioritize safe, inclusive, accessible, green and quality public spaces (Ibid., para.13)*

and

> *We commit ourselves to working towards an urban paradigm shift for a New Urban Agenda that will: (a) Readdress the way we plan, finance, develop, govern and manage cities and human settlements (Ibid., para.15)*

and

> *We share a vision of cities for all, referring to the equal use and enjoyment of cities and human settlements, seeking to promote inclusivity and ensure that all inhabitants, of present and future generations, without discrimination of any kind, are able to inhabit and produce just, safe, healthy, accessible, affordable, resilient and sustainable cities and human settlements to foster prosperity and quality of life for all. We note the efforts of some national and local governments to enshrine this vision, referred to as "right to the city", in their legislation, political declarations and charters. (Ibid., para.11)*

6. The city is not a closed "end state" but an open-ended evolving structure that provides the means to adapt to the evolving needs of citizens and communities, including support for informal growth processes. In addition, buildings are not static structures but, as they grow older, they may be adapted as needs change. The city does not seek one static "new" architecture, but rather, a kind of "fugue" of tangible and intangible cultural heritage, inter-woven with new technologies and techniques.

> *We will encourage the development of policies, tools, mechanisms and financing models…that would address the evolving needs of persons and communities, in order to improve the supply of housing…This will include support to incremental housing and self- build schemes, with special attention to programmes for upgrading slums and informal settlements. (Ibid., para.107)*

and

> *We will promote innovative and sustainable use of architectural monuments and sites, with the intention of value creation, through respectful restoration and adaptation. We will engage indigenous peoples and local communities in the promotion and dissemination of knowledge of tangible and intangible cultural heritage and protection of traditional expressions and languages, including through the use of new technologies and techniques. (Ibid., para.125)*

Public space revived

As we saw with the Charter of Athens, each of these six points has profound implications for the role of public space, and its co-production, within urban form. Public space (crucially including the street) is an arena for mixing of diverse uses, activities and people. Walkable public space (again, crucially including streets) plays a central role in a truly multi-modal transportation system. Historic public spaces, and their adjacent buildings, are often important generators of cultural and economic wealth. Co-creation of the city assumes the ability to operate adjacent to or within streets and other public spaces. Finally, the idea of an evolutionary and "open" city presupposes openness of the public space networks through which its co-creators must move and interact.

The importance of public space in the New Urban Agenda is highlighted by its inclusion in no fewer than eight paragraphs, including discussion of "streets as public spaces," public spaces as "drivers of social and economic development," "well-connected and well-distributed networks" of public space, and other passages that make clear the central priority of public space within the urban form of cities in the coming decades.

Summarizing the differences

We can now re-state these six points of divergence as a series of topics within the process of urbanisation, urban form and public space:

1. *Zoning of urban elements.* Are the elements neatly segregated according to Le Corbusier's ideas of "functionalism" – that is, a machine-like conception of the rational segregation of parts of the city, to aid in efficiency and economies of scale? Or is there a considerable mingling of uses, which can change and evolve over time? Does zoning instead focus on a supportive physical form that accommodates a (changing) diversity of uses, connected through public space networks?

2. *Treatment of streets.* Are the different streets assigned to strict uses by vehicles of only a certain kind and speed, with pedestrians removed to their own pathways? Or is there a mix of modes on most streets, welcoming pedestrians as well as vehicles, and mitigating the impacts of each on the other through more careful design? Are streets treated as public spaces in their own right?

3. *Treatment and placement of buildings.* Are buildings removed from streets, and loosely grouped within "superblocks" of limited access and separate pedestrian paths? Are they treated as standalone "object-buildings" within loose verdant settings?

Or are buildings placed to frame, define and activate public spaces, including streets?

4. *Treatment of historic structures and patterns.* Are older buildings and patterns regarded as irrelevant to contemporary challenges and not to be conserved, with the exception of a few representative specimens of historical interest only?
Or is heritage conserved and re-used, in both tangible (buildings) and intangible (knowledge, culture) forms? Are lessons learned and re-applied from the successful (and unsuccessful) patterns of the past? Is history seen as a kind of "fugue" of old and new, continuously weaving together? Are historic public spaces, including street patterns, conserved and extended?

5. *The role of specialists in relation to others.* Is the creation of the city an exclusive domain of technical specialists, to the exclusion of other co-creators and forces of informality? Are these forces of informality suppressed and even destroyed?
Or is the city treated as a continuous co-creation by many actors operating within or adjoining public spaces, guided by a "polycentric governance" at formal and informal levels?

6. *The role of time and evolution.* Are the designs of the city conceived as unchanging works of art and engineering targeted to human needs as defined at a fixed point in time?
Or is the city conceived as a "complex adaptive system" that is continuously transforming, guided by design frameworks and strategies into more preferred conditions? Is the public space system an integral part of this evolutionary urban system?

We can summarize these points in the following table:

Topic	Athens Charter of 1933	New Urban Agenda of 2016
1. Zoning of Urban Elements	Segregated according to use and "Functionalism"	Mixed uses are encouraged while regulation focuses on form
2. Treatment of Streets	Streets are strictly segregated by vehicle speed, and pedestrians are prohibited	Streets are places of multi-modal transportation and public spaces, welcoming pedestrians
4. Treatment of Historic Structures and Patterns	Most historic structures are demolished, while a few representative monuments are retained; knowledge of traditional patterns is regarded as obsolete	Both tangible (buildings, monuments) and intangible (knowledge, patterns) heritage is conserved and re-used, often combined with new technolgies and approaches
5. Role of Specialists in Relation to Others	The city is a creation of specialists (economic, political, technical, design)	The city is a co-creation of many actors at many levels, including informal processes
6. Role of Time and Evolution in the City	The city is a static work of art and engineering, aimed at pre-defined human needs at a fixed point in time	The city is a complex adaptive system that must be continually engaged by design to transform toward more "preferred" states

Table I. Six normative topics of urbanism

Changes in urban science since the Athens Charter

In the intervening years between the CIAM/Le Corbusier document and the UN document, there have of course been overwhelming changes in the sciences, and as a direct consequence, in our understanding of technology, design, and urbanism. In 1933, the design theorist Herbert Simon had not yet formulated his definition of design as a process of "changing existing conditions into preferred ones" – a very different definition indeed from the more determined, "tabula rasa" approach of the early 20th Century (Simon, 1988).

Nor did we understand, in 1933 – or indeed 1943 – the sheer complexity of urban processes, and the capacity of networks of people and processes to create "emergent" results with important benefits. We had little grasp of the potential power of "self-organization," or what Jane Jacobs later referred to as "organized complexity" – and the role of myriad people in co-producing more vibrant, creative and prosperous cities (Bettencourt, 2013).

We also did not understand the evolutionary nature of history, or the occasional value of recapitulation in finding the best available design alternatives, from whatever time or place. From this perspective, it is now looking remarkably unwise to have cut ourselves off from this vast repository of well-evolved design solutions, which seem to offer so many promising solutions to the more universal problems of living well together in settlements (Ben Hamouche, 2009).

Nor did we understand what Jacobs later referred to as "border vacuums" – the urban dead zones around large discontinuous superblocks – or the deadening power of isolated object-buildings (Jacobs, 1961).

Prior to 1943, ideas about transportation treated streets more like wastewater pipes, neatly segregated by type and rationally engineered to handle fixed magnitudes of (car) flow. We didn't understand that demand is elastic and people can choose to drive more or less, so that adding capacity to ease congestion can result in "induced demand" and "Braess' paradox" – actually making traffic move even more slowly (Pas and Pricipio, 1997).

Most fundamentally, we failed to understand the importance of diversity and mixing – of people, pedestrians and cars, and uses. That is because we failed to understand, or didn't yet understand, how networks actually work to create interactions and catalytic benefits. The science of networks, applied to economies, resource flows, and social patterns, barely existed in 1943, and had no counterpart in the architecture world (Batty, 2013).

It is telling that the 1933 Charter of Athens proceeded on a remarkably limited and flawed picture of the world, stated concisely by Le Corbusier:

> *The Fourth Congress of the CIAM, held in Athens, has proceeded from this postulate: sun, vegetation, and space are the three raw materials of urbanism. (Le Corbusier, 1943, para.12)*

This statement is understandable from the perspective of someone who was desperate to flee the manifest problems of 19th Century cities, and especially their slum areas: poor sanitation, over-crowding, lack of access to sun and openness. Yet from today's perspective it is simply indefensible. The three elements it does mention are important to include, but hardly universal fundamentals. After all, in hot climates, sun is to be largely

avoided, not sought; and vegetation and space (by which Le Corbusier means spaciousness) are occasionally but not always appropriate.

Le Corbusier in particular had a well-expressed personal predilection against "huddled" cities, and a fascination with grander, more spacious urbanism – which for him necessarily meant a more disconnected and machine-dependent urbanism (Le Corbusier, 1924). It was also an urbanism at a far grander scale than that of human beings. Today, as we are witnessing, this is also an extremely resource-intensive urbanism – and as many argue, an unsustainable one (Farr, 2011; Talen, 2011).

Most revealing, the three "raw materials of urbanism" overlook the most important element of all – the human being. We now see this human being as a creature with agency, with need of connections, and with need to control and modulate these connections, within networks of social, economic and environmental activity. This human being is not a passive consumer of "sun, vegetation, and space."

The vision of Le Corbusier and the other architects of CIAM is expressed well by this drawing by Adolf Bayer in 1948 – a kind of propaganda piece meant to influence post-war reconstruction, as indeed it and other similar materials did.
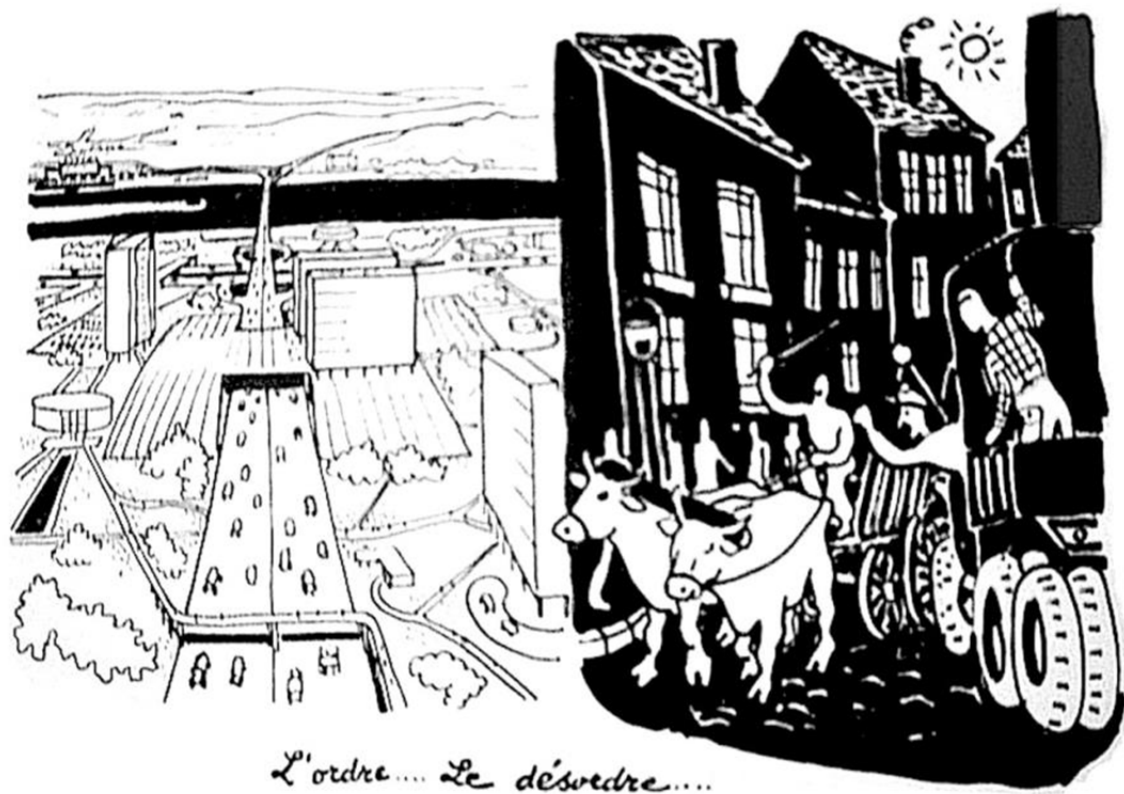
Figure 2. L'ordre… Le désordre, by Adolf Bayer, 1948. On the right is the dirty, dark, crowded, messy traditional city, mired in the filth of animals. On the left is the wonderfully clean, sanitary, mechanically ordered city, with freeways whisking fast automobiles to wherever they may want to go.

Notice what happens to the proximity of human beings in moving from the right-hand traditional city to the left-hand CIAM one. They are mostly isolated into small capsules –

automobiles, work spaces, home apartments. No longer are there complex activities along streets lined with shops and services; no more are people connecting with one another, carrying out plans, forming webs of interaction and vitality. Where pedestrians exist, they are left to trudge along long empty pathways, offering no detail, no intricate change of scenery. They appear as little more than ants, lost in a world of sweeping gigantism.

What is even more remarkable is that in the drawing to the left, there is virtually no public space as such. To be sure, there are plazas and parks, but they are severed from the tissue of connection to other urban elements. They have few activities at their edges, few pedestrians who pass by or through them, and little to generate active use. They are mostly "for looks" – part of a static tableau.

Yet it is precisely this realm of public space where "cities for all" manifests most powerfully – where people may encounter one another, interact, trade, advocate, and find adjacent private property where they may carry out their own plans and aspirations. This does not happen and cannot happen in the gigantic structures of the CIAM/Bayer drawing, with their static designs and their institutional controls. It can only happen along active, mixed, multi-modal streets and other truly public spaces.

There is one other important point to acknowledge. As the last half-century has shown, it is possible to wholly replace this realm of public space, with its natural benefits of agglomeration, networks of propinquity and catalytic interaction, with an artificial network of automobiles, conference rooms, telephones, and the Internet. However, there are two main drawbacks with this approach. One, it is resource-intensive, and, as many argue, ultimately not sustainable. Two, it is exclusionary, and largely leaves the poor and the marginal out of the network. This is bad for the poor, and ultimately, bad for everyone else (Bettencourt, 2013).

A similar caution must be voiced about so-called "smart" cities. Indeed, as a recent editorial in the New York Times by author Emily Badger points out, there are dangers in the call of smart cities that harken back to the CIAM conception of stark "efficiency" and "function," as well as digitally based designs that start from scratch. Indeed, one interviewee from a start-up accelerator suggested that historical awareness and traditional knowledge only get in the way of tech-based breakthrough ideas. From Badger's article:

> *To planners and architects, all of this sounds like the naïveté of newcomers who are mistaking political problems for engineering puzzles. Utopian city-building schemes have seldom succeeded. What we really need, they say, is to fix the cities we already have, not to set off in search of new one. But it is hard to overstate the degree to which these tech entrepreneurs are looking at the world in ways that would be almost unrecognizable to anyone already working on urban problems…" (Badger 2018:2).*

As Bettencourt and others have shown, a city that excludes large portions of its urban population will under-perform, relative to cities that are more inclusive. This is not only because the excluded populations will tend to demand increasing levels of social service, policing etc. More important, urban economic networks, like other networks, benefit from greater connectivity of larger numbers of nodes, following what is known as "Metcalf's Law". The more connected are members of an urban economy, other things

held equal, the more the economy is likely to perform optimally (Bettencourt and Lobo, 2016).

This key conclusion offers a powerful motivation for municipal governments and other leaders to make (often difficult) changes in their urban structure to be more accessible, more connected and more diverse. The result not only provides benefits for social justice and equity – it offers benefits for everyone's "bottom line."

Conclusion

The collection of papers in this edition of The Journal of Public Space – and indeed, the existence of the journal itself – are a reflection of the renewed vitality of public space research, and the new relevance of public space in international policies like the New Urban Agenda.

It should also be clear from the previous discussion, however, that achieving the normative goals of New Urban Agenda – including its public space goals – will require a markedly different set of urban models, able to replace those that have been dominant since the post-war era – those that were outlined in the Athens Charter. Among them we can include the segregated-use zone, the segregated street, the superblock, the "urban renewal" (demolished) historic area, structures created solely by specialists, and "static" engineered elements. Implementation will require, among other things, that we identify alternate models, and the specific characteristics that they will require.

In fact, these models are already well-established in older parts of many cities – namely, mixed-use zones, multi-modal streets, buildings aligning with streets, neighbourhoods that incorporate and build upon historic patterns, "emergent" urban areas that are co-created by many people, and structures that reflect an ongoing, dynamic approach to design. The common objection to these examples is "yes, but that was long ago, and the world's economy and society does not operate in that way any longer."

We will need to examine modern examples of cities that operate successfully as prosperous and creative contributors to the global economy, while also demonstrating the different urban models that are called for in the New Urban Agenda. That is a task that the authors hope to take up, with others, in future research. We can also point to early examples of such assessments (e.g. Mehaffy, 2017, Chapter V.1).

More deeply, we must examine not only the forms of these cities, but the processes that produce them – including co-production processes. Clearly we have seen that the New Urban Agenda represents a historic departure from previous conceptions of the role of non-specialists, including citizens and informal entities, in the co-production of urban structure and especially, public space. We have argued that this affordance is an essential and defining characteristic of the New Urban Agenda, and a marked contrast from the Charter of Athens.

We have also described the central role of public space itself which, through its structure and management, must play an important role in providing the capacity for co-production of the city. For those working to implement the New Urban Agenda, this topic – the structure of public space, and the processes by which it is created and maintained by many actors – demands much more careful study and research. As Joan Clos said, in the end "the relationship in a city between public space and buildable space… is the art and science of building cities."

A further significant remaining challenge will be to identify the tools and strategies by which these alternative models and processes may be implemented in both new urbanisation projects, and in the crucial retrofits of large existing areas built during the post-World War II period, including many suburbs. There is currently an enormous "lock-in" of existing codes, laws, standards, rules, tax policies, and other incentives and disincentives for contemporary urban development – what we may think of as a kind of "operating system for growth." This system, and its myriad sub-systems, will also have to be extensively reformed. Strategies and incentives will need to be found for doing so, before we can expect feasible large-scale implementation of the New Urban Agenda. This is certainly a daunting challenge. However, we can find considerable encouragement in the same lessons of history emerging in the wake of the Charter of Athens – not only the profound mistakes of that era, but its successful and even breathtaking implementation as well. For that radical transition also required major systemic changes, including new codes, laws, standards, rules, and incentives. Those changes proceeded, and whatever their many faults, we can readily see that the transformation was brilliantly effective. Then as now, the most important first step was to identify and embrace the new normative models. Then as now, we had the responsibility to make real and profound choices that would shape our urban future, for better or worse, for generations to come.

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There is one respect in which our approach today must be radically different from the approach taken in developing the Charter of Athens. While the members of the CIAM felt free to make their doctrinal pronouncements ex cathedra, we are compelled today to base our reforms upon actual evidence, and upon an understanding of the varying demands of context. Therefore we must develop and share research evidence on what actually works and why, what is important and why, and how successful strategies in one place can be translated into new applications in another. That is the basis of the new research agenda that we need for public space.

The authors in this volume offer stellar examples of this kind of research. In the first research article J. Antonio Lara-Hernandez, Alessandro Melis, and Claire M. Coulter examine the temporary use of streets as public spaces in Mexico City, and the tension that often exists between local traditions of use with existing legislation. They outline the history of laws and regulations on street life and transportation planning and then contrast these legislative interventions with everyday patterns of use and appropriation of the street by neighbourhood groups and individuals. This comparison illuminates the municipality's preference for transit and tourist uses over local street-vending, socializing and religious processions and underscores some of the difficulties of implementing the New Urban Agenda in ways that speak to both governmental and residential needs and benefits.

The second and third research papers focus on finding ways to assess and measure public space use and sociability. Stephen Appiah Takyi, Andrew D. Seidel, and Jones Kweku Adjei are interested in who uses public parks, and at what intensity, with two case studies from Vancouver, Cananda. The contrasting cases suggests ways that Park administrator and policy makers can assess specific needs by neighbourhood providing more effective use and satisfaction with park amenities. Thomas Oram, Ahmad Jehan Baguley, and Jack Swain

are also concerned with how public space accommodates users, in this case focusing on the effects of outdoor seating on sociability in Brisbane, Australia. They conclude that more and better seating that includes shade and shelter would be necessary to improve the social use of the Queen Street Mall. Their interviewee quotes reflect the downturn of the use of this space and its focus on commercial activities to the exclusion of other social uses.

The final two research articles offer programmatic recommendations based on observations of the increasing digitalization and technification of public space. Kevin Leyden, Benita Lipps, and Namita Kambli question the "smart city" model, and ask how we can create more livable, people-friendly places. They draw together findings from researchers, city planners, architects, public officials, urban activists, businesses, and NGOs from 30 countries to offer a comprehension, albeit, idealized set of propositions that can guide smart cities in the future. Kylie Budge, on the other hand, examines how different kinds of public spaces within a museum setting – an important but sometimes overlooked institutional public space – motivate people to behave differently, particularly in their activities on social media. By examining Instagram posts from the Cooper Hewitt Design Museum immersive space, Budge suggests that the role of the museum as public space may be changing and offers ways for visitors to communicate the emotional importance of a place as well as creating a play-based public through social media.

The issue concludes with three viewpoint pieces. Tom Rankin looks at how art can serve as a catalyst to activate public space, with a case study of artist William Kentridge's Rome project 'Triumphs and Laments'. Robbie Warin explores the case study of "The Undercroft" skateboard park on London's Southbank, and the attempt to relocate it – an effort that failed to recognize the lived experiences of the individuals involved, and "their desire to be included in the ongoing production of public space, and therefore deeply embedded within their own individual and collective senses of citizenship." Finally, Cristina Cassandra Murphy takes up the extremely timely issue of migration, and the need for "in-between" public spaces that can be shared between migrants and locals, with explorations in Bogotà, Tucson, Baltimore, and Rotterdam.

All of these studies have a number of features in common. They are grounded in detailed field studies of people actually experiencing and interacting with public spaces; they extract detailed lessons about the dynamics of public spaces; they are drawn from cities around the world; and they contribute to a body of lessons that can be translated and adapted to many other locations. They are, in short, at the vanguard of a new generation of public space research, contributing to a new and better generation of public spaces – and along the way, to the timely implementation of the New Urban Agenda.

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City Space Architecture

Using the street in Mexico City Centre: temporary appropriation of public space vs legislation governing street use

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Abstract

Historically there has been a rich discussion concerning the function of streets in cities, and their role in urban life. This paper outlines the relevance of temporary appropriation for understanding social dynamics within a given urban environment, looking in particular at activities occurring in the street. It takes as a case study Mexico City Centre and examines the laws and regulations set out by the government of Mexico City which regulate the use of the street. It contrasts this with the ways in which the inhabitants of the city appropriate public space on a daily basis. There is a contrast between the lack of clarity in the legislation surrounding potential activities occurring on the street, and a seemingly tacit consensus between citizens regarding how they appropriate such public spaces. We explore this contrast and outline ways in which public space is used in traditional and unexpected ways, how creative ways are found to use the street area within the spirit of the law, and where further research on this topic this could lead in future.

Keywords: public space, temporary appropriation, streets, city centre, Mexico City Centre

Introduction

The design of the street as a public space is highly relevant for more than simply physical or aesthetic reasons; it frames our understanding of social encounters in the public realm. The creation of environments that support social behaviour in places is one of the most important roles of urban design (Mehta, 2013).

Human beings have the inborn need to interact with each other. Mumford (1938) claims that the city, above all else, is a *theatre of social action*. This suggests that there is a *dialogue* between people and physical spaces or environments. This dialogue is spatialised through people's activities occurring in the spaces, and has been defined differently throughout time. For instance, *street ballet* by Jacobs (1961) or the *space of contact* by Choay (2001), in where all the different social encounters happening in the street, such as children playing, people walking, or sitting at a table drinking coffee, mean that public spaces in cities are the physical environment where this interaction between citizens takes place. According to Rywert (Anderson, 1986), the expectation of daily human contact that public space offers is unique. When public spaces do not allow this contact, one of the possible risks is a rise in alienation, which contributes to social stress, unused space, and an increase in crime rates. Moreover, since cars have taken over most of the street space, the only place where the *street ballet* occurs is on the sidewalk (Minnery, 2012). The street is the immediate public space where urban life is evidenced.

In this paper we explore how the use of public space is currently regulated in Mexico City Centre (MCC), and how this differs from the ways in which public space has historically been used. We note the discrepancies and loopholes in current legislation, and show how the day to day use of public space in MCC occurs alongside, and sometimes despite, legislation.

With a total population of over 21 million Mexico City forms the core of the fourth largest urban agglomeration in the world, and is both the world's largest Spanish speaking city and the largest city in the Western hemisphere (United Nations, 2014). It is a forerunner of the trend towards the growth of megacities in the Global South, and its residents are part a deeply unequal society, where wealth is concentrated in the hands of the few and where informal commerce and construction have become a means of survival for many. It also experiences high numbers of people coming into the city each day for work, leisure and other pursuits (Nivon Bolan & Sanchez Bonilla, 2014; Villanueva *et al.*, 2012). The size and population structure of Mexico City make it an interesting choice for exploring how public space is currently being used in a global megacity, and for hinting at how the use of public space may change in other rapidly expanding Latin American urban centres. As Herzog (2004) notes, "Mexico City encapsulates what we might call the 'yin/yang' of globalization—it houses both the best and the worst of our global future."

The paper is divided into three main sections. The first outlines the concept of temporary appropriation (TA), and discusses its relevance as a theoretical concept for understanding the relationship between people and places. The second section attempts to clarify the legal framework that regulates the use of streets in MCC. The third section places the concept of TA within the specific research context, in this case MCC. It explores historical and contemporary uses of public space in MCC, and the varying ways in which TA can be categorised within this research setting. The legal framework for street use stands in contrast to the way in which streets are actually being used, and forms the basis for the discussion of perceived, actual and desired use of public spaces within MCC,

viewed through the lens of TA. Finally, we conclude by showing the tension between the popular and legislative use of the streetscape, and suggest areas where this could be further explored in future.

1. Temporary appropriation in the urban context

Temporary appropriation is relevant as a theoretical concept for understanding the relationship between people and public spaces. Although there is no formal definition of appropriation, other theories incorporate and approach the concept, claiming that it plays a key role in creating the bond between people and places that leads to the social construction of public spaces. In previous work we have explored in depth how TA can offer a valid alternative way of reading the urban landscape (Lara-Hernandez & Melis, 2018), looking at the development of the idea of *appropriation* from its first use in this context in Korosec-Serfaty (1976) and Sansot, (1976). We show how more recent work on appropriation, such as the topophilia theory of Yory García (2011; 2003), fits with Lefebvre (1971), who argues that without appropriation, the domination of nature does not have a purpose; there is no urban realm if public spaces are not appropriated. TA is an individual, social, and spatial need that cannot be underestimated when it comes to urban studies, and forms the vital theoretical link between people and places (Lara-Hernandez & Melis, 2018). Fonseca-Rodriguez (2015) provides a definition incorporating the temporality of the concept by defining temporary appropriation (TA) as "the act in which people use public spaces to carry out individual or collective activities other than the purpose that the space was originally designed for". This definition helps us to better conceptualise TA as an urban phenomenon.

Looking at the context of MCC, although a considerable amount of literature (Gehl, 2014; Jacobs, 1961; Whyte, 1980) discusses and analyses the physical attributes of the built environment for the purpose of creating lively and inclusive public spaces, studies on the subject in Latin America have only focused on the processes of segregation (Oehmichen, 2010), gentrification (Martinez-Ramirez, 2015), and exclusion (Bayón, 2008) occurring in city centres. Alternative authors, such as Carrion (2013), Garcia Espinosa (2005), Hernandez Bonilla and Gomez Gomez (2015) and Hidalgo et al. (2008) deal with the effects caused by transforming the built environment to create public spaces in city centres in Latin America, however they fail to consider the new public spaces in terms of their ongoing use and TA by the public, let alone exploring the current legal framework that defines the uses permitted for each space in the local context.

1.1   Forms of temporary appropriation of public space

Public spaces are the arenas in which many activities can occur, ranging from leisure pursuits to political protests. Nevertheless, not all activities are the spatialised expression of appropriation. According to Sansot (1976) people only appropriate places which they identify with. Torres (2009) argues that the appropriation of public space is strongly valued by people, since it is culturally constructed by everyday activities. This implies that appropriation of the space plays a key role in people's identities and their interactions with their environment.

Even though a breadth of literature describes the importance of the use of the space in which people, through their activities, appropriate public spaces (Korosec-Serfaty, 1976; Gutierrez de Velasco Romo & Padilla Lozano, 2012; Alessandri Carlos, 2014; Fonseca

Rodriguez, 2015), few studies fully specify or classify such activities. Activities relating to trade and commerce commonly occur in public spaces and are associated with appropriation, however there are uncountable other activities occurring besides those linked with profit. Furthermore, while discussing public spaces as a concept we commonly tend to associate this with parks or squares, leaving the street aside. Scholars such as Jacobs (1961), Mourdon (1991), Jacobs (1993), Choay (2001), Gehl (2011), Kim (2013) have described the street as a quintessential public space within the urban realm. The street is a versatile space because even when its meaning is shaped it can be changed, boundaries can be re-defined, new activities can take place and its time management may change too (Mehta, 2013). The space where this conflict is most evident is in public space, commonly in the streets, which is the place that serves as the locus of collective expressions for those who are deprived of institutional settings to disagree (Roy & Alsayyad, 2004). Deleuze and Guattari (1989) suggest that the street is the space for the operation denominated *overcoding* by excellence in which community, state and tradition super impose their code with concrete implications towards the urban realm. The street as urban space is under constant tension between its function as infrastructure and as public space.

As indicated previously there is an infinite number of activities that public spaces could host, however we attempted limit our investigation to those activities in the street which can be classified as those where people appropriate public space. Only by identifying and classifying these forms of TA will it be possible to achieve a deeper understanding of such activities, and their relationship with the street as a public realm. The broad categories that we identified are explored in detail in the paragraphs which follow.

1.1.1   Economic actions and temporary appropriation

According to Ramirez Kuri (2010), there are three types of TA related to commerce or services. First, people such as vendors or workers use the space with or without the authorisation of government authorities; second, people work in public spaces as an extension of their place of work because it is close by; lastly, people gather in the public space, with clients who travel there to find them and use their services, such as mariachi bands. Gutierrez de Velasco Romo and Padilla (2012)agree with the identification of these three types of the occurrence of TA of public spaces in central areas. Even though informal commerce on the street is usually perceived as an undesirable activity by governments in different cities (Ramirez-Lovering, 2008; Kim, 2013), it is without any doubt an activity in which people worldwide temporarily appropriate the street.

1.1.2   Leisure and temporary appropriation

Activities related to leisure, such as arts or sport, are also evidence of TA. Cranz (1982) claimed that recreational and leisure activities occurring in public spaces, such as parks, have a strong influence on urban political processes in North American culture. Crouch (1998) explores the significance of the street as an everyday site of geographical knowledge and leisure practice, revealing the rituals and relationships, and practices and representations which are played out routinely on the street. He also states that the design of both the streets and the buildings dictate the experience of a place. Both authors imply that through leisure and recreational activities, people appropriate public spaces; it is emotionally beneficial when people participate in leisure activities in public

spaces because they feel comfortable to do so, but it is even more important that they feel as if they own the space.

1.1.3 Sacralisation and temporary appropriation

In countries with a strong religious cultural background, another activity in which people appropriate public spaces is through sacralisation. Portal (2009a) describes the term sacralisation by referring to religious symbols (mostly Catholic) being placed in a public space. This form of appropriation is particularly characterised by the installation of crosses or altars in public spaces, where people may pray. According to Portal (2009a), there are two main causes for this kind of appropriation. First, as an act of personal or familial commemoration, for instance because a friend or relative has died on the site or close to it. Portal (2009a) notes that for violent deaths, a cross can be seen as a way of helping the soul to find peace on its onward journey. In other situations, flowers and other artefacts can be placed on the site to mark the place where a death occurred, appropriating the space for personal commemoration. The second cause to mark or define territories at the boundary of a determinate area or neighbourhood, and can be sued to reduce anti-social behaviour within a designated area ((Portal, 2009a, 2009b). Santino (1992) explores this idea further, noting that artefacts forming public displays of commemoration not only invite spectatorship, but through their invitation to bear witness, involve passers-by otherwise unconnected to the event in the act of TA, as outlined by Habermas (1991) through his ideas on shared civic interest.

1.1.4 Summary

People make use of public space for a variety of reasons, and to undertake a wide assortment of activities. We have aimed to categorise these as simply as possible under the broad headings of economy, leisure and sacralisation, but appreciate that under each of these headings a complex network of activities is taking place. Table 1 provides an overview of the activities in which people temporarily appropriate public spaces. In the section which follows we will explore how these forms of activity take place within MCC, looking at specific examples from historical sources as well as from the present.

Table 1: Activities in the public space related to temporary appropriation (Source: Lara-Hernandez, Melis & Caputo, 2017).

Category	Economy		Leisure			Sacralisation
Description	Any activity in which a person or group use the public space in order to obtain an economic benefit directly or indirectly.		Any activity in which a person or a group use the public space for leisure purposes.			Any activity in which a person or a group use the public space for religious purposes.
Sub-category	Work	Trade	Sports-games	Artistic expressions	Rest	
Individual or collective	Advertising or promoting services, waiting, engaging or attracting possible clients.	Selling or buying products (food, handicraft, clothes, etc.)	Skateboarding, soccer, cards, marbles, hopscotch.	Playing music, dancing, painting, acrobatics, reciting and singing.	Eating, resting	Processions, praying, lighting candles and putting flowers.

2. The official use of the street in Mexico City Centre

We analysed the laws and regulations approved by the government of Mexico City regarding the use of the street using document analysis (Bowen, 2009). In addition, in order to gather further information about how the street (as public space) is actually managed, an interview was conducted with the general coordinator of *Autoridad del Centro Historico*, aimed at collecting information on temporary appropriation and whether it is being considered at street management level.

2.1 Mexican laws and regulations regarding street use

Several laws and regulations in Mexico City (Gobierno del Distrito Federal, 2016, 2015; Asamblea Legislativa del Distrito Federal III Legislatura, 2004; Gobierno del Distrito Federal, 2013; Gobierno de la Ciudad de México, 2014) refer to the use of streets and the activities that are allowed to happen in them. Table 2 summarises the information found in Mexican laws and regulations.

In 2004, the *Ley de la Cultura Civica del Distrito Federal* (Law of the Civic Culture of Mexico City) was approved by the government, and establishes how citizens should behave in public spaces and neighbourhoods. The 15th article of Chapter I/Second Title states that it will guarantee the harmony and coexistence of its inhabitants through the fulfilment of their duties, such as a) the freedom of people's actions in public spaces, and b) by allowing the proper use of public spaces according to their nature.

In 2013 a more specific law was approved: the *Ley para el uso de las vías y los espacios públicos del Distrito Federal* (Law for the use of streets and public spaces in Mexico City), which establishes the right to use and enjoy public spaces, especially streets that are used in different ways, rather than streets being just for motor-vehicles. Article 6 states that users of public space (including streets) have the right to use the property for common use according to its nature, and have the right to access, stay and transit in streets. Article 7 establishes that public space users have the duty to access, use, stay in, or transit through public space without disturbing other users. Both laws clearly refer to the social dimension of streets as public spaces.

Other laws, such as *Reglamento de Transito del Distrito Federal* (Transit Regulations of Federal District) and *Ley de Movilidad de la Ciudad de Mexico* (Law of Mobility of Mexico City) establish the free access, use and transit of pedestrians, cyclists and motor-vehicles in streets and roads. They also establish that streets should be free of obstacles or elements that impede or hinder pedestrian traffic, except in authorised cases. Both laws give priority to pedestrian movement; and they acknowledge different uses for the street beyond just movement.

Moving beyond laws aimed at traffic regulation and mobility, socio-urban researchers, such as Campos Cortes & Brenna Becerril (2015) and Ramirez Kuri (2010; Anon, 2016), argue that the codes compiled by planners and urban designers have focused on the economic development and formal aspects of the area, rather than including lessons from other fields dealing with social and cultural aspects. Urban design interventions have been implemented according to a master plan, titled *Plan Integral de Manejo del Centro Histórico de la Ciudad de México* (Management Plan for México City Centre), which involves pedestrianisation, change of pavement, sidewalk expansion, and the addition of urban furniture as well as lighting and trees. According to Flores Arias (2015), even though physical improvements of public spaces in MCC are the result of a plural approach

(involving the opinion of the academic sector, government, experts and general population), they are implemented in a top-down manner, and as a result, do not represent the interests of the population (2015). Though aesthetically pleasing for tourists and visitors, the urban design interventions conducted in MCC in conjunction with changes to the urban landscape (physical and social) have resulted in the eviction of urban actors, thus eliminating the lively social dynamics that they were contributing to(Campos Cortés & Brenna Becerril, 2015; Martinez-Ramirez, 2015). These planning policies are just as significant for the use of public space as the laws cited in Table 2, and yet they are far less accessible and therefore less open to debate and to discussion.

2.2 The view of the authorities on temporary appropriation
As stated above, we conducted an interview with a key figure in the local city administration to collect a fuller picture of the official understanding of TA in the streetscape. The answers provided in Table 3 help to give a picture of the government's working policy on TA activities. On the one hand, it clearly shows that there is an aversion towards economic activities related to work, and particularly towards trade and commerce. On the other hand, activities related to leisure such as sports and games, artistic expression, resting, religious activities and pedestrian use are strongly welcomed. The single most striking observation to emerge from the data was that many of the activities which were reported as desirable could actually be categorised as obstacles for pedestrians, and consequently convene the official legal position. As a result there is some discrepancy between the written legal and the day-to-day official views regarding activities that are welcome to occur in the street in MCC.

2.3 Summary
The laws regarding the governance of Mexico City specify that public spaces (streets and squares) must be accessible for every citizen without any distinction or impediment (Gobierno del Distrito Federal, 2013). Mexican citizens have the right to appropriate public spaces and streets, and streets exist for more than just transit purposes. Furthermore, citizens must respect other street users and respect their rights to use the street area as they wish, so long as this does not impede pedestrian traffic or cause a disturbance of the peace. There is no specific mention of a ban or prohibition on commercial activity, or any further restrictions placed upon the types of activity which can peacefully be enjoyed, other than the vague reference to streets being used according to their nature.
This is not the way in which the authorities would like the street to be used. Official policy would rather that commercial activities be restricted, and that the street be primarily used for transit and leisure. Maintaining pedestrian access was not a priority, and some of the activities that were given preference would directly impede pedestrian traffic. This is supported by official urban planning policies, which give preferential treatment to the tourist experience of MCC and often disregard the needs of local residents and habitual users of the street area who rely on this space to conduct activities central to their day-to-day life.

Table 2: Laws and Regulations about the use of streets in Mexico City (translations: Authors)

	Law for the use of streets and public spaces in Mexico City (Gobierno del Distrito Federal, 2013)	Law of the Civic Culture of Mexico City (Asamblea Legislativa del Distrito Federal III Legislatura, 2004)	Law of Mobility of Mexico City (Gobierno del Distrito Federal, 2016)	Transit Regulations of Federal District (Gobierno del Distrito Federal, 2015)	Citizen Manual for the care of City Centre (Gobierno de la Ciudad de México, 2014)
Name					
Generalities & Functions	Stabilised the right to use and enjoy the public space, including streets used in a different way rather than for motor-vehicles. The public space is considered as an ambience or scenery of social integration, where the right of association and the right of the others to use the same space, its appropriation (accessibility, permanence and enjoyment) of the space, the collective space, the space for everybody.	It establishes the minimum rules of citizen behaviour.	It dictates the laws for mobility purposes in Mexico City.	It regulates the use of streets and roads of Mexico City.	It is a manual for citizens that use MCC.
Specific articles that mention the use of public space	Art 6th. The users of public space and streets have the right to I. Use the property of common use according to its nature and destiny: II. To access public spaces and streets: III. To stay in public spaces and streets; IV. To transit in public spaces and streets. Art 7. The duties of the users are: I. To use the public space and streets according to their nature and destination: II. To exercise their rights without disturbing the order and public peace, or affecting the developing continuity of other inhabitants' activities.	Second Title of the Civic Culture and neighbour's participation. Chapter I. Art 15. The Civic Culture in Mexico City, which guarantees the harmonious coexistence of its inhabitants, is based on the fulfilment of the following citizen duties. VI. To allow the freedom of action of people in public spaces and streets. X. Make proper use of public goods, spaces and services according to their nature and destination.	Art 5. Mobility is the right of every person and the community to carry out the effective movement of individuals and goods to access through the different modes of transportation recognized in the Law, a mobility system that conforms to the hierarchy and principles that are established in this order, to meet their needs and full development. In any case, the object of the mobility will be the person. Art 13. For the fulfilment of the present Law and the ordinances that emanate from it, Public Security will have the following attributions: III. Maintain within the scope of its powers, that the road is free of obstacles and elements that impede, hinder or impede vehicular and pedestrian traffic, except in only authorized cases, in which case, as far as possible, they should not obstruct the accesses for persons with disabilities.	Art. I. The purpose of these regulations is to regulate the circulation of pedestrians and vehicles on public roads and road safety in Mexico City. Art. 6.- The Public Administration will provide the necessary means for people to freely choose the way to move in order to access the goods, services and opportunities offered by the City. The level of vulnerability of users, the externalities generated by each mode of transport and their contribution to productivity will be considered for the establishment of public policy in this area. Priority will be given to the use of road space and the distribution of budgetary resources will be assessed according to the following hierarchy of mobility: I. Pedestrians	Chapter 7. Use and conservation of public spaces. Conditions for realising cultural activities. First, permission must be granted by the SSPDF (Secretary of Public Safety of Mexico City), the SGDF (Mexico City Council) and Autoridad del Centro Historico.

Table 3: Questionnaire response from Autoridad del Centro Historico.

To what extent is it desirable for these activities to happen on the street?					
Activities	**very desired**	**moderately desired**	**somewhat**	**minimally desired**	**not at all**
Work	5	4	3	~~2~~	1
Trade	5	4	3	2	~~1~~
Sport/games	~~5~~	4	3	2	1
Artistic expressions	~~5~~	4	3	2	1
Rest	~~5~~	4	3	2	1
Religious activities	~~5~~	4	3	2	1
Pedestrian use	~~5~~	4	3	2	1

Demographic study		
Do you live in MCC?	~~(y)~~	~~(n)~~
Do you work in MCC?	~~(y)~~	~~(n)~~
Do you live in San Jerónimo St?	(y)	~~(n)~~
Do you work in San Jerónimo St?	(y)	~~(n)~~
Do you live in Moneda St?	(y)	~~(n)~~
Do you work in Moneda St?	(y)	~~(n)~~

3. Appropriation of streets in Mexico City Centre

3.1 Mexico City Centre: historical use

Figure 1: MCC perimeters (source: Autoridad del Centro Historico, 2011)

Mexico City Centre (MCC) is the biggest colonial historic centre in America, with a total area of 9.1 km^2 and a population of 61,22 (INEGI, 2018). In terms of planning, MCC has the Spanish grid commonly used in Latin American colonies, starting from the main square, the church and the council building (see
Figure 1). The streets of Mexican cities are public spaces that are key for urban life, even prior to the Spanish colonisation. The pre-Hispanic civilisations were characterised by the intensive utilisation of the outdoor spaces for everyday activities (Keller, 2006; Suárez Pareyón, 2004). The Aztecs founded the city of Tenochtitlan, the urban pattern of which was compounded by blocks, streets and channels. The Aztecs used the channels for communication purposes, while streets were reserved for a diversity of activities such as trade, leisure, religious celebrations and even sacrifices (Leon Portilla, 1995). The public spaces in which the social, political, economic and religious lives of people occurred were the streets (Webster & Sanders, 2001). Informal activities were an essential element of street life in Tenochtitlan, especially for the common people, as shown in Figure 2 (Crossa, 2009).

Figure 2: The great Tenochtitlan, mural by Diego Rivera Exhibited in the Palacio Nacional in Mexico City
(source: Rivera, 1945)

In the 16th century, during the Spanish colonisation, a new urban planning pattern was established over Tenochtitlan, transforming the city (Stanislawski, 1947). The conquerors tried to regulate informal activities (trading, playing, religious expressions) that happened on each specific street for each activity with a singular order (Nelson, 1963), by confining them into specific places, such as squares in the Spanish tradition. They succeeded for a short period of time, but as the city grew, the confinement of informal activities was not viable anymore. As Monnet (1995, 1996) and Portal (2009b) describe, this informality is still palpable in the streets of MCC, and is easily visible to observers.

3.2 Mexico City Centre: the current situation

In 1987, UNESCO declared MCC a world heritage site. Although the declaration has triggered a process of urban design transformation intended to beautify the built environment, Diaz Parra (2014), Oehmichen (2010), and Ramirez Kuri (2015) have pointed out that this has not necessarily led to the planned improvements urban life, and has occurred to the detriment of the TA of public spaces. Hiernaux-Nicolas (2005) suggests that there has been a symbolic privatisation of heritage in favour of the dominant class and commercial recovery, challenging the strategies promoted by the entrepreneurial urban governance and in doing so creating counter-spaces. As an example of this, one of the strategies of the transformation program was the removal of street vendors from perimeter A (see map in

Figure 1) (Autoridad del Centro Historico, 2011). As a result of this action, the use of public spaces in MCC has changed, with a collateral effect on the relationship between urban design and TA of public spaces. As part of our research into the use of public space (Lara-Hernandez, Melis & Caputo, 2017; Lara-Hernandez & Melis, 2018) photographs were taken in MCC during 2017 showing different activities taking place in the street and in public squares. Many of these activities clearly show public space being temporarily appropriated by members of the public, and fall into the three categories discussed previously. We also found instances of official use of public space which fell under TA, as well as activities which were unexpected, and which defied our original categorisation. The three main categories, as well as the outliers, will be discussed in turn below.

3.2.1 Economic actions and temporary appropriation

Looking at economic forms of temporary appropriation, there is evidence of disruption or disarrangement to the everyday practices of residents, indigenous artisans, and many local vendors, impacting directly on the economy of many families. This has altered the traditional Mexican way of living in cities, which even before the Spanish colonisation was and is about socialising and trading outdoors. According to Crossa (2009), even though the strategies implemented by MCC's *Programa de Rescate* have attempted to remove informal commerce from streets, street vendors have found ways to resist, and they have become *toreros* (a term referring to Mexico City's nomadic vendors), and they are still working in the area. For instance, street vendors in Moneda St. place their merchandise on a cloth on the ground that can easily be gathered up if necessary (see Figure 3 left). A "guardian" with a walkie-talkie is constantly looking out for the presence of authorities (see Figure 3 right). Once the "guardian" has spotted the authorities he notifies the street vendors who immediately collect their merchandise and go and hide in a building nearby (see Figure 4 left). In a matter of seconds the whole temporary market has vanished (see Figure 4 right).

Figure 3: Street vendors in Moneda St. (left),
Street vendors' guardian with walkie-talkie (right) (Source: Authors)

Figure 4: Street vendors hiding in buildings nearby (left).
Street vendors have left the street (right) (source: Authors)

As we have seen, the law regarding street use in MCC primarily protects the rights of pedestrians to have access to the street for transit. In further examples of commercial driven TA, citizens as both consumers and entrepreneurs have found ways to work around the law, for example by placing small chairs and tables right next to the edge of a building (see Figure 5 left). The street which remains a viable place for transit thus simultaneously also becomes an open-air dining area. Similarly, in the example illustrated in Figure 5 (right), a hair treatment is being carried out using a bollard as a hairdresser's chair, with the street becoming briefly an urban salon.

Moreover, even employees of governmental institutions such as the police or refuse collectors temporarily appropriate the street for their own purposes. Figure 6 (left) shows police officers holding their morning meeting in the street, while Figure 6 (right) shows a line of refuse collectors lining up to receive their weekly payment. In both of these examples people temporarily appropriate the street, using the space as an urban open office.

Figure 5: People eating on the street (left), woman doing hair treatment on the street (right) both in Moneda St. (source: Authors)

Figure 6: Police officers in an ordinary morning meeting (left), refuse collectors getting their weekly payment (right) both in San Jeronimo St. (source: Authors)

3.2.2 Leisure and temporary appropriation

Looking at leisure activities, Delgadillo (2014) describes the planning policies that have been implemented as part of the urban beautification process. *La Alameda Central* (the largest park in MCC), used to be appropriated by families, minority groups, religious groups, mimes and even musicians. After the urban design transformation that took place in 2013, this type of appropriation is not happening anymore (Martinez-Ramirez, 2015). The new policies allow the government to displace users who are perceived to be informal, suspicious or misbehaving; to pursue an official cultural programme of free cultural and leisure events which prevent the free use and public dimension of this space; and to follow a zero-tolerance agenda, including an increase in police officers and surveillance in the area (Delgadillo, 2014).

In contrast to the traditional, family-centric and group-oriented use of the street, many of the examples of leisure related TA that we observed in MCC were more individual in nature. In the examples shown in Figure 7 we see a man napping and a woman knitting; two individuals make use of a small peripheral area at the edge of a street or square, and

their chosen activity does not invite interaction with the wider public. Figure 8 shows more complex use of the street area, and highlights how TA can take multiple forms, in this case both economic and leisure-based. In the left hand picture a workshop takes place outside a church, in the right hand picture a woman is playing the violin in the street. Although both of these activities could plausibly be primarily economic in nature, their ability to be enjoyed or participated in by the wider public extends them beyond merely commercial forms of TA.

Figure 7: Man in wheelchair taking a siesta (left), Woman knitting (right) (source: Authors)

Figure 8: Open-air workshop (left) woman playing the violin (right) (source: Authors)

3.3.3 Sacralisation and temporary appropriation
The third category of TA that we expected to find in MCC relates to religious activities. Whilst we observed traditional street altars occupying space within the street (see Figure 9), we also found unexpected instances of TA which could be categorised under sacralisation. The celebration of *Día de los Muertos* (day of the dead) in Mexico is a well-known as a family gathering to remember deceased family and friends. It is a national

celebration in which the whole community participates. Although prostitution is a practice which is not commonly associated with family values, the prostitutes of *La Merced* (a neighbourhood adjacent to MCC) gather together on this day and make their own public *ofrenda* (Castrejon-Arcos, 2012; Redacción ADN, 2015). Figure 10 illustrates how despite the laws, regulations and the social stigma, the prostitutes of *La Merced* temporarily appropriate the street to celebrate *Día de los Muertos.*

Figure 9: Street altar in Mexico City Centre (right) (Source: Authors).

Figure 10: Prostitutes celebrating Dia de los Muertos in La Merced (source: Castrejon-Arcos, 2012)

3.3.4 Other categories of temporary appropriation

Although our previous work had suggested three definitive categories for TA, we found other examples of street use in MCC that did not fit neatly into any of these categories. Firstly, we observed that some health institutions temporarily appropriate the street, providing their services in the open-air for the benefit of the citizens (see Figure 11). Another example are the daily protests that take place in Mexico City (see Figure 12).

Between 2015 and 2017 there were more than ten thousand protest events registered by *Secretaria de Seguridad Publica* (City Security Department) and *Secretaria de Gobierno* (City Council), an average of nine protests every single day (Arredondo, 2018). By law (Gobierno del Distrito Federal, 2013) citizens willing to take part in a protest utilising the public spaces (squares or streets) must to give notice to the authorities 72 hours prior the event. The authorities however state that just over half of these events receive advance notification, highlighting how the citizens' use of public spaces is embedded as a right in the context of Mexico City.

Figure 11: Nurses conducting tests to diagnose diabetes (source: Authors)

Figure 12: Protest against the education bill (Source: Authors)

4. Discussion

4.1 Temporary appropriation of the street, and the laws and regulations of MCC

As mentioned in the conceptual discussion, certain activities occurring in public spaces are considered TA, playing a key role in creating the bond between people and places, and consisting broadly of activities relating to commerce, leisure and religion. The current economic situation in MCC, whereby the built environment has been maintained and improved, may have had a positive impact on the tourist experience, but has arguably had a less favourable impact on everyday socio-urban conditions, which according to Van der Aa (2005), is a condition of many other heritage sites worldwide.

Some authors (Ramirez Kuri, 2008; Saraví, 2008; Alessandri Carlos, 2014) claim that planning regulations imposed on the use of public space are putting the inclusive and pluralistic nature of these spaces at risk. This situation poses a threat to the TA of public spaces, which according to Purcell (2002), is one of the key ways for citizens to exercise their right to the city. A space that is not formally equal for everyone can hardly enhance participation in solving fundamental urban issues such as diversity, governance, and inclusion. What is significant here is that the legislation that governs the use of the street in MCC is fairly loose, reserving only the right for pedestrian transit and maintaining the peace. In addition to this, the right to temporarily appropriate public space is tacitly recognised as a right in all of the laws and regulations that we reviewed. It is not until we begin looking at internal policy and communication that the discussion around appropriate and desirable forms of TA begins to emerge. The city's urban regeneration plan clearly focuses on leisure activities as the key driver of activity in the area, with as much of a stress on maintaining the historic centre for visitors to view and appreciate as for the local population to enjoy. Furthermore, our interview with director of a governmental institution showed that activities related to leisure and religion were considered desirable, whilst commercial activity was to be discouraged, even though the demographic section of the questionnaire shows that the respondent is fully aware of the urban dynamic happening in the area. In contrast to the arguments made by Janoschka and Sequera (2014), Delgadillo (2014) and Ramirez-Kuri (2015; 2016) that regulations have been imposed on public spaces that hinder TA we have instead found that the regulations themselves are vague and lack definition, and that it is internal planning policies, that come under far less public scrutiny, which are forming the backbone of the effort to modify street use in the area.

4.2 The changing use of the street

Although the use of public space is changing, it is significant that the urban actors have not been totally evicted, rather the way in which they temporarily appropriate the streets has changed. Whilst we observed the expected categories of economic, leisure and religious activities, we saw this appear in unexpected ways, as well as ways which we were unable to fit into these categories. We observed how TA is not only occurring in the acts of private citizens, but also in a semi-official context. Police meetings, governmental staff pay queues, and publicly administered healthcare were all observed happening in the street. Likewise we were surprised to observe acts of TA from groups that would otherwise be considered controversial, but which were permitted within a specific time or context. The example of the prostitutes celebrating on *Dia de los Muertos* highlights just how flexible the boundaries of TA can be, whilst the use of the street area for public protests

reinforces what we found in the legislation, that citizens have the right to appropriate public space as long as they do so peacefully and preserve pedestrian access.

The legislation that we surveyed was not particularly specific on how the public may make use of the street, although internal governmental policies on street use were much clearer. Similarly the finding that around half of public protests do not notify the authorities in advance, but apparently without any issues, suggests that where TA is concerned there is a form of legal pluralism occurring in MCC, where state law, religious law, indigenous law, customary laws and local conventions all co-exist, and combine to govern the actual use of the street. In such plural realm the law of the state is not necessarily the dominant one. Furthermore, the state might not actually have the capacity to enforce the law (McAuslan, 2006). In this scenario customary law could have much more influence on how activities are conducted in public, with the written law, conventionally taken as formal, being considered informal and beneath consideration in practice.

The key finding from our research is that although activities were occurring that might strictly be considered illegal, nothing was happening that did not respect the spirit of the law. Informal commerce respected the requirements of pedestrian traffic, prostitutes celebrated a national holiday without disturbing the peace, political views were shared and governmental meetings were held in the same public arena and no one visibly questioned the right for the street to be used in any of these ways. Although some activities were deemed more desirable than others, there is no official consensus on the limits of permitted TA within MCC, and the streets continue to be used for a wide range of activities as a result.

5. Conclusion

This paper has shown that TA of the street is crucial for maintaining socio-urban dynamics in the contemporary city. Looking at the literature on TA we attempted to compartmentalise activities consisting of TA in MCC into three specific groups: economic actions, leisure activities and religious practices, however the full range of activities occurring within the street area were much wider than this and extended to include political activity, healthcare practices, and official governmental business. Compared with the legal position, which made no specific mention of permitted activities, and regeneration policies that indicated that informal commercial activity was undesirable, the day-to-day use of the street appears to reflect the practical needs and wants of the local population, even if they are required to be creative in finding ways to conduct business as normal.

Some authors have noted a decrease in certain types of TA within MCC, leading to a change in the way that the street is used and a loss of inclusivity. The official laws and regulations appear not to be the cause of this, but there is some conflict between how the authorities address the management of public space and how people have previously used these areas. In any case, what is unclear is whether the changes made to the built environment within MCC are improvements that have helped to maintain TA, preserving the social heritage of the site, or whether it has created a new life on the streets, one that benefits a small sector of society, or which even only exists for the benefit of tourists and other outsiders. Time plays an essential role in the changing use of public spaces and

their TA, and this is an area where further research is required

A limitation of our research is that it only focusses on the laws and regulations for the use of the streets (and public spaces) in a particular area in the centre of Mexico City. It does not address fully how the streets are actually used and managed as public spaces within the city as a whole. Further research into the city's planning strategies, policies on urban street use, and the actual use of the street in other districts is needed to confirm our findings that the use of space is affected both by state law and local conventions, changes to which could have an impact on citizens' social obligations (Lara-Hernandez, Melis & Lehmann, 2019).

Future studies on the topic in other cities and multicultural environments are also recommended. Cities are in a constant process of transformation, and the way in which they are designed and re-designed might affect the rational use of public spaces and their TA. A total of 68% of the world population will be living in urban areas by 2050 (United Nations, 2018), with urban areas seeing a corresponding increase in cultural diversity alongside population growth. Van Hook (2017) estimates that in the USA the diversity has increased by 98% in urban areas since 1980. These socio-urban changes represent a challenge for urban design and planning. For instance, Pemberton (2016) points out that there is a lack of work about the role of urban planning towards diversity and migration. We have seen that TA has cultural components which may be specific to a specific place or ethnic group. Research is needed to investigate how cities that are more culturally diverse and/or which are facing high levels of national and international migration (such as London, Barcelona or Sydney) address the issue of the use of public space. It would be interesting to see how the forms of TA practiced in each city vary according to the presence of different cultural and religious groups living in the same area, and how this either coexists or comes into conflict with local legislation governing the use of the street.

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City Space Architecture

Relationship between the demographic characteristics of park users and intensity of park use: the case of Stanley Park and Queen Elizabeth Park

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Abstract

Parks are among the few urban infrastructure that functionally combines all the three pillars of sustainable development namely: ecological, social and economic functions. For example, Stanley Park currently serves as one of the largest tourist destinations in Canada. This helps to promote economic growth through the money spent by tourists in the City of Vancouver. The park also provides ecological services through its green infrastructure whilst at the same time serving as a place for social activities such as cycling, jogging and playing tennis. Despite the enormous benefits derived from urban parks, there is a paucity of research investigating the individual demographic characteristics that tend to associate with increased utilization of public parks within an urban setting. There is therefore the need for park researchers and administrators to understand the relationship between the demographic characteristics of park visitors and intensity of park use. The data used for this research was collected through a survey conducted at Stanley Park and Queen Elizabeth Park, both located in Vancouver, British Columbia, Canada. Chi-square tests were used to assess the association between individual demographic characteristics and increased utilization of public parks. For Stanley Park, place of origin and age were the most important predictors for high park patronage; while employment status and sex were found to be the significant factors that associated with high intensity use of Queen Elizabeth Park. The study shows that different demographic variables influence the intensity in the utilization of Stanley Park and Queen Elizabeth Park. Park administrators and policy makers must therefore undertake park specific needs assessment when providing park facilities, programs and services. This will help promote effective and efficient park service delivery.

Keywords: park planning, demographic characteristics, intensity, park use

1. Background of the study

Historically, parks were created to address specific urban planning problems by helping to restore some elements of the country in cities (Takyi, 2016). Sadeghian and Vardanyan (2015) describe a park as "an area of natural, semi-natural, or planted space set aside for human enjoyment and recreation or for the protection of wildlife or natural habitats" (p. 120). The contemporary roles of parks have moved beyond its ecological functions to include economic and social functions. The multi-functional roles of parks have therefore necessitated the need not to restrict the provision of park facilities to only urban areas. Park services such as recreational and tourism facilities are currently being provided in the both the town and country

The level of investments in the development of parks continue to increase. This is because of the environmental, social and economic benefits of parks. According to Chiesura (2003), the development of urban green spaces provides economic, environmental, ecological, social and psychological benefits. The need to preserve the natural character of cities for example, has increased public interest in the development of eco-friendly cities (Takyi & Seidel, 2017). Environmentally friendly cities generate tourist attractions, provide a favorable environment for active living and also promote the health of their inhabitants. These factors are currently serving as pull factors for people to live in such healthy communities, leading to the economic vibrancy of these cities. This shows a strong relationship between the sustainable environmental management of cities and their economic vibrancy.

Despite the enormous benefits derived from the use of urban parks, there is limited research in the area of assessing the relationship between the demographic characteristics of park users and intensity of park use. This neglect is unfortunate because there is evidence that knowledge of park user characteristics is useful in differentiating, segmenting and targeting park visitors according to various categories of activities (McCormark 2010; Mowen *et al.* 2012). This situation poses challenges to recreation and park agencies that wish to address the diversified leisure needs and preferences of park users (Payne *et al.*, 2002).

A better understanding of how demographics, behaviour and experience preferences correspond to different physical activities helps in the development of a focused program, facilities and promotional efforts to increase park based activity levels (Mowen *et al.,* 2012).

The few studies assessing the relationship between park user characteristics and park use have not however yielded consistent results. Field (2000) found that time and space are important variables that help in explaining the regularity of social behaviour in parks. Scott (1997), on the other hand, indicated that there is as an association between the activities of park users and the time of the day, day of the week and season of the year. Other studies noted the effect of some demographic factors such as race (see e.g., Gobster 2002; Payne *et al.* 2002) and age (see e.g., Kemperman and Timmermans 2005) on park use behaviour.

The overall goal of the study is to analyse how the demographic characteristics of park users influence park use and management through an assessment of the relationship between the demographic characteristics of park users and intensity of park use within the context of a cosmopolitan urban setting of Vancouver City.

2. Study sites

The City of Vancouver in the province of British Columbia, Canada, was selected as the study site on the basis of its long standing position as a nodal point for both internal and transnational flow of goods and people (Horak & Young, 2012). The City of Vancouver is currently noted for its ambitious plan to become the world's most sustainable city through the formulation of policies to protect its natural environment including its green spaces. According to Horak and Young (2012), the City of Vancouver has consistently been ranked among the growth leaders within the Canadian urban system since the deep recessions in the 1980s. The city's urban parks give a broader view on the study of parks due to their social, environmental and economic characteristics and benefits.

The City of Vancouver has a population of 603,502 with a population density of 5,249.1 people per square kilometre (Statistics Canada, 2012). It is one of the most diverse cities in the world thus making it a single case study with diverse socio-economic characteristics. According to Statistics Canada (2008), the percentage of immigrants to the total population increased from 44.4% in 1996 to 45.1% in 2006. The high percentage of immigrants in the city has contributed to its diverse demographic characteristics.

The city also offers an important case for studying the operation and management of its variety of city parks from both historical and contemporary perspectives. The research focused on the two major parks in the City of Vancouver namely Stanley Park and Queen Elizabeth Park. Stanley Park which was created in 1888 is a 400 hectare park located in the City of Vancouver. The park is a good representation of large urban parks with tourism potential. Stanley Park has diversified elements of natural and cultural environments.

Queen Elizabeth Park is a 52 hectare park developed in 1930. This park effectively combines the social, ecological and economic functions of parks. The findings of the study are applicable to cities with similar situations and characteristics as the City of Vancouver. Also, park administrators of large and medium size parks such as Stanley Park and Queen Elizabeth Park can rely on some of the findings of the study for effective and efficient park management. The brief description and justification for selecting each of the parks have been presented in Table 1.

Table 1-Description of Selected Parks and Justification of Choice
Source: Vancouver Park Board

Name of park	Year of establishment	Brief description	Justification of choice
Stanley Park	1888	- Diversified elements of natural and cultural environments. - A 400-hectare natural West Coast rainforest.	- National Historic Site - Vancouver's first and largest park - Local and International Tourism - Good representative study for large parks in cities with similar characteristics like the city of Vancouver.

Queen Elizabeth Park	1930	- Vancouver's horticultural jewel and the city's highest point at 152 metres above sea level. - A 52-hectare park and home to the stunning Bloedel Conservatory.	- Combines social, ecological and economic functions of parks. - Diverse range of recreation including golf, tennis, lawn bowling and disc golf. - Good representation for the study of medium size Parks in cities with similar characteristics like the city of Vancouver.

3. Research method

The study was conducted using a structured interview with a total sample size of 725 respondents (374 interviewed at Stanley Park and 351 interviewed at Queen Elizabeth Park). The general sampling strategy for the park user survey relied on the application of certain aspects of the stratified sampling technique, where the various parks were divided into strata based on the various categories of uses. This served as the basis for distributing the questionnaires to potential research participants.

Stratified sampling is frequently useful to divide the population into subgroups called strata (Sudman, 1976). As already discussed, the case study for this research is the City of Vancouver in Canada. Within the City of Vancouver, the study areas selected are Stanley Park and Queen Elizabeth Park.

Questionnaires were distributed among users of Stanley Park based on the six areas of attractions, the fifteen activity areas, the four restaurants and the four sports clubs. The map of Stanley Park showing the various activity areas has been presented in Figure 1. Questionnaires administered at Queen Elizabeth Park were also distributed among the users of Bloedel Conservatory, Seasons Restaurant, Rose Garden, Tennis Courts, Pitch & Putt Golf and a Celebration Pavilion. These activity areas have been presented in Figure 2.

The systematic sampling technique was used in selecting interview respondents. A systematic sampling technique is used far more frequently than simple random sampling because of its simplicity and usefulness in complex sampling situations (Sudman, 1976). The two main things used for systematic sampling technique according to Sudman (1976) were the sampling interval and a random start. The interviewers of this study chose the first park user to be met who was older than 17 years as the random start and the sampling interval was 3 that is, each 3rd person after the interviewed person will be selected.

This strategy was however, not applicable to park users involved in active recreation and areas within the parks with less number of people. Park users involved in active recreation such as biking and jogging were automatically selected once the user agreed to participate in the study and were more than 17 years of age. The analysis of the park user characteristics specifically dealt with the demographic characteristics of the park users which include the gender of the users, their employment status, age and income.

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Figure 1. Map of Stanley Park Showing the Various Activity Areas.
Source: City of Vancouver Park Boards.

Figure 2. Map of Queen Elizabeth Park Show Activity Areas
Source: City of Vancouver Parks Board

3.1 Measures and analysis
The structured questionnaire used for the survey consisted of 26 questions. The questions covered major themes such as the demographic characteristics of park users, park use information, park management and information on park activities. These themes served as the basis for data categorization. A code book containing the question number, the name of the variable, the question, and the code was created. During the coding, numbers were used to represent response categories. With regards to binary response categories, zero and one were used to code the variables.

Data entry, analysis and statistical tests were done using Microsoft excel and Strata software (version 12) were used for the analysis of data and the various statistical tests. The relationship between the demographic characteristics of park users and intensity of park use was tested using the chi-square analysis. The *p*-values were calculated and the significance level is established at the 0.05 alpha level. Generally, *p*-values less than 0.05 provide evidence of significant association between a particular demographic factor and intensity of park use.

4. Results of the study
4.1 Age of park users
The age structure helped in understanding the statistical components of the different age groups of Stanley Park and Queen Elizabeth Park. This will serve as an important basis for informing decision makers on the age specific needs of the various visitors of the parks. Overall, majority of the park users for both parks comprised of mostly a youthful population. The survey in Stanley Park showed that 41.67% of park visitors were in the age cohorts of 18-34, 32.26% in the cohort of 35-49, 16.13% in the cohort of 50-64 and 9.95% in the age cohort of 65+. On the other hand, the survey in Queen Elizabeth Park indicated that 48.43% of the survey respondents were in the age cohort of 18-34, 25.64 % in the cohort of 35-49, 17.09% in the cohort of 50-64 and 8.83% in the cohort of 65+. The use of Stanley Park and Queen Elizabeth Park are dominated by the youthful population because of the presence of a variety of active recreational facilities and activities on both parks. This notwithstanding, there is a fair number of park users who fall within the age cohorts of seniors. Although the proportion is small, the survey results showed that 9.95% of the respondents in Stanley Park fell within the retirement age while 8.83% of the park users at Queen Elizabeth Park were seniors.

Generally, the results of this survey are consistent with already existing literature on the age structure of park users. Mowen *et al.* (2012) for example found that older adults are less active than younger adults therefore they have a lower tendency to dominate in the use of parks. Cohen *et al.* (2007) survey on neighbourhood parks in the City of Los Angeles also showed few seniors using the parks in the city. However, their finding further showed that the presence of senior citizen centers on the park served as an attractive force for more seniors. The City of Vancouver Park Board can therefore, consider developing facilities such as the senior citizen centres which will stimulate park use among seniors. The minimum and maximum age of the users of Stanley Park was between 18 years and 89 years respectively. The most commonly occurring age among Stanley Park users was 32 years. Also, the average age for the visitors of Stanley Park was

40.20 years thus indicating that the park users comprised of predominantly a youthful population.

It must however be noted that the minimum age of both Stanley Park and Queen Elizabeth Park was 18 years because the study did not include minors. Therefore, the minimum age required for participants to take part in the study was 18 years. The maximum age for Queen Elizabeth Park users was 84 years with the most commonly occurring age among the park users being 26 years. On average, the visitors of Queen Elizabeth Park were 39.1 years of age. The analysis of the age distribution for Stanley Park and Queen Elizabeth Park users has been shown in Table 2.

Table 2. Demographic characteristics of park users.
Source: Stanley Park and Queen Elizabeth Park survey, 2014.

	Stanley Park %	Queen Elizabeth Park%
Age		
18-34	41.67	48.43
35-49	32.26	25.64
50-64	16.13	17.09
65+	9.95	8.83
Employment		
Full Time Employed	55.58	47.47
Part Time Employed	9.35	11.73
Seasonally Employed	2.08	0.56
Student	15.32	19.83
Unemployed	4.68	3.91
Voluntary Employed	3.12	5.03
Retired	9.87	11.45
Marital status		
Married	53.46	43.87
Single	41.00	50.71
Divorced	2.49	4
Widowed	3.05	1.42
Gender		
Male	49.73	51.85
Female	48.40	47.29
Other	1.87	0.85
Place of origin		
Vancouver	29.87	68.95
Metro Vancouver	12.00	11.4
Within British Columbia	7.20	5.13
Within Canada	16.00	5.41
Outside Canada	34.93	9.12

Race/ethnicity		
White	66.49	53.56
African	1.61	1.99
Native	1.34	1.42
Asian	21.72	34.47
Latino	6.43	5.41
Multi-Racial	2.41	3.13
Income		
Less than 15,000	8.49	9.12
15,000-25,000	7.16	10.545
25,000-50,000	17.24	21.37
50,000-75,000	16.45	17.38
75,000-100,000	17.77	17.38
More than 100,000	32.89	24.22

4.2 Gender of park users

Arnold and Shinew (1998) argue that women are among one of the disadvantaged when it comes to the use of park and other leisure facilities. Kaczynski *et al.* (2011) supports this argument by indicating that women are generally more constrained than men in their leisure due to factors such as fear of crime. According to Henderson *et al.* (1996), some of the constraints to women's participation in leisure include busy work and domestic schedules and fear of violence. This theoretical analysis justifies why gender is an important factor in the use and management of parks. There is therefore the need for further studies to identify some of the factors that hinder or promote gender equality in the use of parks.

The results of the survey indicated that on the average more males use parks than females and the females that use the parks are normally accompanied by their male counterparts. According to the results, majority of the users of Stanley Park (49.73%) were males, 48.4% were females while 1.87% were transgender. Similar to Stanley Park, Queen Elizabeth Park had more males using the park than females. The results of the survey indicate that park users who were males comprised of about 51.83% while 47.30% were females. Those who identified themselves as transgender constituted 0.85%. Generally, the survey result for both Stanley Park and Queen Elizabeth Park did not deviate from some of the already existing studies on the analysis of gender and the use of parks. Mowen et al. (2012) for example argues that women are less active than men thus there is the tendency for men to dominate in the use of parks. A study conducted by Cohen et al. (2007) in the City of Los Angeles also showed that more males were using parks than females (62.00% versus 38.00%). However, a lower proportion of females use parks in Los Angeles compared to that of the City of Vancouver. This could be attributed to the higher level safety issues in Los Angeles than the City of Vancouver.

4.3 Employment status of park users

Park researchers such as Kelly (1987) generally believe that there is a positive association between higher occupational statuses and leisure participation. The research findings

showed a high employment rate among the visitors of both Stanley Park and Queen Elizabeth Park thus justifying this theoretical standpoint. According to Statistics Canada (2015), the unemployment rate for the City of Vancouver in 2014 was 5.20% and that of 2015 is 4.80%. Generally, the unemployment rate for City of Vancouver in 2014 and 2015 is higher than the unemployment rate for users of Stanley Park (4.68%) and Queen Elizabeth Park (3.91%). The study further showed that more than half of the survey respondents at Stanley Park are employed.

Historically, the working class were among the main target users for the development parks in the United States. According to Burdge (1969), individuals with higher occupational status have the greatest variety of leisure activities. This positively contributes to increasing their overall park use. The results of this study show the same trends but in this case, parks are not purposely developed for the working class but rather also influenced by issues of affordability.

The results showed that 55.58% of the survey respondents at Stanley Park were full time employed while 4.68% were unemployed. Also, the survey results indicated that the number of Stanley Park users who were part time employed were 9.35% while those who were seasonally employed constituted 2.08%. Furthermore, park users who were students, voluntarily unemployed and retired at Stanley Park constituted 15.32%, 3.12% and 9.87% respectively.

On the other hand, the employment and unemployment rates among the users of Queen Elizabeth Park were 47.48% and 3.91% respectively. The survey results further indicated that Queen Elizabeth Park users who were employed on part time and seasonal basis were 11.73% and 0.56% respectively. Also, visitors of Queen Elizabeth Park who were students, voluntarily unemployed and retired comprised of 19.83%, 5.02% and 11.45% respectively.

4.4 Race/ethnicity of park users

Ballard (2006) describes the term race from two main perspectives. Race according to Ballard (2006) can be used to highlight the common genetic characteristics of the entire human kind. In the second description of race which applies to this study, Ballard (2006) define race as the categorical differences between different sub-sections of Homo sapiens such European Race or White Race.

Anold and Shinew (1998) note that minority ethnic groups such as Blacks are among the disadvantaged categories of people in the United States thus adversely affecting their level of leisure participation. Kaczynski *et al.* (2011) also found that a greater percentage of Whites are active park users than other racial groups such as Blacks. There is the need for researchers and park managers to understand some of the factors that promote or inhibit racial equitability in the use of parks. This can be examined through an analysis of the racial/ethnic origin of park users.

The survey which did not contradict some of the already existing literature on park use and race showed that most of the tourists who visited Stanley Park for instance came from Europe thus contributing to the high percentage of Whites. The results further indicated that the percentage of Whites in Stanley Park was 66.49%. Blacks and Aboriginal population on the other hand, consisted of 1.61% and 1.34%. Furthermore, Stanley Park users who identified themselves as Asians, Latinos and Multi-Racials constituted 21.72%, 6.43% and 2.41% respectively.

The racial trends of neighbourhood parks normally reflect the overall racial characteristics of the city in which these parks are located. There were more Asians in Queen Elizabeth Park than in Stanley Park because Queen Elizabeth Park is mostly used by the residents of the City of Vancouver unlike Stanley Park which is dominated by tourists. The high number of Asians at Queen Elizabeth Park compared to that of Stanley Park generally reflects the large Asian population in the City of Vancouver. The users of Queen Elizabeth Park who were Whites consisted of 53.56% while 34.47% were Asians. Minority racial groups such as Blacks, Aboriginals, Latinos and Multi-Racial group represented 1.99%, 1.42%, 5.41% and 3.13% respectively.

4.5 Income status of park users
The availability of financial resources allows access to paid leisure activities; increase the ability to purchase transportation and equipment used for leisure activities (Arnord & Shine, 1998). Arnord and Shinew (1998) further argue that the poor are receiving less leisure appointments due to the rising costs of providing basic leisure services. The income status of park users is therefore a major contributory factor to the use of parks. In the case of tourist parks such Stanley Park, high income earners will have the ability to travel and visit these parks more often than low income earners.
On the other hand, the visitors of neighbourhood parks such as Queen Elizabeth Park must have the ability to afford the purchase of required recreational equipment before they can enjoy leisure activities such as tennis, hockey, golf and basketball. This generally explains the reason why there are more high income earners among the visitors of both Stanley Park and Queen Elizabeth Park. The survey results showed that 32.89% of the users of Stanley Park earned more than $100,000 a year while 24.22% of the Queen Elizabeth park users earned more than $100,000 per year. Also, the findings of the study indicated that 8.49% of the visitors of Stanley Park earn less than $15,000 with park users earning $15,000-$25,000 constituting 7.16%. Furthermore, Stanley Park users who earn $25,000-$50,000, $50,000-$75,000 and $75,000-$100,000 represented 17.24%, 16.45% and 17.77% respectively. The study also showed that 9.12% of the users of Queen Elizabeth Park earn less than $15,000. Also, Queen Elizabeth Park users who earn $15,000-$25,000, $25,000-$50,000 and $75,000-$100,000 comprises of 10.54%, 21.37% and 17.38% respectively.

4.6 Place of origin of park users
Parks are important sites for environmental, economic and social activities, but few studies have documented the behaviour of park users (Kaczynski, 2011). Parks can either be used by city residents for recreation or by tourist for tourism purposes. The study of the place of origin of park users helps to understand the geographic impact of parks and their overall impact on the economy of the city. Urban parks with wider geographic impact contribute more to the economy of cities, as they help in the promotion of tourism. Stanley Park for instance has a wider geographic impact because majority of the park users representing 34.93% visited the park from outside Canada. The survey also indicated that 16% of the users of Stanley Park were from within Canada while 7.2% were from within British Columbia but outside the City of Vancouver.
All these users were tourists from either within Canada or outside Canada who visited Stanley Park to enjoy the unique environmental setting and recreational facilities. Parks

such as Stanley Park which promotes tourism contributes immensely to the economy of cities. Cities such as Vancouver generate revenue from park tourists through taxes on goods and services purchased. The various forms of expenditure made by tourists such as expenditure on food, accommodation and transportation contribute immensely towards the expansion of the city's economy. The users of Stanley Park who live in the City of Vancouver and Metro Vancouver consist of 29.87% and 12.00% respectively.

Unlike Stanley Park, majority of the users of Queen Elizabeth Park representing 68.95 % visited the park from the City of Vancouver. This therefore makes Queen Elizabeth Park more of a neighbourhood park with less geographic impact compared to Stanley Park. The visitors of Queen Elizabeth Park who come to the park from outside and within Canada were 9.12% and 5.41% respectively. The study also showed that the users who visited Queen Elizabeth Park from Metro Vancouver were 11.40% of the survey population.

4.7 Distance travelled to visit parks

Park visitation is more frequent for those who live within walking distance to a park (McCormark et al, 2010). The proximity to parks influences the frequency and level of park usage. Park users who are normally tourists prefer to live in hotel and hostel facilities that are close to the parks they intend to visit. Stanley Park being one of the major tourist sites in the city of Vancouver has a variety of hotels located within walking distance. The minimum distance travelled to visit Stanley Park was 1 kilometre. The maximum distance on the other hand was 96 kilometres while the average distance is 13.8 kilometres. The standard deviation is higher than the mean because there were outliers that deviate from the mean. This also explains the wide gap between the minimum and maximum distance travelled to visit the park.

The minimum distance travelled to visit Queen Elizabeth Park is 1 km and the maximum distance was about 150 kilometers. On average, park users travelled about 20.6 kilometers to visit Queen Elizabeth Park. The results indicated that park visitors were willing to travel more distance to parks that have certain facilities and activities that are not present on the nearby neighbourhood parks. Queen Elizabeth Park for instance has a variety of recreational facilities and also have an off leash park for dogs that are not available in most neighbourhood parks. Table 6.6.10.1 presents the distance travelled to visit Stanley Park and Queen Elizabeth Park.

4.8 Frequency of visit to parks

The frequency of visit to parks is not only influenced by proximity to the park but also weather conditions. Overall, the survey results indicated that a higher proportion of the users of Stanley Park and Queen Elizabeth Park visited the parks during the summer seasons. The results showed that 2.15% of the survey respondents visit Stanley Park every day while 68.09% visit the park during the summer. Also, 10.99% of the visitors of Stanley Park use the park a few times per week while 6.70% use the park once a week. Additionally, Stanley Park users who visit the park once a month or few times per month constituted of 6.17% and 5.89% respectively.

On the other hand, park users who visit Queen Elizabeth Park every day were 5.69 % while park users who visit Queen Elizabeth Park during the summer seasons were 48.43%. The survey results also showed that 17.09 % of Queen Elizabeth Park users visit the park a few times a week. Furthermore, the users of Queen Elizabeth Park who visit

the park once a week, once a month and a few times per month constitute 7.69 %, 9.12 % and 11.97 % respectively.

4.9 Funding sources for the development of parks
Park users' perceptions on how to raise financial resources for the management and maintenance of parks is crucial to the park management decision making process. The historical analysis of parks in the City of Vancouver indicated that park development was historically funded through donations. However, the survey shows that park users are currently not willing to pay for the use of parks but rather expect park development to be funded by the City of Vancouver and other levels of government. The survey indicated that 37.22% of Stanley Park users expect the City of Vancouver to provide financial resources for the development and management of parks. Also, 14.43% of the visitors of Stanley Park expect the management and development of parks to be funded by Metro Vancouver while 20.17% think financial support for park development should come from the Provincial Government. Additionally, Stanley Park users who recommend that the development and management of parks should be funded by the Federal Government, through user fees and donations constitute 14.43%, 6.09% and 7.65% respectively.
The results further indicated that 47.26% of Queen Elizabeth Park users expect the development and management of the park to be funded by the City of Vancouver. Furthermore, park users who believe funding should be generated from user fees and donations were 3.54% and 6.37% respectively. Additionally, Queen Elizabeth Park users who expect Metro Vancouver, the Provincial and Federal Government to fund the development of parks consists of 12.57%, 20.53% and 9.73% respectively.

4.10 Means of transport to parks
An analysis of the means by which park users visit the parks, help in understanding the overall contribution of the park to carbon foot print and physical activities such as walking. The users of both Stanley Park and Queen Elizabeth Park heavily rely on the use of automobile as the main means of transport to the parks. This increases the level of carbon emissions thus distracting the functional role of parks as a means of preserving the environment. The survey results showed that 41.32% of the users of Stanley Park visit the park with their private cars while 25.26% use public transit. Also, park users who visit Stanley Park through cycling and walking were 8.16% and 21.32% respectively. Furthermore, Stanley Park users who come to the park by charter bus and taxis consist of 1.58% and 2.37% respectively.
Similar to Stanley Park, majority of Queen Elizabeth Park users visit the park using their private cars. The users of Queen Elizabeth Park who visit the park with their private cars constitute 54.79% while 17.81% walk to the park. Also, Queen Elizabeth Park users who come to the park by public transit, charter bus, taxi and bicycle represent 20.55%, 1.10%, 0.55% and 5.21% respectively. The transit system to Stanley Park is more efficient than that of Queen Elizabeth Park. This explains why more users of Stanley Park (25.26%) rely on public transit than the users of Queen Elizabeth Park (20.55%).

4.11 Major concerns on the use on the parks
The issues of safety and poor park conditions resulting from poor park maintenance deter park use (McCormark et al., 2010). This serves as a justification on the need for park

administrators to address the major concerns of park visitors to help improve park based activities. The assessment of some of the major areas of concern confronting the use of parks from the perspective of the park users will help inform park decision makers.

The major issues raised by the users of Stanley Park and Queen Elizabeth Park were related to issues of maintenance and safety. It is therefore important for the managers of these two parks to develop a maintenance plan in consultation with the park users to help improve these two areas of concern. This is because addressing issues of safety and park maintenance will help improve park conditions and facilitate higher physical activity level. The visitors of Stanley Park who saw the issue of safety as a major area of concern were 18.38% while 19.42% were concerned about maintenance. Also, Stanley Park users who expressed concerns about park design and variability of activities consisted of 11.17 % and 17.01% respectively. The other concerns expressed by the visitors of Stanley Park were issues of lighting accounting for 4.81% and availability of transportation options representing 12.20%. Furthermore, park users who had no concern on the current state of Stanley Park constituted 17.01%.

Additionally, Queen Elizabeth Park users who had issues with safety and maintenance consisted of 16.30% and 25.00% respectively. The survey results also showed that Queen Elizabeth Park users who expressed concerns about park design and variability of activities were 14.00% and 13.00% respectively. Furthermore, visitors of Queen Elizabeth Park who had issues with lighting and transportation options consisted of 6.16% and 7.43% respectively. Finally, the users of Queen Elizabeth Park who were satisfied with the current state of the park were 19.00%.

4.12 Wi-Fi access within parks

The level of technological advancement has adversely affected the willingness of the youthful population to move away from the cyber space to utilise park space. Technological advancement has created several indoor entertainment options thus adversely affecting the number of people who are willing to go out and use parks. It is therefore important for park managers to consider combining technological space and park space to maximize the use of parks.

There is currently a proposal to provide Wi-Fi hotspots in 150 locations on Canadian National Parks (CBC, April 29, 2014). In 2005, the Vancouver City Council considered providing Wi-Fi in public places but the implementation of the proposed policy was inhibited by the limited financial resources (CBC, September 14, 2011). The decision making process on providing accessibility to Wi-Fi in parks cannot be sustainable without knowing the views of park users.

The findings of the study showed that park users who want Wi-Fi access on Stanley Park comprised of 51.80% of the survey respondents while 48.20% opposed the provision of Wi-Fi on the Park. Generally, park users who were in favour of providing accessibility to Wi-Fi cited reasons such as improvement in communication, taking pictures and uploading on social media while using the park, combining leisure and learning. Queen Elizabeth Park users who were in favour of the provision of Wi-Fi were 53.16% while 46.84% of the park users opposed the idea. The reasons cited by the park users for opposing the provision of Wi-Fi include the interference with nature and the fact that they already have internet data on their mobile phones.

4.13 Benefits derived from the use of Stanley Park and Queen Elizabeth Park
According to McCormack (2010), social and physical environment is a major determinant of park based activities and the direction of influence may be negative or positive. Some of the positive attributes of parks include its natural features such as trees, gardens, flowers and water. These positive features of parks contribute enormously towards the development of cities. The multiple benefits derived from the use of parks vary from economic, social to environmental.

Generally, the multi-functional roles of parks lead to their multi-dimensional benefits. The multiple uses of parks make them a multifunctional landscape. Yang *et al.* (2013) defines multifunctional landscapes as landscapes designed for multidimensional benefits.

According to the findings of the study, the benefits of Stanley Park and Queen Elizabeth Park as cited by park users were mostly direct benefits. The visitors of the parks did not talk about indirect benefits such as parks serving as storm water management facilities, increasing the tax base of the city through tourism and purifying the air in the city.

This notwithstanding, park users gave an extensive overview of the benefits of the parks thus helping to justify some of the already existing literature on the multifunctional benefits of parks. Park users cited various benefits they derive from the use of Stanley Park and Queen Elizabeth Park. These benefits have been grouped in to twelve main categories and further categorised into either economic benefits, social benefits or environmental benefits. Table 3 presents a summary of the benefits park users derive from the use of Stanley and Queen Elizabeth Park.

Table 3. Benefits of using Stanley Park and Queen Elizabeth Park
Source: Stanley Park and Queen Elizabeth Park survey, 2014

Park Benefit	Category of Benefit	Stanley Park- Frequency %	Queen Elizabeth Park –Frequency %
Adult and Children Recreation	Social Benefits	24	20
Connection to Nature	Environmental Benefits	16	17
Access to Fresh Air	Environmental Benefits	4	3
Aesthetics	Environmental Benefits	14	15
Dog Recreation	Social Benefits	1	6
Relaxation and Social Interaction	Social Benefits	8	16
Reflection/Peace/Joy	Social Benefits	10	7

Exercise/Health	Social Benefits	13	9
Education	Social Benefits	3	4
Tourist Attraction	Economic Benefits	5	2
Employment	Economic Benefits	2	1

4.14 The Conflicting and complimentary roles of Parks-Stanley Park and Queen Elizabeth Park
Overall, this study showed a continuous increase in the area of concrete surfaces, hard landscaping and the number of physical structures on both Stanley Park and Queen Elizabeth Park. This is as a result of the development of parking lots, tarred roads and paved areas to meet the diversified but conflicting need of park users.

The construction of the Vancouver Aquarium which was opened on June 15, 1956 for example contributed to the increase in paved concrete areas and physical structures on Stanley Park. The Vancouver Aquarium covers an area of about 100,000 square feet. In as much as these concrete surfaces, tarred roads and physical structures have contributed immensely to the stimulation of human activities on the parks, it has also adversely affected their natural characteristics.

There has also been an increase in the amount of storm water generated by the parks while reducing the amount of storm water absorbed. The presence of these physical structures and hard landscaping has therefore helped in improving the social functions of the parks but has adversely affected and limited the environmental functions.

In summary, the research findings indicate that the three main functional roles of parks namely the social, environmental and economic complement each other while these three roles also conflict with each other. Therefore, the maximization of one role can adversely affect the functions of the other. Figure 3 below shows some of the hard landscaping, concrete surfaces, paved roads and physical structures on Stanley Park.

The study also showed that the increase in human activities on Stanley Park and Queen Elizabeth Park have adversely affected the mobility of natural habitats. The movement of natural habitats such as ducks is restricted in the afternoons especially when the level of human activities intensifies. An observational analysis undertaken during the field visits indicated that the ducks on Stanley Park for instance normally come out early in the morning. They however go back to their ponds and the other water bodies around the park during the day time when human activity intensifies. This clearly shows a conflict between natural habitat and human activities on the park. Figure 4 gives pictorial representation of the effects of human activities on the activities of ducks in Stanley Park in the morning and at midday.

Despite the conflict between the economic, social and environmental functions of parks, both Stanley Park and Queen Elizabeth Park continue to perform these multifunctional roles. Stanley Park currently serves as one of the largest tourist destinations in Canada. This helps to promote economic growth through the money spent by tourists in the City

of Vancouver. The park also serves as nature reserve and at the same time as a place for recreational activities such as cycling, jogging and playing tennis. Figure 5 shows some of the multifunctional roles of Stanley Park.

Pesdestrain Crossing

Sitting Area at Entrance

Playground Area

Aquarium

Figure 3. Concrete Landscaping on Stanley Park
Source: Stanley Park and Queen Elizabeth Park Survey, 2014

Queen Elizabeth Park also combines its multifunctional role of promoting environmental preservation, social interaction and economic activities. The park currently serves as a nature reserve with its beautiful quarry garden and greeneries. Social interactions and activities are promoted on the park through the provision of recreational facilities such as basketball courts, tennis court and roller hockey court. The Bloedel Conservatory does not only serve as a tourist attraction but also serves as an educational resource. The park also provides recreation for children through its beautiful fountain. The off leash dog park is an important space for dog recreation. Figure 6 shows some of the multifunctional activities undertaken in Queen Elizabeth Park.

Ducks out at 6am   Ducks gone at midday

Ducks out at 6am   Ducks gone at midday

Figure 4. Relationship between Human Activities and Movement of Ducks on Stanley Park
Source: Stanley Park and Queen Elizabeth Park Survey, 2014

4.15 Demographic characteristics and intensity of park use

There is the need for park researchers and administrators to understand the relationship between the demographic characteristics of park users and the intensity of park use. This will help inform decision makers on the demographic characteristics to consider when promoting specific park based activities. The statistical analysis showed that there is no significant relationship between employment, marital status, gender, race, religion, income and intensity of Stanley Park use (P>0.05). There is therefore not enough evidence to suggest that the null hypothesis (H_o: there is no relationship between employment, marital status, gender, race, religion, income and intensity of Stanley Park use) is false at 95% confidence level. However, the chi-square analysis showed a statistically significant

relationship between place of origin, age and intensity of Stanley Park use (P≤0.05). Hence, there is enough evidence to suggest that the null hypothesis is false at 95% confidence level. The survey results indicated that park users from Vancouver are more likely to use Stanley Park at a higher intensity rate than park users from outside Canada. The statistical analysis indicated that 68.59 % of the park users who came from Vancouver use Stanley Park at higher intensity rate compared to 39.23% among park users from outside Canada.

Nature Reserve	Playground

Tennis Court	Sitting Area Along Bike Lanes

Figure 5 (bottom). Multifunctional Roles of Stanley Park
Source: Stanley Park and Queen Elizabeth Park Survey, 2014

Quarry Garden

Bloedel Conservatory

Tennis Court

Fountain

Figure 6. Multifunctional Roles of Queen Elizabeth Park
Source: Stanley Park and Queen Elizabeth Park Survey, 2014

Overall, the statistical analysis showed that the intensity of Stanley Park use is higher among park visitors who came from Vancouver (68.59%) than park users who came from outside Canada (39.23%). Also, park users below the age of 30 years are more likely to use Stanley Park at a higher intensity rate than park users who are above the age of 40 years. The survey results indicated that 54.13% of the park users who are below the age of 30 years use Stanley Park at a higher intensity rate whilst it is 46.50% among park users above the age of 40 years. Table 4 shows the summary of the bivariate analysis of demographic characteristics and intensity of Stanley Park use.

Relationship between the demographic characteristics of park users and intensity of park use

Table 4. Analysis of Demographic Characteristics and Intensity of Stanley Park Use

	Intensity (%)		χ2 Test	P-Value
	Low	High		
Employment			0.07	0.797
Fulltime	46.19	53.81		
Other	47.53	52.47		
Marital status			2.99	0.084
Married	51.04	48.96		
Other	41.92	58.08		
Sex			0.49	0.485
Male	48.65	51.35		
Female	45.00	55.00		
Place of origin			26.85	0.000
Vancouver/Metro Van	31.41	68.59		
Within Canada	54.12	45.88		
Outside Canada	60.77	39.23		
Race			2.82	0.093
White	50.00	50.00		
Ethnic Minority	40.80	59.20		
Religion			0.74	0.690
Christians	48.62	51.38		
Other Religion	48.65	51.35		
No Religion	44.08	55.92		
Income			0.0002	0.989
Under $50,000	46.72	53.28		
Over $50,000	46.80	53.20		
Age			6.48	0.039
Under 30	45.87	54.13		
30-40	37.50	62.50		
Over 40	53.50	46.50		

* H_0: There is no relationship between the demographic characteristics of park users and intensity of Stanley Park Use
* H_a: There is a relationship between the demographic characteristics of park users and intensity of Stanley Park Use

The statistical analysis indicated that there is no significant relationship between marital status, race, income, age and the intensity of Queen Elizabeth Park use (P>0.05). Therefore, there is not enough evidence to suggest that the null hypothesis is false at 95% confidence level.

On the other hand, there is a statistically significant relationship between employment, gender, place of origin, religion and the intensity of Queen Elizabeth Park use (P≤0.05). Consequently, there is enough evidence to suggest that the null hypothesis (is false at 95% confidence level.

In terms of employment, park users who are full time employed (59.88%) tend to use Queen Elizabeth Park at a high intensity rate than the aggregate of park visitors who belong to other employment categories such as students, unemployed, retired and seasonally employed (47.54%). The findings of the study further showed that males (58.56%) use Queen Elizabeth Park at a higher intensity rate than females (47.59%). Additionally, the intensity of Queen Elizabeth Park use among park visitors who came from Vancouver (56.79%) is higher than the intensity of use among park users who came from outside Canada (40.63%). The statistical analysis further indicated that park users who belong to other religions such as Buddhism (63.04%) use Queen Elizabeth Park at a higher intensity rate than park users who are Christians (44.92%) and park visitors who are not affiliated to any other religion (56.22%).

In as much as there is no significant relationship between age and Queen Elizabeth Park use, the statistical analysis showed that park users below the age of 30 years (53.08%) use the park at a higher intensity rate than the users above the age of 40 years (48.98%). Table 5 shows the bivariate analysis of demographic characteristics and intensity of Queen Elizabeth Park use.

Table 5. Analysis of Demographic Characteristics and Intensity of Queen Elizabeth Park Use

	Intensity (%)		χ2 Test	P-Value
	Low	High		
Employment			5.34	0.021
Fulltime	40.12	59.88		
Other	52.46	47.54		
Marital status			1.54	0.215
Married	50.33	49.67		
Other	43.65	56.35		
Sex			4.189	0.041
Male	41.44	58.56		
Female	52.41	47.59		
Place of origin			5.85	0.054
Vancouver/Metro Van	43.21	56.79		
Within Canada	59.46	40.54		
Outside Canada	59.38	40.63		
Race			0.52	0.473
White	44.62	55.38		

Relationship between the demographic characteristics of park users and intensity of park use

Ethnic Minority	48.47	51.53		
Religion			5.72	0.057
Christians	55.08	44.92		
Other Religion	36.96	63.04		
No Religion	43.78	56.22		
Income			1.16	0.282
Under $50,000	50.00	50.00		
Over $50,000	44.17	55.83		
Age			3.87	0.144
Under 30	46.92	53.08		
30-40	36.99	63.01		
Over 40	51.02	48.98		

* H_o: There is no relationship between the demographic characteristics of park users and intensity of Stanley Park Use
* Ha: There is a relationship between the demographic characteristics of park users and intensity of Stanley Park Use

5.0 Discussion and conclusion

Veitch *et al.* (2014) believe that modifying the built environment by improving parks is a sustainable way to increase population level social, activities. The demographic characteristics of park users are important determinants in the use and management of parks. The results of the study indicated that the use of both Stanley Park and Queen Elizabeth Park are dominated by the youthful population with an average age of 40 years and 39 years respectively. Mowen *et al.* (2012) for example justify this results by arguing that older adults are less active compared to younger adults thus, they are less likely to dominate in the use of parks.

The findings of the research also showed that more males use Stanley Park and Queen Elizabeth Park compared to their female counterparts. Generally, this results did not deviate from studies done by park researchers such as Arnold and Shinew (1998), Kaczynski *et al.* (2011) and Henderson *et al.* (1996). There researchers believe that women are among one of the disadvantaged when it comes to the use of parks. Therefore, there is the need for park administrators and policy makers to promote safety on parks in order to stimulate park use by women.

In terms of the employment status of the park users, the study showed a high employment rate among the visitors of both Stanley Park and Queen Elizabeth Park. This also justifies the theoretical standpoint that people with higher employment status tend to use parks and other leisure spaces at a higher rate. Park researchers such as Kelly (1987) believe that there is a positive association between higher occupational statuses and leisure participation.

According to Statistics Canada (2015), the unemployment rate for the City of Vancouver in 2014 was 5.20% and that of 2015 is 4.80%. Generally, the unemployment rate for City of Vancouver in 2014 and 2015 is higher than the unemployment rate for users of Stanley Park (4.68%) and Queen Elizabeth Park (3.91%). Arnord and Shinew (1998) argue that the

poor are receiving less leisure appointments due to the rising costs of providing basic leisure services. The income status of park users is therefore a major contributory factor to the use of parks.

In the case of tourist parks such Stanley Park, high income earners will have the ability to travel and visit these parks more often than low income earners. On the other hand, the visitors of neighbourhood parks such as Queen Elizabeth Park must have the ability to afford the purchase of required recreational equipment before they can enjoy leisure activities such as tennis, hockey, golf and basketball. This generally explains the reason why there are more high income earners among the visitors of both Stanley Park and Queen Elizabeth Park.

The survey which did not contradict some of the already existing literature on park use and race revealed that most of the tourists who visited Stanley Park for instance came from Europe thus contributing to the high percentage of Whites. Anold and Shinew (1998) argues that minority ethnic groups such as Blacks are among the disadvantaged categories of people in the United States thus adversely affecting their level of leisure participation. Kaczynski *et al.* (2011) also found that a greater percentage of Whites are active park users than other racial groups such as Blacks.

The frequency of visit to parks is not only influenced by proximity to the park but also weather conditions. Overall, the survey results indicated that a higher proportion of the users of Stanley Park and Queen Elizabeth Park visit the parks during the summer seasons.

Generally, there has been a major shift on park users' perceptions on how to raise financial resources for the management and maintenance of parks. The historical analysis of parks in the City of Vancouver indicated that park development was historically funded through donations. However, the survey shows that park users are currently not willing to pay for the use of parks but rather expect park development to be funded by the City of Vancouver and other levels of government. The survey indicated that 37.22% of Stanley Park users expect the City of Vancouver to provide financial resources for the development and management of parks whilst it is 47.26% among Queen Elizabeth Park users.

In terms of the means of transport to the parks, the users of both Stanley Park and Queen Elizabeth Park rely heavily on the use of automobile. This increases the level of carbon emissions thus distracting the ecological role of parks as a means of preserving the environment. The survey results showed that 41.32% of the users of Stanley Park visit the park with their private cars compared to 54.79% among Queen Elizabeth Park users. This has also increased the demand for parking spaces on the parks. The major concerns of the users of Stanley Park and Queen Elizabeth Park were mostly related to issues of maintenance and safety. It is therefore important for the managers of these two parks to develop a maintenance plan in consultation with the park users to help improve these two areas of concern. This is because addressing issues of safety and park maintenance will help improve park conditions and facilitate higher physical activity levels.

With regard to park users' opinion on the provision of Wi-Fi on the parks, the study showed that park users who want Wi-Fi access on Stanley Park comprised of 51.80% while 48.20% opposed the provision of Wi-Fi on the park. Generally, Stanley Park and Queen Elizabeth Park users who were in favour of providing accessibility to Wi-Fi cited reasons such as improvement in communication, taking pictures and uploading on social media while using the park, combining leisure and learning. The reasons cited by the

visitors of the parks for opposing the provision of Wi-Fi include the interference with nature and the fact that they already have internet data on their mobile phones. Generally, the research finding indicated that park users who live in Vancouver use both Stanley Park and Queen Elizabeth Park at a higher intensity rate than users coming from outside Canada. This therefore implies that the proximity to parks is an important determinant of the intensity of park use. The chi-square analysis showed a statistically significant relationship between place of origin, age and intensity of Stanley Park use (P≤0.05). Hence, there is enough evidence to suggest that the null hypothesis is false at 95% confidence level. The survey results showed that park users from Vancouver are more likely to use Stanley Park at a higher intensity rate than park users from outside Canada. The statistical analysis indicated that 68.59 % of the park users who came from Vancouver use Stanley Park at higher intensity rate compared to 39.23% among park users from outside Canada. Overall, the statistical analysis showed that the intensity of Stanley Park use is higher among park visitors who came from Vancouver (68.59%) than park users who came from outside Canada (39.23%). Also, park users below the age of 30 years are more likely to use Stanley Park at a higher intensity rate than park users who are above the age of 40 years. The survey results indicated that 54.13% of the park users who are below the age of 30 years use Stanley Park at a higher intensity rate whilst it is 46.50% among park users above the age of 40 years.

Parks are important urban infrastructure used for aesthetic development, promoting social interaction and the preservation of the natural environments of cities. The multifunctional roles of parks is complementary and at the same time conflicting.. These findings will inform policy makers on the demographic characteristics to consider when developing park based programs and facilities. The study shows that different demographic variables influence the intensity in the utilization of Stanley Park and Queen Elizabeth Park. Park administrators and policy makers must therefore undertake park specific needs assessment when providing park facilities, programs and services. This will help promote effective and efficient park service delivery.

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City Space Architecture

Effects of outdoor seating spaces on sociability in public retail environments

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Abstract
Seating is an important contributor to the social effectiveness of public spaces, due to its ability to support stay activities. This paper focuses on the contributions seating makes to sociability in Queen Street Mall in Brisbane, a public space where limited qualitative assessment has been conducted on seating use and social behaviour. Assessments were made on the sociability of Queen Street Mall through initial observations, online surveys and secondary observations. Common findings across all research methods suggest that the design of Queen Street Mall prioritises pedestrian movement pathways in the interest of adjacent retail centres, creating an environment that struggles to encourage social behaviour. To improve the social use of this space, seating environments should be redesigned to prioritise prolonged outdoor stay activity and increased provisions for shading and sheltering should be provided. Given the impending growth of the Brisbane population, it is important that public spaces in Queen Street Mall are designed to best serve an increasing number of local visitors.

Keywords: public seating, social engagement, urban planning, public open space, retail environments

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1. Introduction

1.1.   Aim

This study aims to identify how seating can affect the social-effectiveness of public spaces. Seating elements in public spaces are invaluable place-making tools for cities, given the opportunities for socialising they provide. In terms of social-effectiveness, seating within public spaces has the potential to benefit community health and wellness by creating safe spaces where people can de-stress through relaxation and physical activity (Chen, Liu and Liu 2016).

1.2.   Critique of the Different Theories of Research

Quality, thermal comfort and management factors are valuable tools for analysing public spaces, due to their wide-reaching influence on behaviour and social interaction in public space. Studies have shown that the quality of public spaces has a strong association with a sense of community, enhancing its social-effectiveness (Friesen 2017). The management of public spaces is a key factor in creating a social gathering place (Zhang and Lawson 2009), and thermal comfort strongly influences the effect of social interactions within these spaces (Rasidi, Jamirsah and Said 2012).

Some studies have established how 'high-quality' public spaces can promote greater associations through providing a sense of community, thus enhancing its social-effectiveness (Chen, Liu and Liu 2016). Prior research has stated that 'high-quality' public open spaces can create a stronger sense of community by increasing community participation and promoting physical and mental wellness (Francis et al. 2012). This suggests that attributes of public open spaces can influence the spatial use and behaviour of public space users.

Research into the occurrence of social activities in public spaces suggests that such activities are intrinsically linked to the presence of other people. Public spaces designed to encourage long stays outdoors are shown to be livelier and more sociable spaces than those that don't encourage prolonged outdoor use. By improving the conditions of public space environments to facilitate necessary and optional activities, social activities can be indirectly supported (Gehl 2011). Studies into the use of public spaces show that seating can support more than fifty percent (50%) of total stay activities, increasing the likelihood of passive contact and social activity (Chen, Liu and Liu 2016). There are several influential factors that can affect whether seating is adequately designed, including the quantity, placement, outlook and spacing (Chen, Liu and Liu 2016; Gehl 2011). By ensuring that seating environments are designed to best serve their users within their context, stay activities can be encouraged and public spaces can become more sociable. Further research has demonstrated that the management of public spaces is also a key factor in creating successful social spaces. (Chitrakar, Baker and Guaralda 2017). Examining the social activities in public outdoor spaces, defining the characteristics of seating spaces, and assessing how these spaces are managed in conjunction with other areas has suggested that a comprehensive management plan is essential for the rejuvenation of deteriorating communal spaces (Lee, Byun and Lee 2014). Maintaining a balance between the social, civic and economic functions of public space is also an important aspect of good public space management. This is especially true for economically-driven and privatised environments, where commercial interests often dominate the decision making of the public realm (Friesen 2017). As such, public spaces

require effective management in order to maintain the social and civic responsibilities of public space and prevent corporate and private powers from imposing themselves too heavily.

The role of thermal comfort as an influential factor on social interactions has also been examined. Research investigating how typical humid-sun spaces can show demotion of social interaction suggested that diversity of open spaces allows for better social interaction (Huang et al. 2016). These studies have demonstrated that outdoor thermal comfort and public space utilisation can be improved in hot and humid regions through the use of varying levels of shade. (Lin 2009).

As previously discussed, quality, thermal comfort and management factors are major catalysts for social interaction in public spaces. However, limited research has been conducted on how the perceptions and use of seating in public retail spaces influences social interaction. Therefore, the purpose of this current research is to better understand the social influence of public retail space seating environments, focusing on quality, thermal comfort and management factors.

1.3.   Research Question

The aims of this research are (*i*) to explore the perceptions of public seating in Queen Street Mall (henceforth QSM), Brisbane by assessing individual preferences, experiences and relationships with this seating; and (*ii*) to explore whether the public seating elements in QSM can effectively serve both functional and social purposes, now and into the future. These aims are addressed through the following research questions:

1. *Does the seating design in QSM contribute to socially-effective public space?"*
2. *Do the design characteristics of seating design in QSM encourage social behaviours based on current theories (as outlined in section 1.2)?*
3. *What stay activities are there in QSM that could improve the social interaction of visitors?*

In attempting to answer research question 3, the following sub-questions are asked:

1. *When and where do users choose to sit in QSM?*
2. *Who is using the seating and for what activities?*
3. *What are the user perceptions of seating design in QSM?*

1.4.   Setting

QSM provides an appropriate setting to explore quality, thermal comfort and management factors and to investigate how the design of public shopping malls influences the way people socially engage with one another. According to the Queen Street Mall Visioning Plan from 2015, 7,500 day-trippers, 8,900 residents, 9,000 tourists, 15,000 students, 40,000 shoppers, 20,000 night-time visitors/workers, and 150,000 employees visit QSM on a daily basis (Brisbane Marketing 2015). These statistics led the Lord Mayor of Brisbane to proffer QSM as "the most successful mall in Australia". However, there is no information regarding any specific usage and activities. The lack of qualitative data regarding the use patterns of QSM public spaces and the typical behaviour of its users poses a knowledge gap that must be addressed in order to substantiate claims for the success of QSM.

2.   Methodology
2.1.   Study Area
The study will specifically focus on the public spaces of QSM, situated in the central business district of Brisbane, a major city in South-East Queensland. This subtropical retail precinct extends roughly 450 metres by 210 metres with pedestrian zones roughly 25 metres wide.

A case study approach using mixed methods was selected as the most suitable approach for this project. The case study will explore the design of public seating spaces in QSM, the characteristics of the seating design that encourage social behaviour, and the usage activities which promote social interaction.

2.2.   Study Design
This study followed a mix-method design involving the collection of qualitative and quantitative data. All data collection processes were compliant with QUT Research Ethics guidelines. The study is in two parts:

Part A involved a site observation and an online survey. The initial observations occurred impromptu, irrespective of time and day, allowing for mapping of the public seating environments and the forming of a base understanding of the setting, users and activities of public space in QSM. Early analysis of site observations assisted the design of the online survey, which focused on the individual perceptions and behaviours of QSM users. These methods collectively informed the appropriate times and locations for Part B of the study.

Part B included observations of daily usage patterns. This method took place at QSM over 4 periods throughout a day. Testing was conducted on a Friday with a management-planned daytime public event in order to test during a best-case scenario for pedestrian traffic.

The collective findings of Part A and Part B informed understandings of how the seating environments in QSM do and do not positively contribute to social engagement. These findings also outlined the design characteristics and the usage activities that encourage social interactions within the public space of QSM.

2.3.   Site Observation
The initial site observation, conducted in mid-April 2018, developed our understanding of the site and the public seating locations within QSM. This helped to locate and determine which parts of the Mall contained the seating and place-making elements needed for conducting subsequent research. The field studies consisted of three open spaces with three researchers taking photographs and hand-written notes on the use of primary and secondary seating in the mall. Site mapping and photographic records provided context and generated a physical understanding of the research site. The focus areas for these observations included the uses and placement of seating areas within and around QSM, opportunities for visiting the mall, the design of the spaces in which people interact, and any recurring patterns that could be used to understand the typical use of seating areas.

2.4.   Online Survey
The online survey was created in Google Forms and distributed after the analysis of initial observation data. The survey was shared via Facebook as an open invitation by uploading a link and an explanation of the study purpose to the researchers' personal profiles. The

researchers also asked personal contacts from an older age demographic (>50 years old) to distribute the link and research purpose in order to receive a more even age spread among survey respondents. The online survey had an attached consent form and participant information sheet that provided additional details about the research project. The survey was conducted at the end of April until mid-May 2018 and disseminated to over 100 persons of varying age, gender and ethnicity, included both frequent and infrequent users of QSM.

Survey questions were developed and refined following initial site observations. These closed and open-ended questions included topics on demographics, use of QSM, use of seating, and perceptions of QSM. The questions assessed were:

(i)   The type of users of seating spaces in the QSM
(ii)   The use of seating spaces in QSM
(iii)   Perceptions of seating environments in QSM
(iv)   Additional comments (open-ended responses)
(For full question list, refer to Table 2 in Appendix)

2.5.   Secondary Observations

The secondary site observation explored the typical behaviour of QSM users, focusing on the type of activities performed and the uses of public seating spaces. This method was based upon the methods employed by Chen, Liu and Liu (2016) in their observational analysis of North Central Axis Square in Shenzhen, China.

Observations were conducted at 8:30 12:30, 15:30, and 17:15 on Friday 11 May 2018 to provide an overview across the busiest parts of the day. The observations were conducted with three researchers with two of the three physically tallying the data of pedestrian movement with a digital tally counter application and a timer. The third researcher used an observation table to record the instances and type of seating use that took place in three separate observation zones. This helped to understand the general trends and significant activity patterns that were observed during site visits, and to make comparisons with information collected during the online survey.

Instances of different activity types were tallied on a spreadsheet for each of three (3) QSM observation zones (Myer Centre, Albert St. Intersection and Wintergarden). These activity observations included: Sitting (passive observation); Talking; Interacting with phone/device; Observing public performances; Eating; and Other (miscellaneous activities requiring temporary stoppage). The context of observations was to understand: the uses and placement of seating areas within QSM public space; the interactions between people; and the typical use patterns of QSM which could lead to follow-up research.

3.   Results/Analysis

3.1   Site Observation

This section outlines the results and analysis of the initial site observation that involved site mapping and analysis over two separate visits. Both visits took place during the morning on their respective days, between 8:00am and 10:00 am. The data collected included field notes and photographic records of QSM, which helped inform the site map (Figure 1). Public seating was found to typically be designed as seating clusters for multiple small groups of people, up to five (5) people per bench seat. These spaces had a high activation potential due to the large amount of pedestrian movement, providing good opportunities for data collection.

Figure 1: Site Observation Map

Figure 2: Location A

Figure 3: Location B

Field notes and photographic records from site observation prompted the selection of three key locations that showed relevant seating and place-making elements needed to effectively conduct research. These locations were: Location A (outside of Brisbane Myer Centre); Location B (intersection point between Queen St and Albert St); and Location C (between Wintergarden and David Jones) (see Figures 2, 3, 4, 23, 24, 25).

Figure 4: Location C

Initial observations of QSM found very little social activity taking place among users of public seating. The main observed uses of public seating were:

- Watching the large television screen near the Myer Centre entrance
- Reading a newspaper or book
- Using a mobile phone (phone calls and/or screen interaction)

Some conversations between seating users were observed, but most people chose to sit on their own and space themselves from others. There was also intensive use of the privately-operated dining spaces along the Mall, especially during weekend observations. However, the inwards facing seating of these private spaces creates little connection between diners and QSM public spaces (Figure 5).

Figure 5: Seat orientation for private dining at "Jimmy's on the Mall"
creates disconnection with surrounding public space

Observations into the design of QSM public seating spaces revealed several insights into the typical behaviour of seating use in QSM. Shaded seats were the first to be filled by new users, with sun-exposed seats rarely taken while shaded seats were still available. Secondary seating was favoured over primary seating when the conditions, such as shading, were more favourable. Users not pre-occupied with other activities (e.g. eating,

phone calls) would choose to sit near performers, even if the seating conditions were unfavourable. Duration of seating use was generally dictated by the reasons for using seating. Seating turnover was typically every 5-10 minutes, unless users were engaged with activities such as eating, taking phone calls or watching public performances. The large television screen near the Myer Centre entrance was seen to prolong seating use but did not result in instances of social interaction.

3.2   Online Survey

Online survey data collected both quantitative and qualitative information in three mains areas; demographics, the use of QSM public spaces and perceptions of QSM.

95 people completed the online survey. The survey data was transferred to a spreadsheet based on the survey questions. Once the data was entered for each survey, these were checked by the three research team members to ensure data was correctly entered.

3.2.1   Demographics

Age groups for the online survey were selected so as to group people by their 'stage of life'. These chosen stages were teenagers (11-19); young adults (20-35); adults/middle-aged (36-59); and retiree/elderly (60<). Because of this, the age ranges within these groups is unequal.

- The identified gender of respondents was relatively even, with slightly more (57.9%) identifying as female.
- Of the four different age groups, the majority (67%) of respondents fell within the '20-35 years' age group.
- 44.4% of respondents identified as 'regular users of Brisbane CBD public transport terminals/stations'
- More respondents were casual visitors (27.1%) and CBD employees (19.4%) than Brisbane CBD residents (9.0%) (Figure 6)
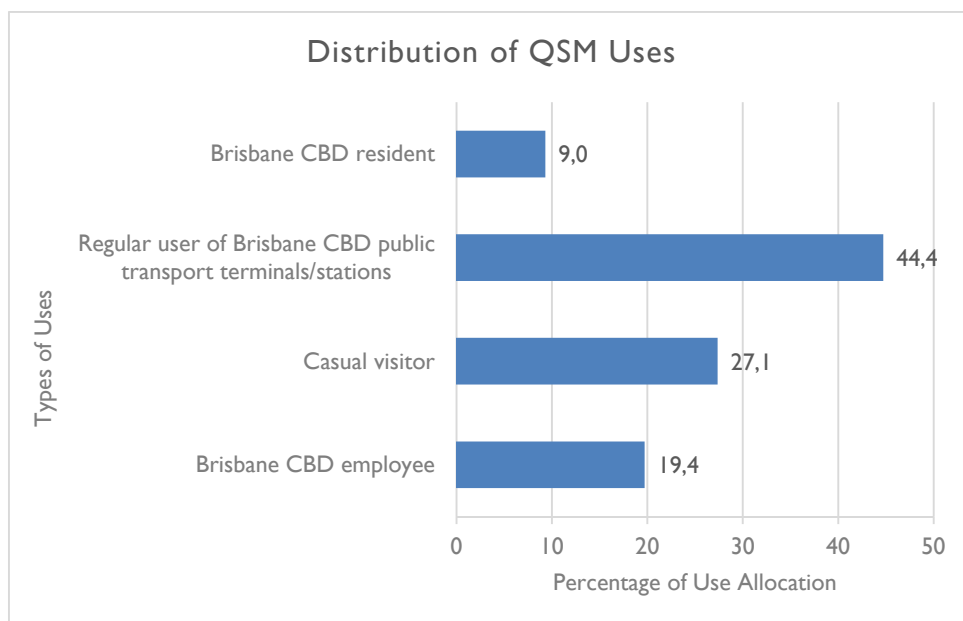
Figure 6: Distribution of Use

3.2.2 Use of Seating

In terms of the use of seating spaces in QSM, both quantitative and qualitative data were collected and analysed. Most respondents claimed to visit the mall at least once a week (51.6%) with few claiming to visit 'almost never' (9.5%) (Figure 7). The most common visiting time was during the afternoon, and more people visited on weekdays than weekends, as shown in Figure 8.
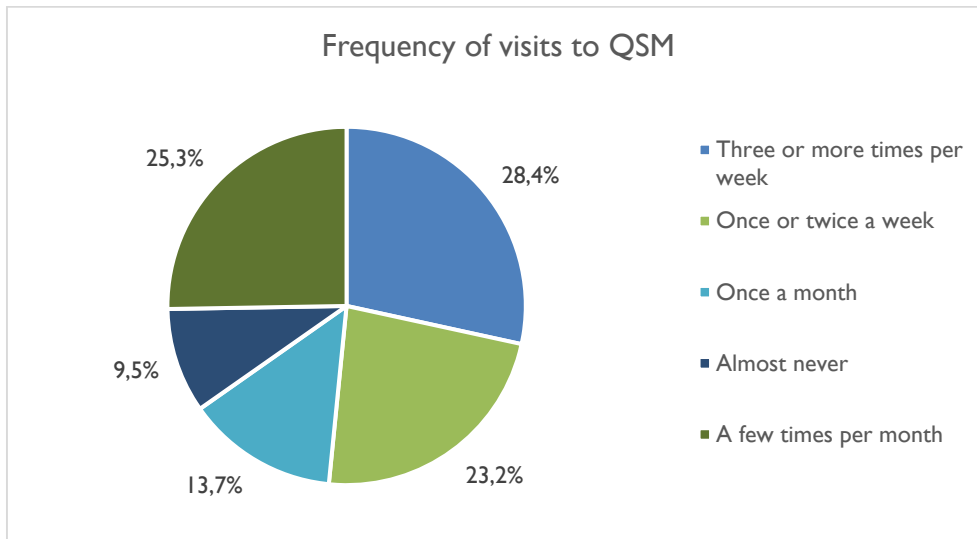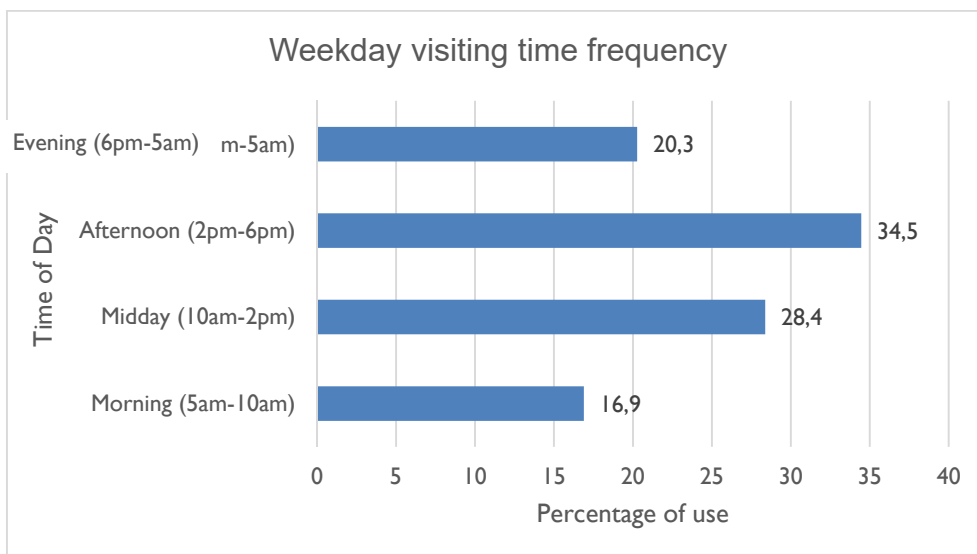

Figure 7: Visiting consistency of survey respondents

Figure 8: Visiting times of survey respondents

A majority of the respondents (65.2%) stated that they rarely used the public seating in QSM. When QSM seating was used, the most common use activities were eating (22.2%), resting (20.9%), meeting other people (20.5%) and using mobile phones (20.1%) (Figure 9). Responses regarding the use of secondary seating were evenly spread, with 49.4% stating they have used secondary seating elements in QSM instead of traditional seating (Figure

10). A majority of respondents (65.3%) claimed that public seating was available when they needed to use it.
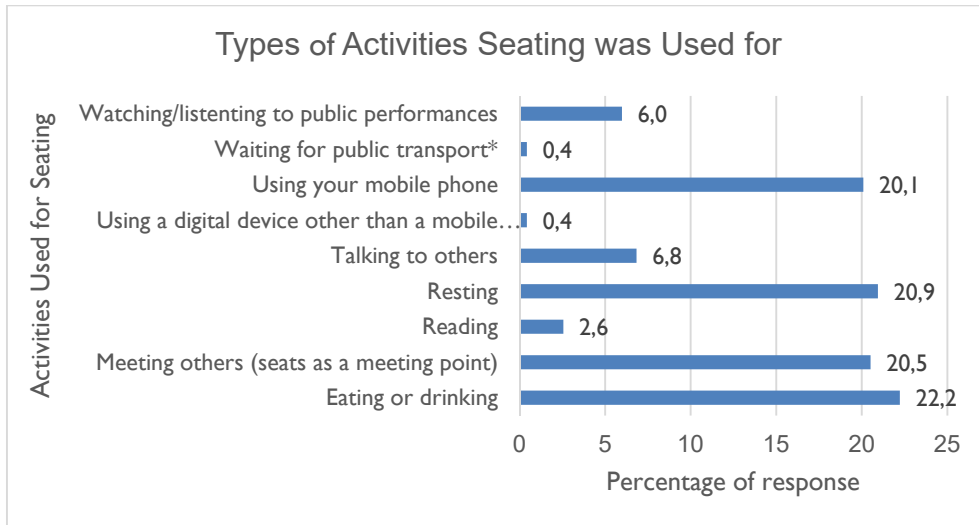
Figure 9: Seating activities of survey respondents
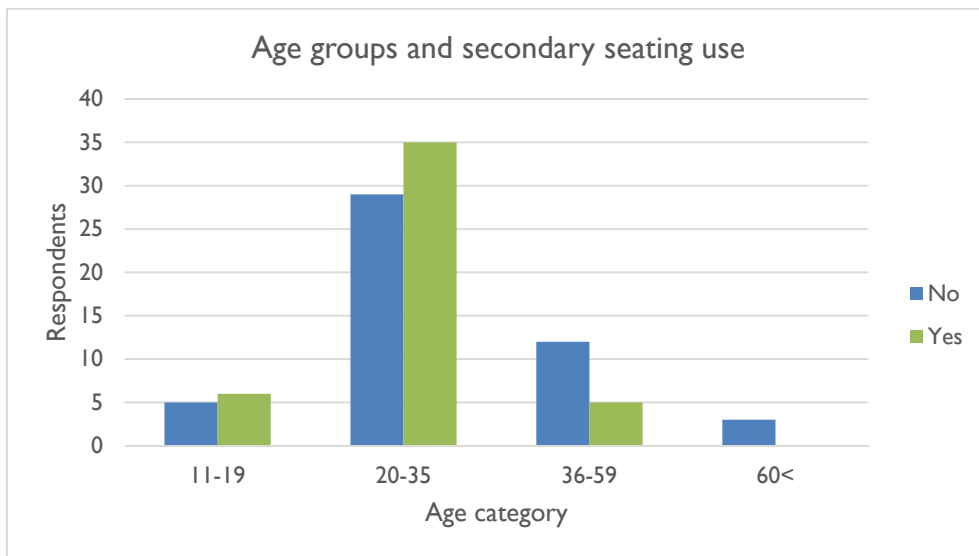
Figure 10: Secondary seating use by age of survey respondents

3.2.3   Perceptions of QSM and seating environments

Half (50.5%) of all respondents felt that QSM was well designed to facilitate stay activities and most (52.6%) respondents felt QSM was inviting to all users.

The majority of respondents felt that seating in QSM wasn't adequately sheltered, with more than half of respondents (54.7%) saying the seating wasn't sufficiently shaded and more than three quarters (78.9%) believing that seating wasn't sufficiently protected from wind and rain.
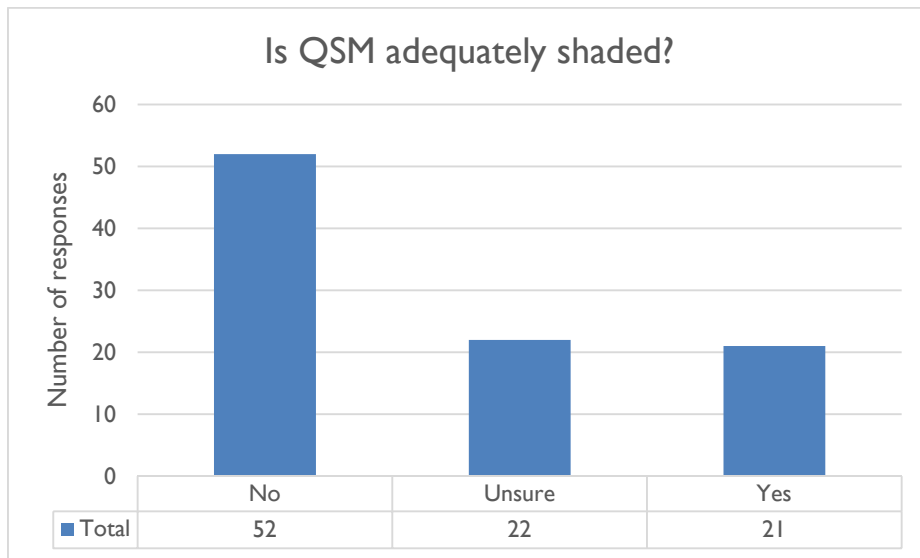
Figure 11: Survey responses on adequacy of QSM shading

3.2.4 Perceptions of branding and advertising in QSM

Most (60%) respondents felt the branding and advertising in QSM had no significant impact to user experience. Opinions on whether branding and advertising enhanced or detracted from the user experience in QSM were evenly divided (20% each) (Figure 12).
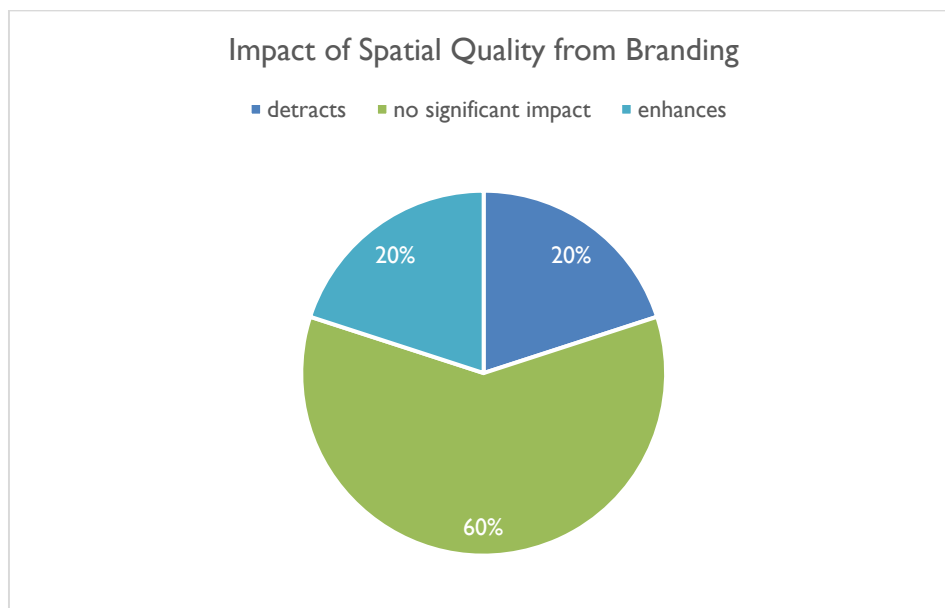

Figure 12: Branding impact on experience

3.2.5 Additional comments on QSM seating environments

The additional comments regarding QSM seating environments yielded mixed results. While some people felt the design of QSM public space was well suited to their reasons for use, others felt that the seating spaces were uninviting, insufficient or did little to support stay activities. Some of the participants also felt that the design of public space

seemed centred around the retail aspects of QSM, with not enough consideration for green space and activities like eating and relaxing.

3.3 Secondary Observations

The secondary observations, conducted Friday 11 May 2018, focused on collecting quantitative data regarding the pedestrian movements and instances of seating use in three zones of QSM. Data was analysed by observing the amount of seating use, the types and amount of different seating activities and the number of pedestrians transitioning through different spaces. Values were compared between different zones and observation times.

3.3.1 Activity Count

Location A, the area with the most seating, saw the greatest levels of seating use across the day. The greatest number of seating use recorded in an observation period was 35 instances, during the mid-afternoon in Location B.

The busiest time for seating use in all locations was the mid-afternoon time slot (15:34-15:52) (Figure 13). Heightened use during this time coincided with the end of the school day and CBD workers leaving their workplaces.
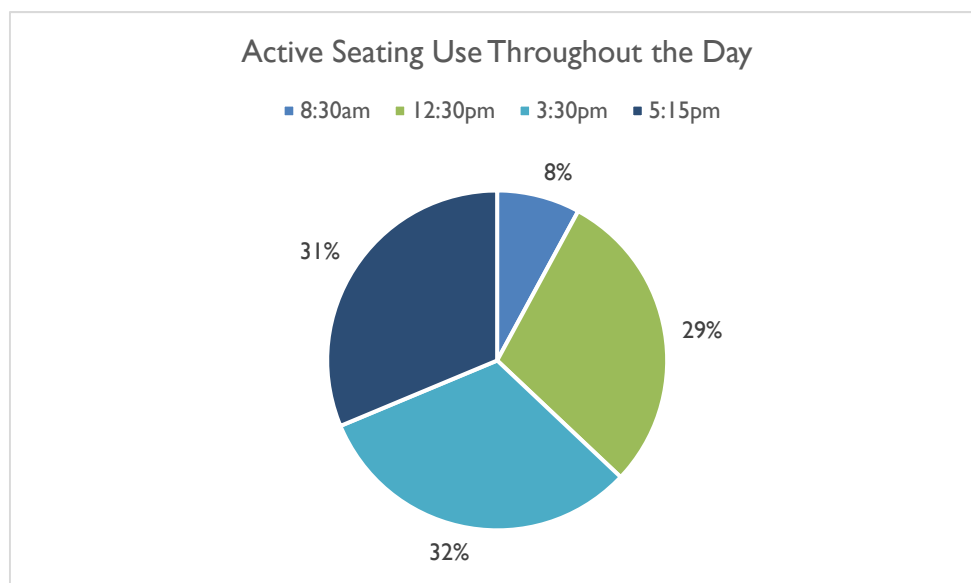

Figure 13: Percentage of active seating use throughout the day

More than a third of users (36%) were observed interacting with a phone or device whilst seated in QSM. Only one fifth (20%) of users were sitting down and interacting (talking) with other people talking. Instances of conversation mainly occurred between two (2) individuals, with no groups larger than four (4) people observed having conversations whilst using seating (Figure 14).
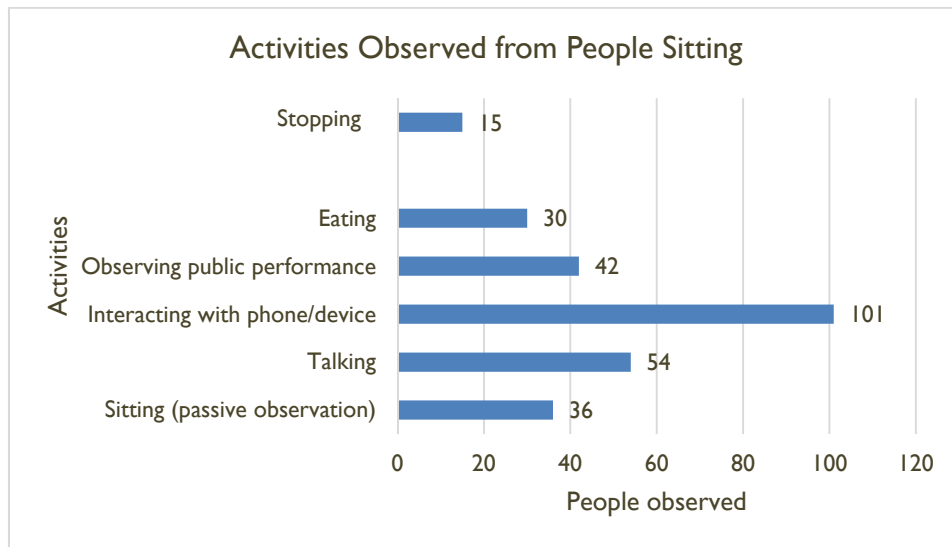
Activities Observed from People Sitting

Activity	People observed
Stopping	15
Eating	30
Observing public performance	42
Interacting with phone/device	101
Talking	54
Sitting (passive observation)	36

Figure 14: Observed activities counted

3.3.2 Pedestrian Count

While the use of seating in QSM was being recorded, the number of people transitioning through both sides of the observation zones was also recorded.

Table 1: Pedestrians passing through Zone 1, 2 and 3

Time	Pedestrian Movements (both sides)	Seating Use
Zone 1		
8:30	194	10
12:20	678	28
15:34	457	28
17:10	601	31
TOTAL	1930	97
Zone 2		
8:37	260	5
12:32	884	13
15:43	603	35
17:18	658	20
TOTAL	2405	73
Zone 3		
8:47	268	7
12:40	1016	20
15:52	564	25
17:27	909	16
TOTAL	2757	68

Pedestrian and Seating Use Totals

Zone 1: 97 / 1930
Zone 2: 73 / 2405
Zone 3: 68 / 2757

- Pedestrian Movements
- Seating Use
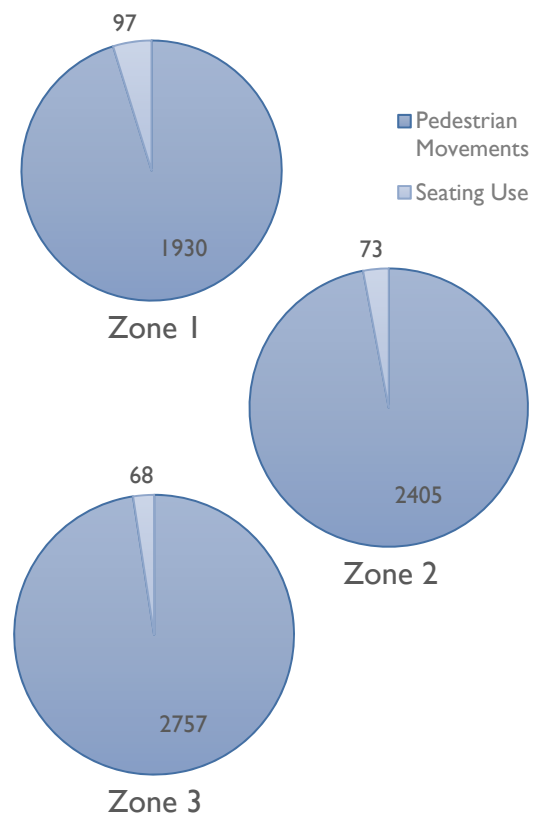
Figure 15: Pedestrian movements and seating use totals

The busiest times for pedestrian movements were at midday and early evening. As with the activity count, the morning period made up the smallest portion of total pedestrian movements (10%) (Table 1). As is to be expected, the instances of pedestrian movement in QSM far outnumbered the instances of seating use. The percentage of QSM users observed using the public seating was between 2-5% per location (Figure 15).

3.3.3 Further Findings
50.5% of survey respondents stated that the seating in QSM effectively supported stay activities within the public space. 52.6% of survey respondents found QSM to be uninviting (Figure 16).
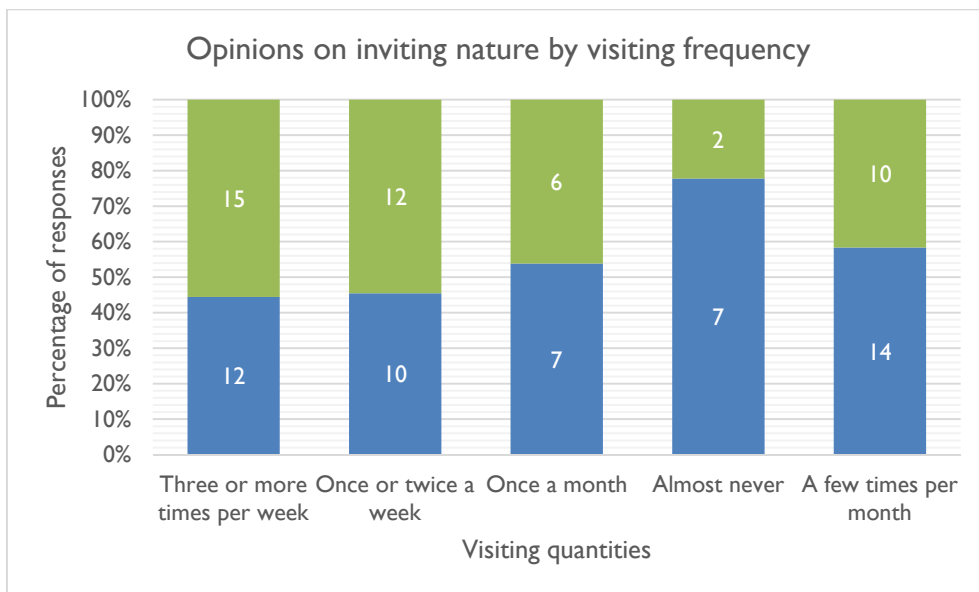
Figure 16: Visiting frequency against inviting nature of QSM

4.   Discussion

4.1 Initial Observations
The seating elements observed in QSM are spread throughout the main thoroughfare of the mall in three main clusters along critical access points of the space, these being the at the north-east end near Wintergarden, the intersection point of Albert Street and Queen Street and the south-western end at the entrance of the Myer Centre (refer to Figure 1). Upon initial inspection these locations provide a high potential for social interaction. The ability to observe high volumes of pedestrian traffic and the position of these seating locations along the thoroughfares provides good accessibility for QSM users and high levels of observational stimulus. The seating in selected locations is built into the public space design, working with the elevation and required flow of foot traffic from the major transportation arterials. The seating design and placement feel secondary to movement through the mall, particularly in Zone 1, as the shape of the seating seems to respond more to ideal movement pathways and less towards ideal seating design for encouraging social interaction (see Figure 19). The three investigated locations all use the same

combination of materials, including wooden seats, concrete planters and stainless-steel-accented elements (see Figure 17).

Figure 17: Seating material example, Zone 3 (Wintergarden)

4.1.1 Seating placement and design

4.1.1.1 Location A (Myer Centre)

By observing the seating design in Location A through the framework of Kevin Lynch's urban wayfinding theory (1960), it can be seen that the seating forms help to direct pedestrians towards the entrance of the Myer Centre, a major retail environment in QSM. Seating outside the Myer Centre is comprised of three separate seating islands which create a convex curve facing the Myer Centre entrance (see Figure 17). As seen in Figure 19, the 'edges' formed by seating elements and storefronts in Zone 1 create 'paths' that direct users towards the 'nodes' at entrances to the Myer Centre and Queen Adelaide Building arcade. This design creates an ideal situation for encouraging store visits but is not ideal for encouraging seating use and long-stay social behaviours in QSM's public spaces.

Further to this, initial observations suggests that the curved design of the seating causes users to face away from each other and can thus lead to the social segregation of groups. The seating appears to separate into individual segments in response to elevation changes and to avoid blocking movement between the storefront pedestrian pathways. This subtle segmenting of seats along with a convex arrangement may impede social interaction between larger groups of users (5 or more) and may also cause heightened feelings of segregation between the users of seating, reducing social cohesion between users. While such design traits may be unplanned or unanticipated, future works to QSM public spaces and similar environments should acknowledge these conditions generated by the seating design.

Figure 18: Seating Location A at 9:10am 23/04/2018

ZONE 1 MOVEMENT DIAGRAM

■ SEATING ISLAND (PRIMARY AND SECONDARY)

○ NODE (INTERNAL PATHWAY)
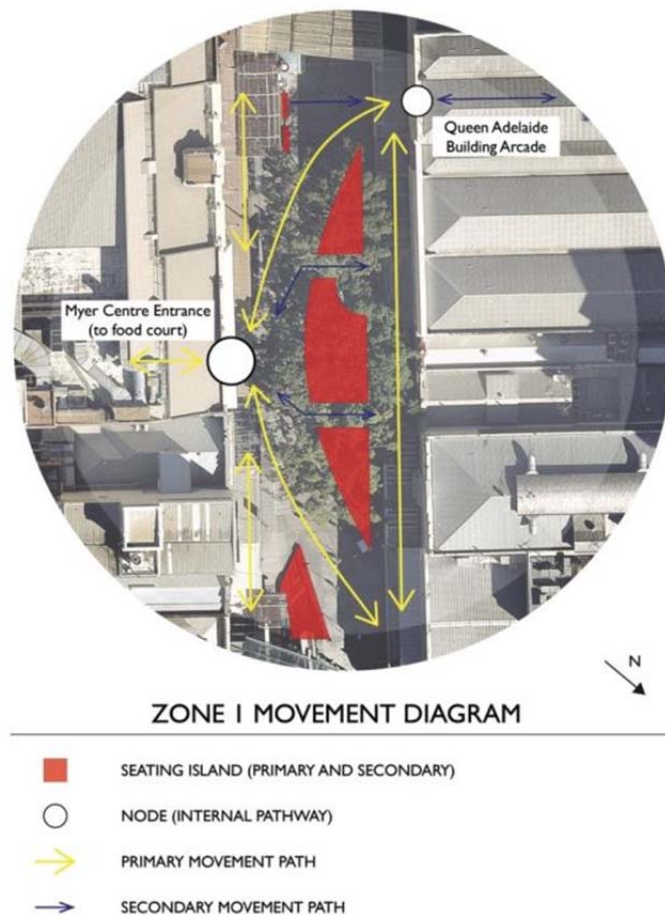
→ PRIMARY MOVEMENT PATH

→ SECONDARY MOVEMENT PATH

Figure 19: Movement diagram of Zone 1, QSM.
Seating islands form 'edges' that direct users towards retail 'nodes.

4.1.1.2 Location B (Albert Street Intersection)

Seating at the Albert St intersection follows the same design principles as Locations A and C, but with different execution. Seats in this area follow a continuous run broken by

waste bins (Figure 20) and respond to elevation changes through a continuously level seating height, causing seats on the edge of the run to be raised noticeably further off the ground plane. Unlike the other locations, forms in Location B are straight and the adjoining planter beds are used to grow small plants rather than trees for natural shading. As a result, there is no natural shading, only incidental shading from surrounding buildings. Additionally, seating in this area creates a blockage to large amounts of pedestrian flow, possibly as a means of keeping visitors in the vicinity of QSM by creating a visual 'edge'. While this positioning creates one of the more pleasant outlooks for seating users, it may also cause discomfort for some users, as pedestrian movements along Albert Street can become bottlenecked along the edges of the seating, making space around the seating overcrowded.

Figure 20: Seating Location B

4.1.1.3 Location C (Wintergarden)

Location C (Figure 21) contains a collection of 4 irregularly-shaped garden beds with narrow walkways between them and wooden seating attached partially along some edges. The narrow pathways between raised garden beds appear to be an attempt to maximise seating in the space while avoiding the high-density pedestrian paths that connect users to the main train station (Central Station). As with Location A, the garden beds are planted with moderately-large trees that provide natural shading to the space. The curving shape of the garden beds creates convex seating arrangements facing both inwards and outwards, with inward-facing arrangements having largely unstimulating views and outlook. Additionally, inward facing arrangements rarely face other, impeding the opportunity for conversation between users of different benches. The high pedestrian flow of this area seems to attract performers and buskers, which can help improve the sociability of the space.

Figure 21: Location C

4.1.2 Saturday Social Interaction Observations

The initial observations of seating spaces in QSM, performed on Saturday morning, 21st April 2018, seemed to support assumptions of typical seating use by QSM users. Seating selection appeared to be most strongly dictated by the activity seating was to be used for and the most favourable conditions available. People looking for a space to perform independent activities such as eating, reading and using mobile phones were most likely to look for shaded seating to improve comfort during seating use (Gehl 2011). This behaviour is supported by research into the role thermal comfort plays in public space (Farida 2013). For those not engaged with independent activities, seating selection was largely influenced by the stimulus available within their location. Passive observers in front of the Myer Centre were likely to sit in shaded seating to independently watch the commercial television projection, the main visual and audial stimulant within the space. In front of the Wintergarden, however, passive observers were seen to sit in direct sun in order to best watch a busker who was performing during observation time. Those watching the busker were seen talking and socially engaging with each other, activities not seen among those watching the large television. Management of QSM is strictly controlled, with buskers requiring successful auditions to be granted a busking licence (Brisbane City Council, 2018). This, combined with the QSM television and music played over speakers, suggests that the public presence of QSM is strictly manicured by management to encourage a specific usage of the space (Zhang and Lawson 2009). As the results show, the most prevalent activities during observation were independently-performed activities, owing largely to the available stimulus in QSM during observation.

4.1.3 Monday Observation

Observations carried out on the following Monday morning (23 April 2018) saw similar behaviours and instances of seating use with seating choice largely dictated by where the

most favourable conditions were. The ambient temperature of QSM was cooler during this observation period than on the previous Saturday, so users were more spread out, with some choosing sunny seats to achieve thermal comfort (observations took place at 9am) (Farida, 2013). With more seats exhibiting favourable conditions, users would choose to sit away from others before sitting near another seating user. Because of the long length of individual seating benches (~3 metres), users were often positioned at distances greater than 3.75 metres, exceeding the distance for social activities to occur naturally (Hall 1966). Additionally, instances of secondary seating use were present despite there being primary seating readily available (Figure 22). This suggests that secondary seating may be more inviting in some instances than primary seating.

Figure 22: Instances of secondary seating

4.1.4 Initial Observation findings and effect on further investigation

The qualitative data collected during initial observations of QSM that its public spaces are centred more around optimising pedestrian movements and less about improving conditions for sociability and stay activities. The wide movement corridors spaced out seating elements and emphasis of impersonal visual and audial stimulus all contribute to public spaces that feel cold and impersonal (Gehl 2011). The social effects of such an environment were evident in the behaviours and activities exhibited by seating users, who rarely chose to interact with other seating users or pedestrians. These conditions of pedestrian flow prioritisation, disconnection between users and the unwelcoming nature of space will be examined against quantitative and qualitative data from subsequent research methods to ensure that findings from these initial observations are well grounded before answering research questions.

4.2 Online Survey Questionnaire

The findings from the online survey back up analysis from initial observations across multiple areas. One such area is how pedestrian flow is the driving force of public space design in QSM, and a key influential factor on sociability in QSM. Short answer responses regarding public seating environments in QSM were largely negative, with several

addressing how the fast-paced atmosphere of QSM encourages movement while discouraging prolonged stay activities (see Table 3).

Quantitative survey results also supported these opinions, showing that the majority of respondents rarely used public seating in QSM and those who did mainly performed low intensity or non-social activities, such as resting and mobile phone use (Figure 9). Improving the quality of public seating spaces in QSM, considering factors such as seating design, planning, outlook, location, context and accessibility, could help foster a greater sense of community that, in turn, would encourage more social behaviour (Chen, Liu and Liu 2016) (Francis et al. 2012).

In opposition to findings that QSM public spaces do not encourage extended use are survey results that suggest a small majority of the respondents (50.5%) thought public seating effectively encouraged the use of stay activities. Other results found a direct correlation between how frequently respondents visited QSM and whether they felt that QSM was inviting to all (Figure 16). Those who frequently visited the Mall were more likely to say the Mall was inviting, while those who rarely visited felt the Mall was uninviting. This phenomenon could be explained by the large proportion of workers, residents and public transport users who responded as being frequent visitors, with very few responding as 'casual visitors' (Figure 6). These types of users would not likely be using QSM public spaces for social purposes, instead using QSM as a thoroughfare to reach their homes, transport terminals or places of employment. Additionally, these frequent users would likely be sensitized to the conditions and design of QSM.

In terms of shade and shelter, survey results supported the findings from initial observations that seating environments in QSM require additional protection from direct sun, wind and rain. A majority of respondents felt that public seating in QSM was both under-shaded and under-protected from the elements (Figure 11). Given the subtropical climate of Brisbane, the need for shade and protection from wind and rain in QSM is important throughout the year, indicating that additional design measures should be implemented to improve conditions for use.

Research findings suggest that users of QSM found the presence of branding and advertising in QSM public space was of little consequence to their user experience. The majority (60%) of QSM users surveyed felt indifferent or unsure about the presence of branding and advertising in QSM public space, with the remaining respondents voicing both for and against the presence of branding and advertising in equal measure (Figure 12). This could be an indication that the retail presence in the public spaces of QSM has little effect on sociability, or that, to some extent, users feel the public spaces are an extension of the retail environment indoors. Other studies have highlighted how creating healthy public space requires the visible and audible presence of social activities rather than commercially-driven attractions, such as the commercial television projections and commercially-focused activities present in QSM (Chitrakar, Baker and Guaralda 2017; Lee, Byun and Lee 2014). Additionally, the intensive use of QSM as a travel corridor may result in elevated feelings towards the presence of advertising in its public space, by extension of the 'mere-exposure effect' (Zajonc, 1968). More research is required to understand how QSM can more harmoniously serve both retail and social functions through its inclusion, or removal, of branding and advertising from its public space.

4.3 Structured Observations

The structured observations reinforced several findings made in Part A of this research project through the collection of quantitative data on seating use in QSM. Because tallies were made for instances of both seating use and pedestrian movement, an analysis of the relationship between these two areas was possible.

The relationship between pedestrian flow and time of day was as expected, with pedestrians traversing the space in greatest numbers at 12:30pm for lunchtime and 5:30pm as workers left the city (Table 1). The amount of people in a space at a given time was higher than expected during peak times, with observed numbers in excess of 204 people per minute at their highest (1016 within the observed five-minute period). The lowest recordings were understandably taken at 8:30am, when most shops were not yet open. Location C (Wintergarden) saw the greatest total number of pedestrians, followed closely by Location B (Albert St. intersection), while Location A (Myer Centre) saw the least. This can be attributed to pedestrians moving through Location C to visit Central station, accessible towards the north-east of QSM along Queen Street. The added difficulty of recording pedestrian movements in Location B due to additional directions of movement would explain why this location did not see the greatest number of pedestrian movements. Such research issues could have been remedied by conducting observations with the aid of video recordings. Overall, the pedestrian movements in QSM appear to be largely down to the schedule of an eight-hour working day, with more pedestrian movements occurring at times when CBD workers were less likely to be working (i.e. lunchtime and after 5pm). From the data we collected, the quantitative data given by Brisbane City Council regarding annual visitors appears to be based in fact (Brisbane Marketing, 2015).

A comparison between the number of pedestrians and the number of seating users present during various observation periods suggests the design focus of QSM is as a pedestrian thoroughfare for surrounding businesses and services, rather than an inviting public space for stay activities. Data collected suggests that, at most, five percent (5%) of total observed QSM users were using public seating, while the remaining 95% were pedestrians (Figure 15). The observed seating use activities also reinforced survey data, demonstrating that people using public seating in QSM require a form of stimulus to stay in the space for extended periods. Interaction with a mobile phone was consistently the highest recorded activity when seating use was observed (Figure 14). In this instance, the mobile phone is providing the stimulus required for users to perform stay activities, with such activities impeding social interaction in ones' immediate surroundings. Performances and QSM-managed events contributed to greater stay activity rates than mobile phone use, but most people engaged with these events would choose to stand, restricting the flow of traffic and causing more people to temporarily observe before moving on. These public performances and QSM-managed events were able to draw the attention of visitors for only short periods of time. Apart from mobile phone use, eating was also commonly observed, especially from 12:30 onwards (Figure 14). Given the lack of seating with tables in QSM, this suggests that seating use for eating is performed as a short stay activity, where additional facilities that benefit the eating of meals are forgone in the interest of time and seating turnover. Evidently, the design of QSM public seating appears to best serve the interests of local businesses, by restricting potential long stay activities in order to return visitors to private retail spaces as soon as possible.

4.4 Mobile Phones

A critical finding from the research was the wide-spread use of mobile phones in public spaces, prompting us to consider how the use of mobile phones might be able to support social behaviour in public spaces like QSM. Further research investigating how mobile phone use undermines the enjoyment of face-to-face social interaction suggests that, while mobile phones are not fundamentally antisocial, their use isolates users from their surroundings, decreasing social engagement in public spaces (Dwyer et al., 2018). Findings from our study suggested that mobile devices and digital technologies could be valuable tools to inspire social behaviour in public retail environments and cities in general. Prior research has stated that mobile phone use for social engagement is a relatively new phenomenon, with the relationship between social interaction and human-computer interaction within shopping environments not fully understood (Ng, 2003). Additionally, the rise of online shopping poses a risk to QSM and other physical retail environments, but mobile devices could be part of the solution to maintaining the economic and social longevity of these spaces. Some studies show that mobile devices and digital technologies have the potential to offer both economic and social benefits (Misra, et al., 2016), which could support public retail environments like QSM by improving the sociability of the retail experience. Studies investigating the effects of over-reliance on technology suggest that further research is needed to understand how people can best receive the social benefits possible from mobile phone use in non-digital environments (Kushlev et al., 2017). Given the wide-spread adoption of smart devices worldwide, further research into ways of supporting social behaviour in public spaces through mobile phone use should be conducted to better understand this increasingly relevant issue.

5. Conclusion

As discussed, Queen Street Mall is not adequately designed to support social behaviour between users. By prioritising the design of its public spaces to best support pedestrian pathways and the interests of retailers, the economic aspects of the mall overwhelm the social and civic functions, to the detriment of sociability and sense of community among users (Friesen 2017). Research findings suggest that increased shading, shelter and a redesign of seating to focus on encouraging prolonged stay activities would improve the sociability of the Mall. With growth projections suggesting the population of Brisbane will more than double over the next 45 years (Australian Bureau of Statistics 2013), it is increasingly important that seating environments in Queen Street Mall are improved in order to better accommodate the public space needs of locals and frequent visitors.
A critical finding from research was the wide-spread use of mobile phones in public spaces. The nature of mobile phones as a tool for connecting users separated by location appears to result in a disconnection from a users' immediate surroundings. As observations show, this results in anti-social behaviour from users of mobile phones, negatively impacting the social effectiveness of public space. Given the wide-spread adoption of smart devices worldwide, further research into ways of supporting social behaviour in public spaces through mobile phone use should be conducted to better understand this increasingly relevant issue.
Due to several research constraints, findings made in this research project should be considered as a catalyst to further analysis into the sociability of public seating spaces in

Queen Street Mall. Additional observations carried out over a broader range of days, seasons and weather conditions, along with increased sample sizes, would help develop a more comprehensive analysis of the social effectiveness of the Mall. The qualitative data collected through online surveys could also be enriched by conducting on-site interviews with QSM visitors. Additional research into social science fields such as mere-exposure effect and consumer theory in relation to public space design would also help build on research findings.

6. Appendix

Table 2: Online survey questions in full

Survey Questions
Types of users
1. Which age groups do you fit within?
2. Which gender do you identify as?
What type of person are they? (resident, employee, casual visitor)
The use of seating in QSM
1. How frequently do you visit Queen Street Mall?
2. When do you generally visit Queen Street Mall?
3. When you visit the Mall, how often do you use the public seating?
4. What activities do you use the seating for?
5. Do you ever use 'secondary seating' elements in the Mall instead of proper seating?
6. Additional comments about your use of public seating in Queen Street Mall?
Perceptions of Seating Environments
7. Do you find there is public seating available when you want it**?**
8. Do you feel Queen Street Mall is well designed to facilitate stay activities?
9. Based on your use, do you feel that the public seating in the Mall is sufficiently shaded on sunny days?
10. Based on your use, do you feel that the public seating is sufficiently protected from wind and rain?
11. Do you feel that the public spaces in Queen Street Mall are inviting to all users?
12. Do you feel that the presence of branding and advertising in Queen Street Mall enhances or detracts from the user experience?
Do you have any comments regarding your perception of branding and advertising in Queen Street Mall?
Other
Additional comments regarding do you have any additional comments to make regarding the seating environments in Queen Street Mall?

Effects of outdoor seating spaces on sociability

Table 3: Use case quotes

Users cases in the QSM: Quotes
"It's unwelcoming and always been a bit dodgy. I wouldn't really want to sit in queen street ever. I only use it to get from one place to another."
"Public seating in Queen Street Mall can be quite dirty; people often leave trash or bits of food on the seats, so I often avoid this area if I can."
"Not many comfortable seated spots, there isn't really much shade either when during the heat of summer."
"The mall is not public friendly and stopping to sit down and relax is hard when people are walking pass all the time."
"I don't find that to be too clean to feel comfortable using them unless I really have to. Plus, it seems there could have been more seatings as sometimes it is always full".

Table 4: User experience quotes

User experience and branding presence in QSM: Quotes
"I think shops should be allowed their advertising on their shopfronts, and signs pointing to where large shops are. But not too much in regard to billboards as it does retract from the beauty and architecture in the area"
"The more creative/bright and engaging displays are the more interesting the mall is."
"Have the brands deliver or enable a service e.g. Wireless fast-charging or user-interaction rewards like coupons for nearby stores."
"I understand that the purpose of Queen Street Mall is to bring public presence to retail outlets, however, these days the high use of advertisements around the mall (especially the food court) makes the place feel overwhelming and disorganised. It lacks architectural, or interior intent (there's no experience) and feels like the mall is being overrun by ads & marketing tactics. (I feel like I'm only wanted as a customer, not a visitor).
A mall that best deters from this is Garden City. Their outdoor food plaza brings life, spirit and a euphoric experience for visitors. (I feel like I'm being invited to enjoy myself rather than rush to complete all my errands)"
"I believe when people are on move they hardly have time to get into any details of any advertisements for which some can go unnoticed. Bold, Catchy, Friendly, Visible and at right spot can help boost the way people perceive adverts. It is informative and where people can feel comfortable relating to what is on offer."

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Table 5: Seating environment Quotes

Seating Environment in the QSM: Quotes
"I believe it's not that difficult to find a seat as it's not a super appealing space to sit in, there's no quiet spaces especially at lunchtime.
"It is a very busy walkway which can be frustrating during peak hours, so more seating should be accessible but keeping in mind to not block those passing through."
"Seating can serve more of an active purpose; user interaction and engagement with nearby businesses. Wireless charging pads present the opportunity for secure, embedded NFC tags controlled and secure - that may open avenues for marketing and analytics outcomes, enrich cultural participation and awareness, and support local business presence within the hub."
"They seem designed to discourage use beyond a short amount of time.
"There is not enough seating and green spaces, there is a lot of overcrowding in the Mall with people basically standing around in groups, it seems like the Mall is more of an advertising for a shopping mecca then a general green relaxation area."
"They (the seating) need to be shaded and covered from rain
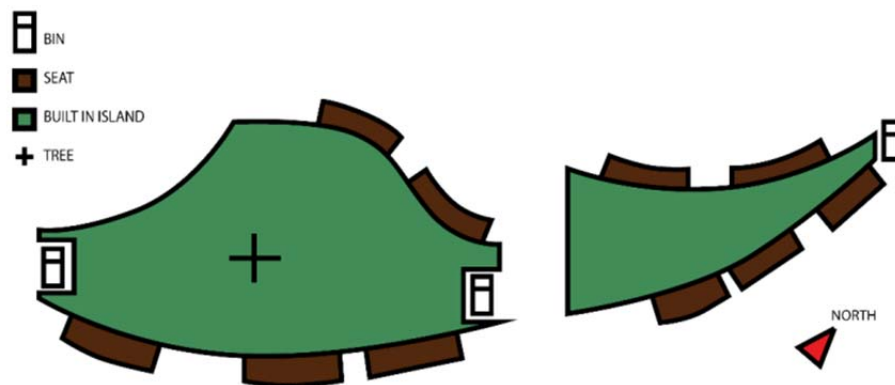
Figure 23: Seating Location A diagram

NORTH

BIN

SEAT

BUILT IN ISLAND
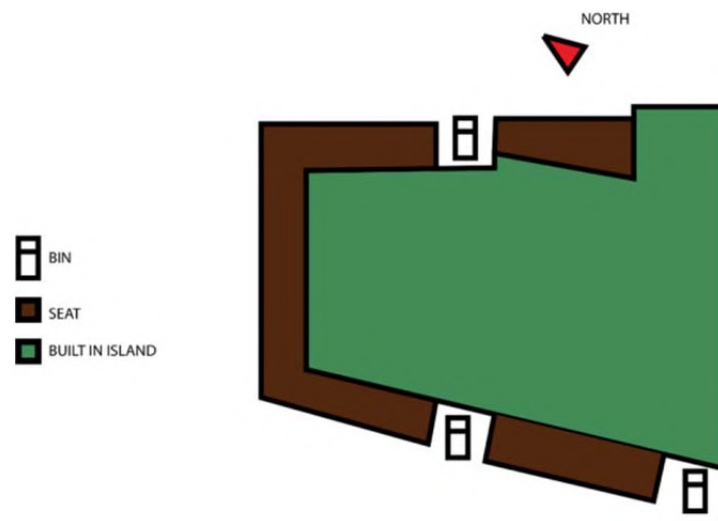
Figure 24: Seating Location B diagram

WATER FOUNTAIN

BIN

SEAT

BUILT IN ISLAND

TREE

NORTHI
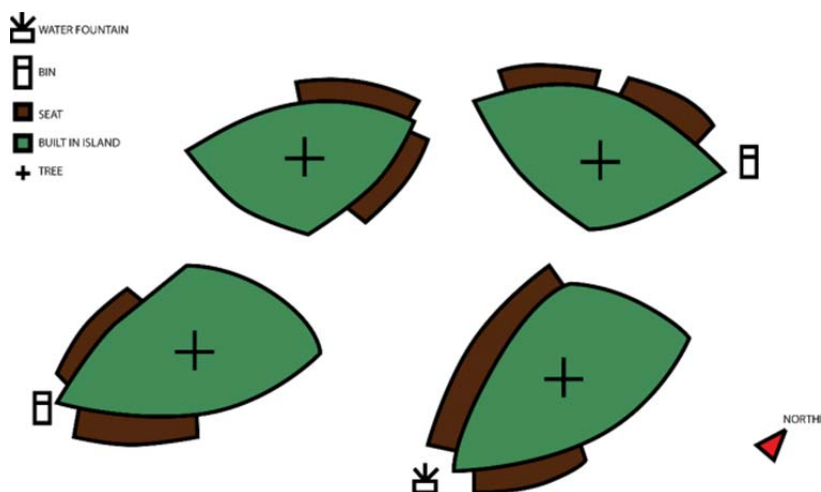
Figure 25: Seating Location C diagram

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Creating people-friendly cities in a data rich world: towards smarter and more liveable places

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Abstract
There is a growing movement to make cities "smarter." Typically the goal is to enhance a city's efficiency and sustainability and thus lower carbon footprints. While these efforts are well-intended and of great importance, we must also make sure that our future cities are places that people also desire to live in across their lifespan. Against this backdrop, a European Union-funded COST (European Cooperation in Science and Technology) Action was undertaken from 2013-2017 entitled *People-Friendly Cities in a Data Rich World*. The Action culminated in a two-day Participatory Urbanism 2017 conference that brought together researchers, scientists, city planners, architects, public officials, urban activists, businesses, and NGOs from 30 countries. A crucial goal of this conference was to solicit both guiding principles and research questions that should be pursued in the quest to make cities more liveable for people and smarter for the planet. Here we present the main findings. Ultimately, it is hoped that these findings will help guide the creation of people-friendly cities in a data-rich world.

Keywords: smart cities, liveability, people-friendly urban places

1. Introduction

"Cities", declares Edward Glaeser (2011), "are our greatest invention". Glaeser, an urban theorist and Harvard economist, adds that properly planned and maintained cities can enhance productivity and creativity as well as lower our carbon footprints. Whereas at the turn of the 19th century only 2% of the world's population was urban, it is expected that by 2030, 60% of the world's population will live in cities (UN-Habitat, 2001). Differently put, cities are here to stay.

Given the value of cities to people and the planet, it follows that many would work towards making cities function better. One effort to do so is the smart city movement. A smart city is generally understood to utilise digital technologies and the abundance of data we now easily produce on a daily basis to provide better – more efficient – services and systems for its residents, businesses, and communities, ideally in a sustainable manner (European Commission, 2013; Robinson, 2015).

Through a pervasive network of sensors, microcontrollers, and transceivers for digital communication, smart technologies enable easy access and interaction with a wide variety of devices, such as home appliances, surveillance cameras, monitoring sensors, and motor vehicles (Zanella et al., 2014). As a result, smart technology has meant more effective traffic and energy management, environmental monitoring, timelier infrastructure repairs, easier access to online governmental portals, and speedier emergency management solutions, among other services (Telensa, 2017; Smart Citizen Kit, n.d; IBM, n.d). In many cases, smart phone apps make this information easy to use and are therefore of great value to urban residents and visitors. Apps that provide real time information on public transportation and traffic are but one example.

Since their inception in the 1990s, the focus on smart cities has only increased. They are now considered an important research and development topic, expected to create a US$ 3.48 trillion revenue opportunity by 2026 (Persistence Market Research, 2017). It is therefore safe to say that many of the ideas behind smart cities will drive urban development for the foreseeable future.

So far, smart has been largely synonymous with efficient. While it is undeniable that efficiency is an important objective with multiple benefits, there are nevertheless many aspects of well-functioning cities that are not about efficiency and yet have tremendous value: extensive social connections and networks, access to a variety of economic opportunities, green spaces, access to art, architecture, and leisure activities, small neighbourhood shops and unique restaurants, and an urban scale that people find attractive, and which contributes to health and well-being (Duany, Plater-Zyberk & Speck, 2001; Leyden, 2003; Frumkin, Frank & Jackson, 2004; Leyden et al., 2011; Gehl, 2013; Hogan et al, 2016; Cervero, Guerra, & Als, (2017); Leyden & D'Arcy, 2018). In thinking about the future of cities we must also think about how cities can meet people's needs and become places people *want* to live in. *We must think of the inefficient as well as the efficient* and aim to create and maintain places that are liveable, i.e. places that enable human well-being and improve the overall quality of life.

Increasing evidence suggests that current smart city visions often lack some of these liveable aspects (Neirotti et al., 2014; Robinson. R, 2016; Robinson. A, 2017). Moreover, the quality of the built environment, one that promotes a human-scaled public realm, for example, is not a defining factor of smart city initiatives (Kambli, 2013; Keeton, 2015; Mattern, 2017). Although some research has been done to counter these shortcomings, it

often addresses only singular aspects, with results not being shared across different sectors.

With respect to the shaping of smart cities, urban planner Anthony Townsend (2013) maintains that if we are to get the design of smart cities right, we will need to involve citizens in their creation and maintenance. If not, the smart city will be no better than an efficiently-managed technopole wherein citizens have very little agency (de Waal, 2013; Greenfield 2013). Sadowski (2017) refers to such a model as "insidious" whereby the majority of control – over people, places, and policies – lies in the hand of giant corporations.

No one has as yet found a way to bring together big technology platforms and the interest of citizens in a manner that places citizens at the centre of smart city design (Hemment and Townsend, 2013). This is why some scholars suggest that the truly 'smart' thing to do is to ask questions about drivers and enablers, personal and civic responsibility, and to engage citizens, NGOs, city leaders, academics, and technologists in a robust debate to push the smart city idea forward (Hill, 2013; Mulligan, 2013).

It was against a similar backdrop that a four-year European-funded COST (European Cooperation in Science and Technology) Action entitled *People-friendly Cities in a Data Rich World* brought together a range of experts from different disciplines to explore what a smart city can be like when it is also people-friendly and inclusive. The Action understood people-friendly cities to mean smart *and* liveable places that put people in the middle of planning and design whilst incorporating public policies that meet human needs – much along the lines of the above suggestions made by smart city scholars. The main objective of this Action was to promote networks amongst researchers and city practitioners of various backgrounds with the intention of enabling greater research collaboration and the sharing of knowledge and expertise. In so doing, one aim of the Action was to bridge the divide between academia and practice.

The Action called for a participatory approach to urban development, and the four-year collaboration of interdisciplinary experts culminated in a two-day Participatory Urbanism 2017 conference in April in Brussels, Belgium. The conference was organised by the COST Action together with the Da Vinci Institute Brussels. A key goal of the conference was to launch *The European Charter on Collaborative Urban Development* in the form of a research roadmap for 21st century cities. This article discusses the main findings from the conference, presented in the form of research questions and recommended actions that ultimately inform the Charter.

2. Methods

This COST Action is certainly not unique in setting out a research agenda for future cities. Several authors and institutions have proposed urban agendas, with *The New Urban Agenda* by UN-Habitat (2016) arguably being the most widely known. As a rule, such studies touch upon broader environmental, economic, and social objectives for urban development (Hall and Pfeiffer, 2000; UN, 2000; UN, 2015; UN-Habitat, 2016; Short, 2017). In other words, they very rightly endorse the creation of sustainable, resilient, and just communities.

Where many urban agendas fall short, however, is in their relevance and execution. According to Satterthwaite (2016), charters such as Millennium Development Goals are full of targets, i.e. what has to be done, but weak on by whom and with what support. More often than not, such documents also tend to be long and dense and not clear and relevant to all urban dwellers. The 'right to the city', for example, is not explored in depth. Short (2017) finds that although Lefebvre (1972) in his seminal work *Le droit à la ville* extended the right to the city to all those who inhabit the city, most commentators concentrate on those with access to the rights and privileges of citizenship, but inadvertently neglect the "quasi-citizens", such as those who are marginalised.

What differentiates this COST Action and its *European Charter on Collaborative Urban Development* is its clear recognition that the needs of communities can only be met when *all* citizens are involved in the shaping of their cities. The main aim of the Charter is to empower cities and urban hubs through citizen engagement and participatory planning by providing evidence-based insights. To achieve this, the Participatory Urbanism conference used a collaborative toolkit to tap into the collective wisdom of participants and come up with a clear vision of what our cities should become as well as research questions that are in need of further empirical investigation going forward.

Participants at the conference represented a range of professionals, including architects, urban planners, policy-makers, engineers, entrepreneurs, urban activists, and academics from 30 countries, thereby meeting one of the conditions of a meaningful smart city debate. Most of these participants had been part of the *People-friendly Cities in a Data Rich World* COST action for all or part of its four-year term. Others were new to the Action. The conference began with a series of presentations by two panels outlining the visions and inspirations of participatory urbanism. Participants were then divided into four groups to delve deeper into the challenges and opportunities of participatory approaches to urban planning. Four main 'challenge groups' were identified each corresponding to a separate chapter of the Charter: *Developing Liveable Cities; Connecting People with their Government; Using Data for Wiser Cities; Engaging and Involving a Diversity of Citizens in Urban Planning.*

Inspired by speaker insights and best practice examples, group participants worked with their respective chairs to frame research questions and develop broad principles to guide future urban development. The draft of research questions and broad principles was then edited and further refined to turn them into concrete agenda points for the Charter and the Action's research roadmap. At the end of this exercise, each group was given 10 minutes to present their findings, and, in keeping with the conference's participatory theme, another 10 minutes were allocated for voting on the final version. In all cases, the dynamic of each group was overwhelmingly positive; the majority of participants had been part of the COST Action for the better part of four years prior to the conference and had learnt to appreciate each other's views. This in turn led to a natural – democratic – consensus on key principles and research questions.

3. Results

This section summarises the findings that arose after deliberations of the challenge groups. Workshop participants drew on their individual expertise to identify several 'areas of investment' for each of the challenges. Each area of investment included research

questions and broad principles relevant to the development of future cities. The recommendations put forward are meant to serve as a starting point in creating smart and liveable cities using a participatory approach. Where applicable, they suggest 'how', 'by whom', and 'with whose support' without being overly prescriptive. Given the interdisciplinary nature of the topic, there was a degree of overlap between the broad principles and research questions across the four themes. The following section is structured in the form of primary *research questions* raised within each challenge group followed by *guiding principles* related to creating people-friendly cities in a data-rich world. For the sake of brevity, additional questions are outlined in Appendix 1.

3.1 Challenge Group #1: Developing Liveable Cities

Although no one definition of smart city exists, what smart cities have in common is that they are meeting a growing demand to make cities more liveable (Nam & Pardo, 2011). Challenge group #1 discussed the current state of knowledge on urban liveability and explored the best ways in which we can make our cities better places to live in (Pacione, 1990; de Chazal, 2010; Hogan et al., 2016). The participants of this group included architects, engineers, urban designers, planners, urban project managers, and social scientists. Together, it was agreed that liveability refers to those aspects of the built environment that improve people's overall quality of life as well as the attractiveness of urban living. Towards the end of this discussion, the group identified several crucial research questions and six guiding principles to foster liveability on the part of cities: create public spaces; promote a shared value system; establish collaborative processes; invest in urban design; encourage cultural expression; and provide soft and hard infrastructure.

Research questions
What type of public realm do people most identify with and why? How can we create public spaces that are more inclusive, not only towards women, but also towards children and the elderly? In what ways can we (re)activate public space? What are the values that people prefer to see in their cities? How do we identify these values? How can we convert shared/community values into design and planning policy? How can we draw on local knowledge and skills to create more engaging public spaces and more liveable cities? How can we design cities to improve well-being? What are the ways in which cities can generate more equitable and resilient infrastructure?

Guiding Principles: Create Public spaces
Commit to enriching the public realm, for example, public spaces and streets. Key to this is the engagement of citizens in the making and remaking of public spaces. Ensure that the public realm reflects the unique character of a city and its neighbourhoods, preferably generated through common consensus. Think of public space as a living room for both expected and unexpected encounters. Explore the need for a new understanding of 'common space' unrelated to ownership.

Promote a shared value system
Commit to co-creating a 'charter of values' together with the city administration and its citizens. Guide the development of the city emphasising values and qualities that enable cities to be more liveable and more humane. Emphasise values important to all

citizens, such as respect, inclusiveness, acceptance, transparency, and mutual support, among others.

Establish Collaborative Processes
Commit to inclusive bottom-up approaches in which all stakeholders and citizens can participate. Develop processes that underscore learning and listening amongst all stakeholders, especially citizens and their governments. Enable neighbourhoods to experiment with local solutions to public policy that reflect key values. Allow for flexibility and innovation in the planning and design process. Commit towards maintaining a visible balance between liveability and livelihood.

Invest in Urban Design
Commit to urban design that reflects urbanist principles. These principles promote walkability, dynamic people-oriented streets, mixed-use development, small urban blocks, local shops, and development that is to human scale. It is important that this development enable interaction with the natural environment, promote sustainability, green infrastructure, and encourage intergenerational and intercultural social interaction. Incorporate the concept of mixed-use buildings and provide multiple connections to the public realm.

Encourage cultural expression
Commit to fostering sensibility and access to culture, the arts, character, and identity. Protect every citizen's right to create, discover, share, and develop their vision of the city through a diverse range of cultural expressions, accordingly building mutual respect and trust.

Provide soft and hard infrastructure
Commit to facilitating a citizen-driven response to the provision of infrastructure. Prioritise the provision of hard infrastructure (utilities, buildings, and public space) and strengthen soft infrastructure (institutional, community, and personal). Rebalance cities in favour of pedestrians, cyclists, and public transportation. Focus on public realm-led strategies and multifunctional infrastructure.

3.2 Challenge Group #2: Connecting Government to People
The smart cities movement is often guilty of assuming that all aspects of the city and its citizenry can be measured, monitored, and addressed through technical solutions (Kitchin, 2014). This model often uses a top-down approach that disconnects governments and their people. According to Nam and Pardo (2011), a smart(er) government goes beyond simply regulating economic and societal processes. Smart governments connect dynamically with citizens and communities – in real time – thereby sparking growth and innovation. More importantly, smarter governments should be more transparent and more willing to give citizens access to information about decisions that affect their lives (Nam & Pardo, 2011, p. 287).
The purpose of this challenge group #2 was to consider how citizens can build confidence and know-how in collaborating with their city governments, especially with respect to urban planning decisions. This group included architects, urban planners, academics, city

councillors, and social entrepreneurs. Together, they addressed the values and processes driving city governance and collaborative planning. Once again this challenge group proposed both research questions and guiding principles. The guiding principles worthy of investment were: nurture stewardship; enable conversations; gather local knowledge; interpret information; and make the city.

Research questions
How can urban authorities facilitate ways in which citizens can help shape their cities? What are the types of avenues that cities can provide to foster urban dialogue? How can cities tap into local innovation that produces greater civic value? What are the ways in which cities can make information gathering more transparent? How can we better overcome the barriers between top-down and bottom-up urban planning?

Guiding Principles: Nurture Stewardship
Commit to responsible, people-centric, sustainable planning and management of resources. Inspire people to care for their community by creating and supporting the sharing economy, connecting stories of community collaboration, honouring innovation, and allowing space for experimentation that gives relevance to failure as well as success.

Enable Conversations
Commit to supporting safe, empowering, and inclusive spaces for urban dialogue and exchange, using both virtual and physical platforms. Identify and integrate facilitators within local communities to enable face-to-face conversations and to ensure a diversity of opinions.

Gather Local Knowledge
Commit to becoming 'listening organisations', creating authentic conversations and two-way relationships to gather local knowledge, ideas, and aspirations. Curate and crowdsource research and information gathering using a diversity of traditional and digital tools from multiple sources so as to identify local priorities across various scales.

Interpret Information
Commit to establishing a common, transparent, rigorous, and trusted methodology of gathering and interpreting evidence to enable comparisons between different cases. Ensure that the methodology used is public and open to regular review and revision based on international good practices.

Make the City
Enable people to design, create, and test solutions to common needs and issues, reinforcing a sense of shared ownership and cooperative city-making. Encourage and support the work of NGOs and initiatives acting as facilitators, local innovators, and catalysts for change.

3.3 Challenge Group #3: Using Data for Wiser Cities

Information gained from data gathering can be a great asset to effective city governance, accordingly providing an evidence-base for action (IBM, n.d.). However, citizens are all too often relegated to "an entrepreneurial role as co-producers of data-driven information" (Joss, 2018). There is, therefore, a clear need to move away from the purely technology-focused or data-gathering approach towards a more citizen-centric approach. To this end, Latorre (2016; 2018) puts forward the notion of a "wise city" that puts far more emphasis on the value of conscious, meaningful input of citizens than on technology. It was along these lines that the challenge group #3 considered moving beyond the concept of 'smart' big data to that of 'wise' data. This group comprised socio-environmental researchers, urban planners, ICT researchers, and social entrepreneurs in the field of citizen engagement. Together, they explored metrics and indicators that would foster citizen-centric approaches to urban planning. Five guiding principles or areas of investment were accordingly offered for cities: use data for dialogue; promote data accessibility; manage data as a public good; promote data literacy; and ensure sound data governance.

Research questions

How can data be used to give citizens more agency in smart cities? How can we enhance the capacity of cities to use data more wisely? How can we generate more humanitarian value from data? How can we create a better understanding of data literacy for a data-rich society? In what ways can data be used to support citizen democracy and create citizen mandates? How can data be leveraged by civil society to move from seeking incremental change to focus on systemic change?

Guiding Principles: Use Data for Dialogue

Commit to using data to start conversations with citizens and not to justify unilateral decisions. Use both big and small data in qualitative and quantitative formats to open debates, add new dimensions to discussions, and foster richer understanding of issues. Use the notion of 'data for dialogue' as an action-guiding approach for collaborative urban planning.

Promote Data Accessibility

Commit to open access with respect to data storage, connectivity, and availability. Data accessibility goes beyond making data openly available to NGOs, researchers, and entrepreneurs. Promote open formats that can be linked, combined, and compared easily. Promote the work of 'data facilitators', such as storytellers and artists, to bring the message behind data to a broader public. Accessibility also includes disclosing what data is gathered, when, by whom, for what purposes, and at what cost.

Manage Data as a Public Good

Commit to treating data as a public good. Shed the notion of data as a 'valuable revenue stream' for cities and governments. Acknowledge that data which is being collected by individuals, public, and private entities at an ever-increasing pace concerns all and belongs to all. Recognise the many urban actors who contribute to building this

public good. Coordinate access amongst the different actors and provide interfaces that connect data and its providers.

Promote Data Literacy
Commit to becoming data experts. Gain a deeper understanding of data and its role in a collaborative urban system so as to make the best out of this data. This requires the acquisition of expertise in data collection, storage, protection, analysis, visualisation, and communication.

Ensure sound Data Governance
Commit to establishing and enforcing clear guidelines on data governance. Document practices on the collection, storage, and usage of data and publish these for accountability. Ensure effective, efficient, ethical, and people-centric collection, storage, and use of data by working with NGOs, businesses, and researchers.

3.4 Challenge Group #4: Engaging and Involving a Diversity of Citizens in Urban Planning
Involving citizens in the shaping of their cities is the cornerstone of good urban planning (Seltzer & Mahmoudi, 2012). This approach can be linked back to Lefebvre's (1972) *droit à la ville,* which is also a useful construct for planners as it raises questions of not only who owns the city but also of who has access to a safe living environment, employment, culture, education, and to meaningful forms of participation that impact urban governance (Fainstein, 2005). The right to fully participate in urban life as an equal then becomes a matter of social and spatial justice.
Specific to new technologies, Seltzer and Mahmoudi (2012) note that open innovation and crowdsourcing have the potential to make the planning process 'wiser' and more inclusive by opening up new avenues to engage a diversity of citizens. Challenge group #4 explored whether official procedures used to consult and engage citizens in urban planning are relevant, effective, and/or useful for the diversity of citizens that make up urban demographics. The group included academics, social scientists, social entrepreneurs, and universal design specialists. Together, they proposed five guiding principles to enable a diversity of citizens to participate in urban planning: include the marginalised; engage early; change political frameworks; champion a people-centred approach; and foster synergy and promote excellence.

Research questions
How can we accommodate a multitude of voices in the decision-making process? What are some of the barriers to early engagement and inclusion? Can these barriers be removed through the use of smart technologies? What would the democratisation of urban planning entail?

Guiding Principles: Include the marginalised
Commit to identifying and engaging marginalised, vulnerable, and excluded citizens (and groups) and ensure that their perspectives are considered and included in the making of urban spaces and neighbourhoods. Create frameworks, conditions, and spaces that allow a diversity of stakeholders to engage in dialogue.

Engage early
Commit to promoting active citizenship from an early age. Raise awareness together with other professionals who work with children and young adults in schools, day-care, community centres, and NGOs. Focus upon what it means to take part in the shaping of one's environment. Foster an empowering and inclusive approach to urban citizenship.

Change Political Frameworks
Commit to investing the necessary time and resources to build know-how, acceptance, and new approaches to participatory urbanism amongst politicians and policymakers. Update policy timelines and frameworks to make the meaningful integration of participatory processes possible.

Champion a People-Centred Approach
Commit to promoting an inclusive and people-centred approach in all training, development, and higher education. Acknowledge that close collaboration between urban planners and educational institutions ensures knowledge transfer between theory and practice. It helps build trans-disciplinary curricula in participatory urbanism and contributes to the establishment of a new profession of collaborative urban planners.

Foster Synergy and Promote Excellence
Commit to sharing good practices, exchanging insights, and promoting synergies between existing stakeholders, thereby becoming champions of excellence in urban planning. Co-create new models of participation and collaboration for the improvement of urban centres.

4. Discussion

A research roadmap takes stock of current debates and existing research to outline avenues for future research (Short, 2017). The main objective of this article was to highlight the kind of research that our participants concluded needs to be carried out if we are to make our cities more liveable and more people-friendly in a data-rich world. These research questions were based upon broad principles of urban living also identified through deliberative insights of urban-focused researchers and professionals from 30 countries associated with the *People-Friendly Cities in a Data Rich World* COST Action. The research roadmap presented in this article reflects the questions that arose from transdisciplinary collaboration on the topic. In general, participants were most intrigued by questions that would:

- Improve the quality of life of urban residents.
- Enhance the ability and willingness of citizens to participate and inform the planning and functioning of their cities.
- Best enable the use of data and public policy to achieve both of the above.

Limitations
Although interdisciplinary conferences are extremely useful for building ties amongst collaborators, the authors acknowledge the potential limitations of such an approach, as previously evidenced by Dannenberg et al. (2003). Firstly, as in any process of participatory decision-making, the questions generated depended on the individuals participating in the conference. Investigations into some of the questions raised are ongoing, some are fairly well developed, whereas others have not been as closely examined. The question on what makes a city worth living in, for example, is one that continues to occupy researchers as well as city authorities vying for a top spot in global liveability rankings (National Research Council, 2002; Cities Alliance, 2007; Tan et al., 2012; Balch, 2016; Economist Intelligence Unit, 2017). Similarly, scholars are exploring technology-mediated citizen engagement (Foth, 2011; Caldwell & Guaralda, 2016) so as to overcome barriers between top-down and bottom-up approaches through concepts such as "middle-out design" (Fredericks, Caldwell, & Tomitsch., 2016). However, many other questions raised by participants – such as those related to data literacy and data as an enabler – are relatively novel (Wollf et al., 2017; Veeckman, McCrory, & Walravens, 2017).

While it is probably true that a different set of individuals would have generated different research questions and principles, we are confident that the questions proposed here are of strong relevance to cities and to the people who live in them. Indeed, many of the research questions here have an even deeper importance and focus upon issues that are at the core of people-friendly urban planning in the 21st century. It is worth noting that majority of the questions raised can be tied back to the importance of public spaces. Notwithstanding the relevance of these questions, the fact that similar research questions continue to be raised about smart cities and urban liveability indicates that there remains an implementation gap between practice and academia. Both the COST Action and the conference demonstrated that this is arguably because of the lack of collaboration and knowledge transfer between different urban stakeholders.

We also recognise that not all areas of investment, or guiding principles, proposed by the four challenge groups have equal relevance for urban planning or in making cities smarter and more liveable. For instance, urbanist principles, such as those proposed by Jacobs (1961), Alexander et al. (1977), Gehl (1987), Carr (1992), Duany and Talen (2002), and Carmona et al. (2010), among others, may be crucial in creating places for people regardless of a city's aspiration to be smart or not. The implications of ensuring sound data governance, on the other hand, may be less straightforward in relation to urban planning.

It is important to bear in mind that the conference participants, who are experts in their own disciplines, put forward recommendations that they deemed pertinent, albeit tied to their field of expertise. Concepts such as common space (Stravrides, 2016), the sharing economy (Sundarajan, 2013; Heinrichs, 2013; Hamari et al., 2016), data as a public good (Taylor, 2016), and listening organisations or urban rooms (Farell cited in Wainwright, 2014) are still evolving and are not necessarily incorporated into all urban projects.

Conclusion and directions for future research
The goal of the COST Action associated with this Participatory Urbanism Conference required a collaboration of a variety of professional disciplines many of which may not have previously interacted with the urban planning community. Together they provided

many astute research questions worthy of investigation and guiding principles to which cities might aspire. While it is likely that there are additional questions and principles not mentioned here, what is offered is undoubtedly useful and insightful and will aid in gaining a better understanding of how to create smarter cities that are also people-oriented, and hence more liveable. A wide range of qualitative and quantitative studies would be useful in answering these questions (Onwuegbuzie & Leech, 2005; Yin, 2013) as well as tools such as Urban Living Labs, surveys, virtual reality tools, and design challenges, amongst others (Design and Architecture Norway, 2018). Ultimately, it is our hope that the publication of these findings will help other colleagues and experts build on their own research, and accordingly guide the creation of people-friendly cities in a data-rich world.

5. Appendix

Appendix 1: Additional Research Questions
DEVELOPING LIVEABLE CITIES
What makes a city worth living in? Which cities have the highest quality of life? Why?
What are the different impediments to liveability?
Which cities have the best public realms? Why? What are the consequences of having a good public realm for a city and its people?
How can we safeguard the publicness of the public realm? To that end, what are the ways in which we can counter the privatisation of public space?
How can we (re)animate underused public space? How can this be made more cost-effective?
To what extent should public spaces be green or provide access to nature?
To what extent is a good public realm good for a city's economy?
What do people value most about their cities?
How can a set of values be translated into design? Is this desirable? What if these values are reactionary?
How can we (co)create a more humane city?
Which cites enable experimentation within their neighbourhoods? What works? What doesn't? Why?
What does a more liveable, smarter, and more humane city look like?
How can cities best promote culture and the arts?
What influence does access to culture and the arts have on people? How can we better enable urban residents – of all backgrounds – to become engaged in culture and the arts?
In what ways can we reuse old infrastructure that is no longer deemed safe for its original purpose? Which are some of the cities where this has been done? Has this been beneficial to the city? If so, how?
How can we use digital technologies to make infrastructure planning more democratic?
CONNECTING PEOPLE TO GOVERNMENT
In what ways does technology redefine how citizens engage with governmental structures?
How can we facilitate more people-public partnerships to boost urban solidarity?
What do we know about the ability of citizens to co-generate solutions to urban problems? What are some

creative methods of engagement to encourage active participation on the part of citizens in the shaping of their cities?

How can cities make it easier for citizens to take ownership of their streets, neighbourhoods, and cities?

What is the role of the sharing economy in citizen engagement? In what ways can local governments harness the sharing economy to advance urban development goals?

How can cities support and encourage Open Government Partnerships?

In what ways can local governments harness the sharing economy to advance urban development goals?

How can cities tap into local innovation that produces greater civic value?

What are the types of avenues that cities can provide to foster urban dialogue?

How can cities identify facilitators or local champions within a community? To that end, what attributes should local champions embody?

USING DATA FOR WISER CITIES

In what ways can citizens assert their power beyond the ballot box?

How can data be made publicly available but also easily accessible and useful?

What are citizens missing out on by not being connected?

How can cities better collect and analyse data in unbiased ways?

In what ways can big data be used to make cities better places for people?

Who should have access to city data? How can we deter its abuse?

How can we select gatekeepers to prevent the nefarious use of data?

How can big data be shared more ethically amongst varied urban actors?

What resources do cities need to become better at using data wisely?

In what ways can data be used to strengthen public participation and governmental transparency?

What are the barriers to gathering and organising data so as to promote community initiatives?

ENGAGING AND INVOLVING A DIVERSITY OF CITIZENS IN URBAN PLANNING

Should the residents of a city be involved in the planning process? Why? What would the democratisation of urban planning entail?

How can citizens be empowered to discover what they truly want?

What role can schools and universities play in the transition to a more democratic form of urban participation?

How can we better educate elected and appointed city officials about participatory planning?

How can we involve people in the process of co-design or co-creation? Does being involved in the design and planning process instil a sense of pride and ownership in residents?

Do people want to curate their city? What happens when you give ownership and trust to people? How can we give increased ownership to people? Does digital technology serve as an enabler in this regard?

Is the wisdom of crowds relevant to urban planning? If so, how can we tap in to it?

How can cities engage non-engaged citizens? What are the barriers towards engaging the non-engaged?

How can we empower marginalised communities, and, by extension, how can we get them more involved

in the decision-making process?

In what ways can we foster a citizen-led form of urban planning?

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City Space
Architecture

Visitors in immersive museum spaces and Instagram: self, place-making, and play

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Abstract

Visitors to museums are increasingly drawn to posting images online that document and reflect their experience. Instagram, as a social media platform, has a proliferating presence in this context. Do different kinds of public spaces within the museum motivate people to share particular types of posts? What kind of posts do visitors generate from digitally immersive spaces with an interactive focus? These questions were unpacked through an exploration of data generated from a digitally immersive, interactive public space – the Immersion Room at the Cooper Hewitt, Smithsonian Design Museum in New York. Findings indicate that constructs of self, place-making, and play constitute critical components of what occurs, and these aspects are amplified in immersive spaces leaving digital traces within social media. I argue that the intersection of immersive digital environments and visual social media platforms such as Instagram offer a moment to play with and subtlety reconstruct the self with place being a significant contextual frame for this activity. Implications extend and challenge perceptions and the role of both museums as public spaces and the ways in which visual forms of social media intersect with spaces and the people who use them.

Keywords: social media, visual research, museums, immersive environments, place, play

Introduction

On entering a museum these days one will most likely encounter fellow visitors wielding mobile digital devices such as smart phones and tablets, as they move around various spaces. These devices are being used to document, record, and share their experiences (Budge, 2017; Budge & Burness, 2018; Humphreys, 2015). Such activity is increasingly integrated into the contemporary museum visit experience, and much of this involves the social media application, Instagram.

As a photography-based smart phone application that was launched in 2010, Instagram has gained immense popularity amongst the general population since April 2012 (Ferrara, Interdonato & Tagarelli, 2014). A social media application allowing for both still photography and video, Instagram commands increasing power and attracts much attention across a range of industries and sectors due to its significant uptake amongst the population in general. To illustrate this point, Hilary Milnes (2016), describes how the use of Instagram now drives decision making in the fashion industry.

Museums have been attempting to address engagement through experimenting with immersive spaces for some time, however, the focus has mostly been on design of such spaces. Less attention, if any, has been given to what the public is communicating through their social media accounts in these spaces (Russo, Watkins, Kelly, & Chan, 2006), and how this might account for engagement, self, and meaning-making. Traditionally, museums have concentrated efforts on collecting, interpreting and presenting material culture (Bennett, 1995; Dudley, 2010; Hooper-Greenhill, 1992/2003), with few opportunities for the visitor to play with, shape and construct meaning of what is encountered, and in turn, their own identity. In recent times this has begun to change, with many museums seeking opportunities to extend their offering beyond the expected (Sparacino, 2004).

Since the digital revolution of the late twentieth century, museums have been primarily concerned with using social media to broadcast their information and activity, and more recently engaging in a dialogue with visitors through museum social media channels (Russo et al., 2006; Russo, Watkins, Kelly & Chan, 2008). Arguments have been mounting for some time about the need to listen to and observe how visitors are communicating experiences through their own social media accounts in order to understand engagement and what might be considered meaningful for the museum visitor (Budge, 2017; Budge & Burness, 2018; Russo et al., 2008). To do so places the museum in an anthropological role as observer of people and culture.

Museums are increasingly interested in audiences and the ways in which they interact with their content. Engagement, while seemingly a buzzword in many quarters of public and private enterprise, has become an important marker of value, especially in contexts involving customers, employees, students or the public (see for example, Jaakkola & Alexander, 2014). Engagement in this context is understood broadly to encompass not only the 'quality of user experience characterized by attributes of challenge, positive affect, endurability, aesthetic and sensory appeal, attention, feedback, variety/novelty, interactivity, and perceived user control' (O'Brien & Toms, 2008: 938), but also the physical world surrounding the digital, and the ways in which both realms overlap and constitute a broad ecology of engagement, or what Adriana de Souza e Silva (2006) calls hybrid spaces.

Communication scholar, Erving Goffman (1959), made a compelling argument about the need to research the way in which we communicate, even the seemingly ordinary and

mundane. The position of self in research was of pivotal interest to Goffman and those who drew on his thinking in later years. For Goffman, understanding ordinary interactions about everyday communication can reveal much about the human condition, and why we do the things that we do. He argued that the way in which our social selves interact with others is inextricably linked to the relationships that connect people to the social world (Winkin & Leeds-Hurwitz, 2013). The construction of social reality was, in his view, an important field of research, as it has been for theorist Judith Butler (2008). As we near the end of the second decade of the twenty-first century where much communication between individuals now occurs in the digital realm, the need to understand such interactions is as urgent as ever and underpins my rationale to study social media interactions posted by museum visitors.

In addition, Gillian Rose (2012) has argued for more research that takes into account the audience 'eye', as few studies in the museum context have done this to date. The rationale for the research outlined in this article attends to this call for several reasons. Firstly, not enough is known about Instagram, engagement and the cultural sector, yet it is widely used. Secondly, photography, especially when shared publicly, can tell us much about culture, society, and ourselves. Lastly, digital screen-based culture now plays a dominant role in our lives (Australian Directors Guild, 2011; Evans & Giroux, 2015; Mioli, 2015). Much learning can be derived from this behaviour to inform broader understandings of people, places and society – all of which concern museums. However, research into Instagram imagery and practices in the museum context is new and emerging. There is still much to know that can be used to inform museum design and planning, with the potential for engaging with audiences in new ways.

In the following sections I highlight the literatures surrounding place-making as a theoretical construct that contributes to thinking about this topic. It provides a theoretical framework for interpretation and to develop new understandings about how museum visitors document and create meaning of their experience in museum spaces through the visual medium of Instagram.

Place-making and Instagram

The design and use of space within a museum is varied. Mark Wigley (2016) argues that museums choreograph themselves for discursive and immersive experiences, engaging the brain and the body respectively. Furthermore, he suggests that immersive museum experiences, such as exhibitions or installations, create spaces where the 'subject/object spacing' is lost because of their multisensory nature (2016: 2). I argue that this is communicated through visitor Instagram posts of such spaces, and through this article I will interrogate data to evidence this position.

The idea of place is not simple. Tim Cresswell argues that its complexity (2004: 50) has been discussed by theorists in relation to the act of both pausing (Tuan, 1977) and movement (see for example, Massey 1994, 2005). When considering the use of mobile devices such as phones, and the way people use these in cultural institutions through applications like Instagram, it requires conceptualising place-making within the parameters of both pause and movement.

As Jordan Frith and Jason Kalin in their study about place-making and digital memory argue, mobilities research 'sheds light on how different types of movement enabled by spaces can often come to define how people experience place as a dynamic entity or

process' (2016: 46). For this reason, thinking drawn from the field of mobilities about movement and place is critical to understanding what is occurring in immersive spaces within museums when people are photographing and sharing their experiences on Instagram. As Frith and Kalin along with other scholars (see for example, Brouwer & Mulder, 2003; Gane & Beer, 2008; Humphreys, 2015) have highlighted such everyday practices are part of the growing process of archiving our experiences in the digital realm. As these researchers and others have argued, this is not a 'catch all' process, but rather one of intentional selection with some images ignored and not shared, while others are chosen for the individually owned but publicly shared (in many cases) digital archive. Acts of place-making occur within this process, both in a virtual and real life physical sense. Image-based social media platforms, such as Instagram, appear to play a strong role in fostering place-making as the research outlined in this article will show. The intersection between a digital platform, peoples' behaviour, and the physical space in which this originally occurs is of particular interest in the research I undertook because to date, the literature does not reflect how these domains come together and inform each other. The notion of place-making that occurs in the context of social media applications is limited in research conducted so far. Therefore, the broad aim in the research explored here is to understand how certain types of spaces in museums (and elsewhere) might create an environment that fosters and legitimates particular behaviour that is then conveyed through Instagram images of museum visitors. The relationship with place-making is integral to this activity.

Previous studies conducted exploring the content of museum visitor Instagram posts (Budge, 2017; Budge & Burness, 2018; Carah, 2014; Suess, 2014), have highlighted the way in which exhibition material has been of central focus to the posts shared on Instagram. Self-portraiture, or 'selfies' as they are commonly known, were a minority of posts in a study of one exhibition (Budge, 2017); and a small proportion of a posts in a much larger study conducted in another museum which considered all posts shared on Instagram for a seven-day period (Budge & Burness, 2018). In Adam Suess' study of art gallery visitors and Instagram he found that visitors' usage of Instagram is 'connected to their aesthetic experience' (2014: 62) of the gallery. Carah's study of social media use in music festivals, involving platforms such as Facebook and Instagram, argued that 'images work as a device for registering relationships and experiences from material cultural spaces on the databases of social media' (2014: 4).

Yet, my informal observation is that other types of spaces in museums, such as those that are digitally immersive and interactive in character, tend to generate posts of an entirely different nature and are more likely to include people. In this article I define 'digitally immersive spaces' as ones that 'perceptually surround the user' drawing on Schnall and colleagues' definition (Schnall, Hedge & Weaver, 2012: 2). To clarify, the Immersion Room, as the site of the research shared in this article, is not an immersive *virtual* environment such as that used in virtual reality games like the widely experienced Pokemon Go phenomenon that made a mark on the world in 2016. In the Immersion Room, visitors do not immerse themselves in another world but are completely surrounded by images generated digitally, and thus create a spatial environment unlike that encountered in other parts of the museum, or in fact most of their daily lives. More information about the Immersion Room is described in the section to follow.

My observations suggest that the images produced in these spaces are tied with the idea of place; that is, being in the museum and the city surrounding it, and are embedded within the immersive nature of the space itself. Furthermore, place-making within social media platforms such as Instagram appears to be a part of what unfolds and is a topic of growing interest with researchers in digital, social and cultural fields of inquiry as we grapple with the many dimensions of this phenomenon and its impact on social life (see for example Ash, 2015, 2017; de Souza e Silva, 2006; Miller & Goodchild, 2015; Shaw & Graham, 2017). Therefore, I designed a study to test this hypothesis by exploring data generated by museum visitors in a popular and digitally immersive environment.

Research Design

While in New York in 2015, I visited the recently refurbished Cooper Hewitt Museum of Art and Design in Manhattan. The Cooper Hewitt is part of the Smithsonian Institute that describes itself as 'the world's largest museum, education, and research complex' (Smithsonian, 2017). With the changes made to this museum and its reopening in late 2014, an array of elements have been introduced to digitally engage visitors while in the museum. One space, the Immersion Room, is a discreet small-scale space off to the side of one of the main gallery floors. In this room, visitors are able to use a large digital tablet constructed as a table to explore the Museum's wallpaper collection (by choosing one from the database) and have it projected on the walls in the room. Visitors are also able to create their own wallpaper by using digital pens on the tablet to draw. The technology immediately puts the patterns into repeat form, so that it's possible to see how these hand drawn images become wallpaper. The experience is immersive in that all walls in the room hold the images, so the visitor is surrounded by what amounts to a visually arresting experience (Figure 1).

I visited the Museum on an ordinary weekday and yet the queue to the Immersion Room was constant. People were eager to participate. I also noticed most people took photographs in the room, and many of these were either selfies or images of themselves and/or their friends taken by others but the backdrop of the digital wallpaper design projected on the walls in the room seemed to be an integral part of what was being captured and shared. I wondered if the images were being posted to Instagram. I asked a staff member from the Museum's digital team, who was showing me around that day. He confirmed that yes, many, many posts of this room were shared on Instagram and that they had even run a few Instagram campaigns around the focus of the room when they realised how immensely popular it had become (Cooper Hewitt, 2015).

When considering a context that foregrounded immersive spaces in museums, I chose the Immersion Room as a case study site for this research because there was evidence that the public were attracted to it, engaged with it, and seeking to communicate this experience on social media, especially Instagram. A two-year gap between my initial experience of this room and my decision to explore it as a site of research was the result of a growing curiosity, extending from research into museum visitor-generated Instagram posts, about various spaces in museums and the different kinds of Instagram posts that appeared to be shared there.

Figure 1: Kylie Budge (author) and Micah Walter from the Cooper Hewitt, Smithsonian Design Museum in the Immersion Room, New York, 2015

The specific aim of the research was to understand how digitally immersive and interactive museum spaces cultivate an environment that encourages particular behaviour and practices that are then conveyed through Instagram by museum visitors. Extending from this, I set out to analyse what this means in relation the act of place-making in the context of such spaces and the widely used, extremely visual social media platform, Instagram. The following research questions guided this investigation: Within digitally immersive interactive spaces in museums, what kind of social media posts on Instagram are visitors posting and sharing, and how might this relate to notions of meaning-making, identity, and place-making? The methodological approach I took was concerned with understanding representations of behaviour and actions, and the attitudes, beliefs and values associated with these, with a socially critical approach to understanding the broader context in which these are located.

Two terms are used throughout this study that need some defining. The first is *hashtag* defined as "a short keyword, prefixed with the hash symbol '#'—as a means of coordinating a distributed discussion between more or less large groups of users, who do not need to be connected through existing 'follower' networks" (Bruns & Burgess 2011: 1). The second term, *geotag*, is defined as a hyperlink that allows Instagram followers to know the geographical location of where the image was taken.

Method

A nondescript seven-day time period of posts to Instagram was chosen to bound a sample to study: 10am Wednesday 5 April – 10am Thursday 13 April 2017 (Australian Eastern Standard Time). By time-boxing the study, I followed the advice of Lee Humphreys (2015) and Lee Humphreys and colleagues (2012) who emphasise the need to firmly bound studies in social media because of the sheer volume of data they are capable of producing. The Cooper Hewitt geotag was used to further define the data sample. From this point, I looked at each post and determined whether it had been taken in the Immersion Room, and if so, included it as part of usable sample for this study. This was possible because I have visited the space and could recognise the distinctive nature of the photographs generated in the room. The Cooper Hewitt has an active #immersionroom hashtag, but this was not chosen as a way to bound the study because on closer observation, I noticed that more posts taken in this room were posted with the Cooper Hewitt geotag (and not the hashtag). This is possibly because many visitors are not aware of the hashtag, despite it being heavily used during previous Instagram campaigns run by the Museum. All posts are publicly available for viewing by anyone using Instagram

Ethics

Like many researchers working with publicly available social media data, I considered the ethical implications of collecting and studying posts without the previous knowledge of their creators. Although there is no consensus of what constitutes best practice (Haimson, Andalibi & Pater, 2016), it is important to consider and acknowledge the ethical implications of working with this material. I have followed the practice of receiving consent from the owners of Instagram posts before including these as examples (visual and text) in articles I have previously published using social media research.

In this article, I have included images *I have taken*, not those of Instagram users, to provide an example of the kind of images posted by others, and to illustrate the technology used in the Immersion Room. I made a decision based on a consideration of ethics not to include images from the Instagram users who I studied. To protect the identity of Instagram users whose text was included in this article to evidence my argument, I have not included their Instagram handle (name), or other material that might immediately make their identity known to the reader. I also considered the nature of the posts' content, and the perceived risk factors in using example text from such posts. The nature of the study undertaken does not pursue taboo, sensitive, or controversial topics, and as such was perceived to be low risk in terms of creating any potential harm for those whose words and phrases were included in the examples that follow. These decisions are in line with ethical guidelines for use of social media content in research publications (Haimson et al., 2016).

The notion of the researcher in this context as someone who is observing without being known, or as Dana Boyd refers to it, as part of the 'invisible audiences' in networked publics that are tied to properties including persistence, searchability and replicability (2007: 9) unlike those of mediated publics, was something I was mindful of as I worked with the data and considered how it would be represented in publication. Furthermore, Susan Barnes' (2006) notion of the 'privacy paradox' was considered. Social media activity now constitutes a large proportion of social life for many people, and in doing so, especially for teens, intimate, private thoughts are quite often exposed. The paradox lies in this information being harvested and stored by a range of organisations from

government agencies to marketers (Barnes 2006). Layered over this is the way in which, since Barnes early writing on this topic in 2006, we have become somewhat accustomed to the idea of being watched while talking and presenting ourselves textually and visually online, yet the discomfort continues around notions of privacy.

Handling the data
I am informed by Sarah Pink's approach in *Doing Visual Ethnographies* (2013) and Gillian Rose in *Visual Methodologies* (2012) when working with Instagram data due to the extensive visual properties it contains. To ensure I was working with a stable data set (Instagram users can delete or add posts at any time) I 'captured' the data by taking it from the live Instagram environment to a static one. Using the Cooper Hewitt geotag as a tool to identify relevant posts for the sample, I then deposited these into a MS Word document so that they could be maintained in an electronic file for exploration during analysis. Finally, I printed each post onto separate sheets of A4 paper. I then pinned these to a wall to enable a tangible and visual way to handle the data.
In this way, posts could be observed, explored and interrogated through their visual presence. The content of posts, both visual and text, were then 'read' and coded using a thematic approach. Data were explored for patterns and relationships, and to 'find[ing] explanations for what is observed' through segmenting and reassembling (Boeije, 2010: 76). A central focus was to 'ask questions of the data' as I worked through analysis of it (Neuman, 2000: 420; Richards, 2010). The research questions, purpose, and overall design guided analysis (Coffey & Atkinson, 1996).
From here patterns and themes emerged quickly. I used a process of inductive coding (Corbin & Strauss, 2008) to group the data. That is, the codes were developed from the data itself using a bottom-up method (rather than imposing preconceived codes) working 'up from the data' (Richards 2010: 73).
This way of working allows me to come back and forth over time in an iterative manner to reconsider the themes, and having them visually presented on a wall, allows those who encounter them (for example, other researchers visiting my office) to view and consider their content. This unintended dialogue has become a valuable way of testing my emerging thinking about the data and was used as a way to refine understandings in previous studies by (Budge, 2017; Budge & Burness, 2018).

What the posts revealed
A total of 66 posts from 62 individual users were generated through the seven-day period chosen for the study. In terms of the visual content of images, there were three distinct categories: people standing in front of the digital wallpaper image (with the image projected across their faces and bodies), posts containing just the digital wallpaper on the walls in the room, and posts of the large digital tablet (mounted as a table – See Figure 2) together with the digital wallpaper on the wall. Information about the number of posts in each of these categories can be seen in Table 1 along with the codes and themes from the data. It is worth noting that one of the posts in the sample was from the official Cooper Hewitt Instagram account but was a 'regram' of a visitor's post. A regram is when a user reposts an image from another user on their Instagram account, usually to draw attention to it.
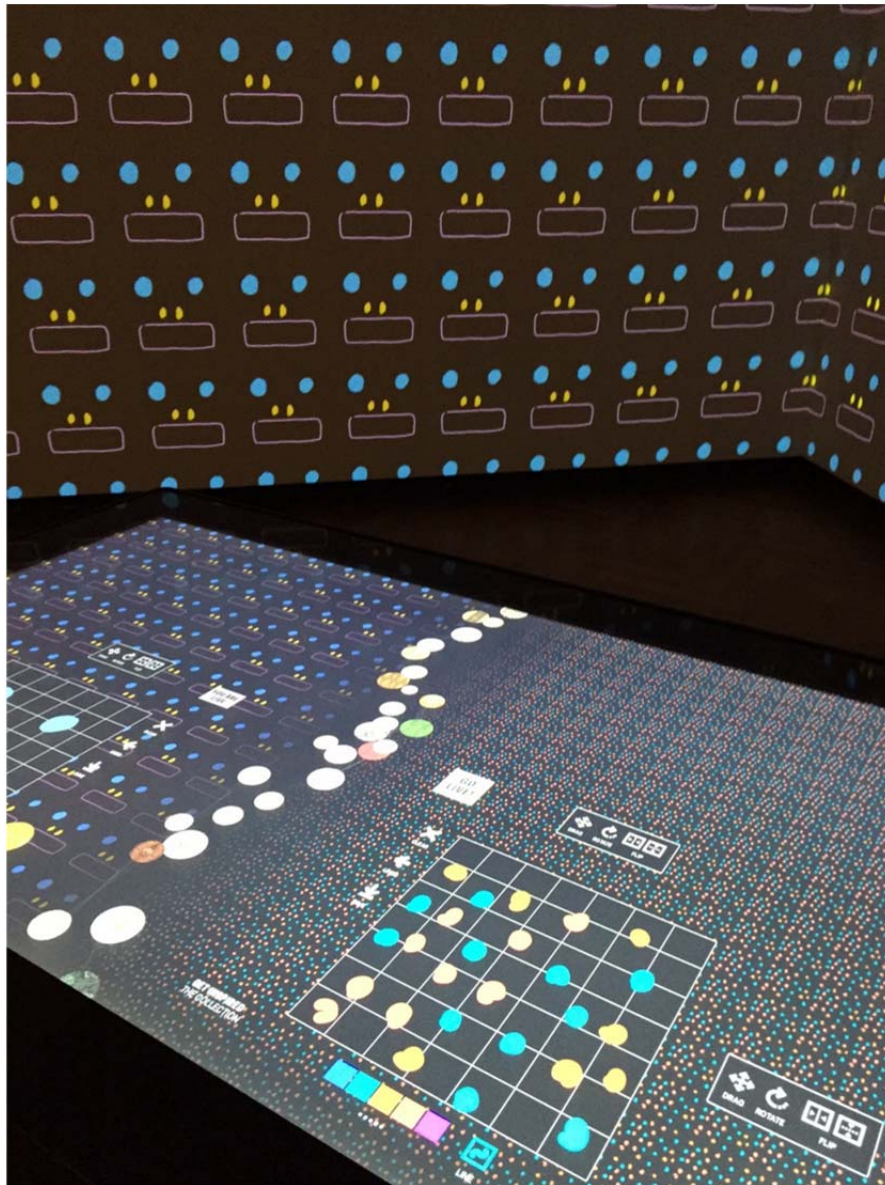
Figure 2: Digital tablet for designing wallpaper and projected image on walls in the Immersion Room, Cooper Hewitt, Smithsonian Design Museum, New York

It was not possible to provide a demographic breakdown of individual users (museum visitors) in the sample because an Instagram account does not readily lend itself to this exercise. User names are sometimes not the names of the user, and even if they were, it would not be possible to know gender or other demographic information unless this was confirmed with the Instagram users in the sample. Direct contact was not made with those in the sample to ask this or any other question. However, it is worth noting that every person appearing in the sample of posts appears to be under 40 years old, and thus provides a youthful lens to the activity that is reflected. Most posts contained one person in the image, while sometimes two or three people were pictured.

Table 1: Overview of images posted 5-13 April 2017 with codes and themes

Category	No of images	Major code groups	Key themes
People standing in front of wallpaper	49	Emotion – humour, joy, delight Selfies/people-related photography – looking at the viewer Pattern, light and people enmeshed through photography	Museum visitor-as-designer Sharing emotion
Wallpaper	12		
Digital tablet/Digital tablet & wallpaper	5	Design – visitor experimentation with technology Use of colour and pattern in posts to stand out Communication – expressing and sharing with followers Marking place – museum, New York; the self in place	Place-making Self

In the category, 'People standing in front of wallpaper', 36 of the 49 images posted were of a single person (but not the same person) standing alone in front of the wallpaper. The other 13 images in the category were of small groups of two or three people standing together, presumably friends visiting the museum together.

Of the 66 posts, 24 used text statements in their wallpaper design. This constitutes 36 per cent of all posts in the sample. These were obviously made by the Instagram user who posted the image (or their friend/s accompanying them), and not drawn from the Cooper Hewitt wallpaper collection. The prevalence of such statements is surprising as I assumed that the opportunity to draw images, rather than use text, would be taken up in this room. Statements in the wallpaper design varied but many were names, presumably those of the visitors. For example, 'hey Jenn', 'Ri & Hele New York', 'Julia', and 'Annelie' were seen integrated into the different digital wallpaper designs. One visitor chose to include the statement, 'Be gentle with yourself'. Four of the text-based wallpaper designs appeared in languages other than English – Korean and Chinese.

Eleven out of the 66 posts in the sample included languages other than English in the text that accompanied the visual image (that is, not part of the wallpaper design but as text written under the visual image in Instagram), with the majority of these being languages from Asia. Those that could be easily identified included Korean, Mandarin, and Japanese. Portuguese was also present.

Hashtags were used by most visitors. For example, #wallpaperWednesday, #designing, #creating, #creativeprocess, and #designinspiration were included in many of the posts.

Discussion

The visual and text-based elements of each post was read holistically to provide an opportunity for meaning to be conveyed through the entire context of the post. Interpretation of information posted by visitors in the sample involved organising data into themes. As mentioned earlier in the description of how the data was handled, this process of coding the data into themes emerged quickly. When the posts were read, coded and thematically grouped, four key themes emerged: museum visitor-as-designer; sharing emotion; place-making; and self. The following sections highlight the central thematic groupings that my interpretations revealed.

Museum visitor-as-designer

Of much interest to me as someone who has worked in a museum, there is a strong need to convey the act of designing or creating revealed both through the photographs posted and the text accompanying these. Museums work hard to create experiences for visitors to engage with their collections. In this case, there is strong evidence to show that the Cooper Hewitt, an internationally renowned design museum, has succeeded in engaging visitors in this space in the act of designing.

For example, text under posts that communicates this idea of visitor-as-designer includes the words 'designing', 'creating', and 'design inspiration', and 'patterns' as hashtags. One post included the information: 'Cooper Hewitt's customizable DIY digital wallpaper', and another, 'Immersion Room for creating textures'. Highlighting the visitor-as-designer idea was one post with the words, '@_____[name of person posting] is an interior designer'. Another post included: '@_____[name of person posting] drew on a wall today'. These examples highlight the active role playing of designer by visitors in the sample. As such, the notion of being a designer, of creating something, even if only fleetingly, appears to be important to many of the visitors immersed in this space. Reinforcing this idea is the way in which visitors experiment with colour and pattern in their digital wallpaper creations. While some of the wallpaper designs projected on the walls in the posts are from the Cooper Hewitt collection (visitors are able to download these through the database on the digital tablet in the room), the majority of posts reveal designs created by visitors through the technology embedded in the custom-made digital tablet and accompanying pen. Designing a repeat pattern appears to be particularly compelling and this activity is highlighted through the visitors' posts. Creating a repeat pattern is not a simple step for novices, and thus having access to technology that immediately does this appears to be very engaging for visitors in this space.

Thus, the museum visitor momentarily becomes a designer in the Immersion Room. The social presence of others, both those in their Instagram network and the people physically present in the room, is part of this experience. The ability to experiment with being a designer is enabled through the technology of the custom-made digital tablet that allows for two visitors as a time to create patterns. This experience is amplified and extended through the sharing on Instagram and thereby potentially drawing in and including many others. The simple idea of projecting the patterned digital wallpaper around the room creates a visually striking and unique immersive experience for the museum visitor-as-designer. There is an immediacy about this experience that is also attractive. All it requires is for the visitor to stop and draw on the tablet for five minutes, and their work is instantly projected around them. Inhabiting the role of a designer, if only briefly and somewhat superficially, is fast, visually exciting, and appears to be satisfying. An example

of this is a post of a young woman using the tablet to design her own wallpaper (we see her face and body from the side and her hand as it holds the pen and draws on the digital tablet surface) who writes 'Channelling my inner designer'. Suggesting pride in their work, another visitor posted 'I made dis' with an image of them standing in the space with their designed wallpaper surrounding and across their body.

Sharing emotion
The overwhelming atmosphere portrayed through all posts (both visual and text components) is one of joy and of the museum visitors having fun. It was the first thing I observed when looking at the data. For example, summing up this idea, one visitor posted: 'I'm having the time of my life designing this wallpaper'. Another visitor expressed their enjoyment simply with 'Sunday Funday'.
This particular immersive space appears to cultivate a positive atmosphere and one which the visitors want to share with others via their social networks in Instagram. Illustrating this idea are the comments made by followers on posts such as:
> 'Obsessed'
> 'I am in love with this'
> 'This is too cool'
> 'Legitimately perfect'
> 'Actual art'
> 'OMG this is goood!'
'Wow! This is a great photo'.
Thus, the desire to share their presence in this space is strong. It is possible to see how the acts of place-making and connecting with others are fully activated in the Immersion Room.
It is intriguing as to why one space could illuminate such a display of positive affect, and extending from this, why there is a need to share it with others. One possible explanation is the need to tell others so that they too might experience a similar joy and connection with an act of design in the vein of Hjorth's (2016) notion of 'intimate copresence'. Mobile media amplify creative possibilities bringing together acts that create a sense of closeness or proximity through the visual. As viewers of these posts we are drawn into a close, otherwise private moment between friends. This visuality is emplaced (Pink & Hjorth, 2014) and this is illustrated through the emotion portrayed within the posts in this sample. Hjorth and Hendry describe their concept of *emplaced visuality* as putting

> *theory of movement at the center of our understanding of contemporary media practice. Rather than movement being between nodes in the "network," movement needs to be understood as central to the way people and images become emplaced. Emplacing involves the entanglement of movement and placing across temporal, geographic, electronic, and spatial dimension. (Hjorth & Hendry, 2015: 1)*

The sharing of joy is emplaced in the Immersion Room at the Museum through the act of being there and designing digital wallpaper with others.

Place-making through visuals
The visuals in the posts, that is, the photographs and one short video, declare almost audibly, that '*I am here*'. Visitors want to let others know that '*I am in this place*', that is,

this museum, doing something interesting. In some cases, there is the need to communicate that they are in that place (the Immersion Room) in the museum, 'with these people' (others who are sometimes also in the photos that are posted).

The Immersion Room means something to the museum visitors from this sample. This declaration of place-making is done in several ways. Firstly, we can see place-making occur through hashtagging and/or geotagging the Cooper Hewitt. With geotags as location-based tags, it is possible to view a map of where the Museum is geographically located. This is a very literal way of perceiving place-making but it is an important one. If visitors did not want to demarcate place as meaningful, they would neither hashtag nor geotag their posts, and would most likely refrain from posting about their visit on social media.

Secondly, the act of place-making is visible through various design elements within the wallpaper created by visitors. For example, one post included the text 'Ri & Hele New York' in their design so when it was put into repeat by the digital tablet technology, a room full of these words was displayed to full effect. One reading of this could be that Ri and Hele are the museum visitors who created the digital wallpaper, and that being at the Cooper Hewitt is significant not only for their ability to design something while they are in the building, but because it is located in New York. The Cooper Hewitt is located on 'museum mile' on Manhattan's Fifth Avenue across the road from Central Park. All of these geographical markers are significant because of the international standing and popularity of New York as a city. Ri and Hele could quite possibly be travellers visiting the city, and as such wanting to place-make their trip. Their post, like others in the sample communicates the excitement of being at the Museum in this particular and unique space (the Immersion Room), and of being in New York.

The significance of New York as a place, and the need to identify this through an act of place-making is evidenced through the posts via a variety of hashtags, for example, #NewYork and #NY. The Museum too is articulated as a place worthy of highlighting and sharing through hashtags such #CooperHewitt and #Smithsonian used by many visitors whose posts appear in this sample. The museum as a significant place to mark (both the museum as a general place and this particular one – the Cooper Hewitt) is indicated via one visitor who included the following text under a photo of herself (we presume) standing in front of her wallpaper design: 'Museum day again with @_____[friend's name]'. Her design consists of many short, coloured lines intersecting into a graphic pattern which falls across her face and body and behind and around her in the image. Another visitor posted: 'By far the trippiest room I've ever been in [facial emoticon] (but also the museum had a sustainable textiles exhibit that was really great, would definitely recommend).' Both show the ways in which visitors single out the museum as a place that is special or significant in some way, and this is further amplified through their practice of sharing the place-making on Instagram.

Self in the Immersion Room
The idea of 'self' is a central theme emerging through the images and text posted. Interwoven through and connected with self is the concept of identity. The wallpaper pattern text created by visitors especially evidences this given 36 per cent of all posts in the sample of 66 included some kind of text in their wallpaper design. Many of these were names and presumably those of the visitors. Examples of names appearing in repeat

pattern as the focus of their digital wallpaper design include 'Julia', Miki', 'Annelie', 'Tracy', and 'Ri & Hele New York'.

Being known to be in the Immersion Room is an important part of many visitors' experience, and is certainly communicated through the posts shared in this sample. Photographs of visitors (be they selfies or photographs taken by a friend) is one way this is communicated with 74% of posts in the sample including a person or a small group of people (pairs, and in two cases, a group of three people). However, in addition to this need to capture and visually communicate the self in this space, is the desire to express this through text via names in the wallpaper design, presumably those of the visitors who posted the images to Instagram. When considered together, this constitutes a considerable amount of self being expressed and communicated in one museum space. The specific technology provided by this particular space enhances opportunities to not only take selfies, but to create wallpaper that incorporates the individual (for example, through their name), and to leave a trace of something about their personality or creative interests. While the trace is not left behind in the room as such, the digital mark is held and remains within the image posted to Instagram. This finding echoes Alli Burness' argument about 'self-representational social photography' being 'a definite response to, and a form of self-expression inspired by, museum objects' (2016: 100), but in this case the objects are digital and mutable (Rose, 2016) ones.

Communication theorist, Katie Warfield's (2014) research on the self in the context of the selfies taken by young women, points to the desire for self-expression as a way to insert oneself into the public domain on their own terms. Given the young age of those visiting the Immersion Room, it is possible that such acts of self are being carried out here given the significant traces of self-expression in the posts created by those who visited the Immersion Room.

In these traces of self within the Immersion Room posts, elements of performativity can be seen. Warfield has explored performativity in her work with girls and selfies, and argues that it is connected with the unfolding process of everyday human performance of self. In such performances there are insights into connections, be they momentary and fleeting, and authenticity (Warfield, 2014). Theorist, Judith Butler (2008) has explored performativity in relation to self and identity construction with a strong focus on gender, claiming the importance of power in speech acts such as naming. Her work posits that all reality is fundamentally social and constructed, and created through continuous performance. In the Immersion Room data speech acts occur through the text that supports the Instagram posts, the text woven into the visitor-made wallpaper designs, and through the act of self that is portrayed through the photographs themselves. As such, the notion of self is pervasive and present. However, there is a need to speak directly to those producing the images to further understand the motivation and other complexities that underpin their creation, as Warfield has argued in her research.

Suspending reality
In the data set discussed here there is much evidence of play and 'ambient play' as Hjorth (2016: 180) refers to it. As she explains, 'Mobile media play a key role in emergent intimate publics whereby binaries such as online/offline, public/private and work/personal are eschewed. This entanglement can be understood through the notion of ambient play' (Hjorth, 2015: 24). Both play and ambient play are witnessed through the visitors'

experimentation with being a designer, and the joy they express of being in a unique space within a far from ordinary museum in an extraordinary city, New York. Play is further enacted through the desire to illuminate the idea of self in such place-making through the visual, with many visitors opting to post images of themselves woven through the digital patterns they have created on the walls behind and around them. Here, Pink and Hjorth's (2014) notion of 'emplaced visuality' is enacted on a double level: through the Instagram post itself marking a visual-in-geotagged-place and space, and via the emplacement of the visitor in the digitally design wallpaper through which many are enmeshed in their images.

The Instagram posts illustrate the way in which 'the emotional, psychological, and social dimensions [of visitors] are both lived and imagined' (Hjorth, 2016: 33). As viewers, we speculate on those in the images (and those we cannot see but understand to be present) to ponder where they live, how they usually spend their days. We wonder if they aspire to be designers or are just enjoying a moment to play at this role. We read the comments on their posts and imagine the circle of friends and acquaintances they inhabit, both real and virtual, and use this moment to paint small portraits of their lives in our minds, thus unleashing many possibilities. The entire experience from the viewer's perspective is both intimate and strikingly visual, generating a sense of copresence and knowledge of place.

All of this is possible because of the offer to suspend reality through the convergence of an immersive and interactive digital environment in a museum and the visuality and sociality afforded through Instagram. With the meshing of these two habitats an invitation to suspend disbelief, to take a step away from the everyday, including how we understand and usually perform our 'self', is opened up. From there comes an opportunity to take a small slither of time to playfully shape, construct and reconstruct who we are, and who we can be, leaving a digital trace to memorialise the moment.

Conclusion

Located in an emergent interdisciplinary field, there have been few scholarly studies involving Instagram and cultural institutions from which one can draw to understand the phenomena generated by the convergence of these realms. Exceptions include five recent studies (Arias, 2018; Budge, 2017; Budge & Burness, 2018; Carah, 2014; Suess, 2014). The case shared here, like those of recent studies, draws on data from one setting in one moment in time (albeit seven days from a very popular, high profile museum in New York) and as such I acknowledge the limitations of generalising claims from this research. Standing beside this acknowledgment, however, is the belief that the methodology and findings of this research are meaningful and significant in understanding museum visitors' perspectives. Through this approach, insights are revealed and interpretations are possible, and the implications from this research extend and challenge perceptions and roles of both museums and visual forms of social media.

In this article, I have argued that the intersection of immersive digital environments and visual social media platforms such as Instagram offer a moment to play with and subtlety reconstruct the self with place being a significant contextual frame for this activity. This contributes new knowledge to the field particularly in relation to place-making. Furthermore, it takes up Rose's (2012) call for studies to include and focus on the visitor's 'eye'. It does this through an increasingly popular visual medium, Instagram. This

research foregrounds social media as a serious and worthy subject matter in the museum engagement context. Moreover, it draws on visitors' publicly available creative outcomes of this moment in the museum (their Instagram posts), to illuminate activity occurring in a uniquely immersive museum environment with digital engagement as the central focus. Implications for this research extend to deeper understandings of the nuanced relationship between people, spaces, museums, and technology, including social media. Furthermore, such thinking opens the possibility to alter and reconfigure perceptions held about the role of museums and their spaces, and the ways in which this relates to social media such as Instagram. This includes recalibrating out-dated notions of museums as sole interpreters of knowledge whose role is to deliver history or ideas about the present in a didactic, one-way manner (museum to visitor). Research such as this and previous studies in the museum context enable the possibility for reshaping conceptions about social media research as being worthy of scholarly inquiry and exploration. It can inform current thinking, approaches and practices in museums, and the mediums from which meaning about contemporary culture can be drawn.

Research such as that articulated in this case study repositions the museum in society so that it is clear that it is not detached from, but very embedded in the broader world as a public space. The museum is a place for many experiences, including ones that involve creating and recreating ideas about the self, even if for only a brief moment in time. The added dimension of visually-based social media in this act framed by the museum as place is that it provides the potential for digital traces of the experimental and playful self to remain, and to be encountered by others. In doing so, it offers the opportunity to be part of this evolving experience of the lived and imagined.

Acknowledgements

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VIEWPOINT

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Art as a catalyst to activate public space: the experience of 'Triumphs and Laments' in Rome

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Figure 1. 'Triumphs and Laments' art work by William Kentridge in Rome, on the Tiber riverfront.
Source: the author.

Many cities have rediscovered and reinvented their river fronts as public spaces in recent years. From New York to Seoul, urban waterways which were forgotten, marginalized, or outright abandoned are now filled with life. In each case the transformation was spurred by a combination of grass roots, bottom-up initiative and savvy government recognition of

the projects' potentials. Once the city leaders embraced the projects - and not a moment sooner - public and private funding materialized and bureaucratic barriers disappeared. In Rome, whether due to the complexity of the chain of responsibility for the river front, or simply an ingrained aversion to progressive planning - saying no or saying nothing is much easier than taking responsibility for positive change - initiatives to renew the urban riverfront have been small and disconnected. Diverse interests ranging from green space to water transit, from river front commerce to ecological restoration, have all vied for a role in the river's regeneration.

But one particular discipline, that of art, has succeeded more than others in attracting international attention and changing the way people in Rome and throughout the (art) world see the Tiber. Artist William Kentridge, with his project 'Triumphs and Laments', using the simple technique of selective cleaning of the Tiber embankment walls, revealed to the world a procession of figures which populate the riverfront with a life that it hasn't seen in centuries.

How does this experience, spearheaded by a grassroots organization with ties to both the local architectural community and the international art world, provide a model for public space regeneration? Using the Kentridge project as a case study, how we can better understand how art can serve as a catalyst to spur social change, and how can the city leverage its existing resources to do more with less?

Before examining the phenomenon of 'Triumphs and Laments', it is worth remembering that the collective memory of Rome has repeatedly been shaped by top-down plans for urban form, imposed onto sites cleared by fires and floods, or in its *disabitato*, tracts of green space abandoned by a shrinking population. Nero rebuilt after the fire of 64 AD with wider, straighter streets, and the Renaissance popes from Julius II to Sixtus V cut axial boulevards through the historic fabric to establish new urban connections. In the 20th century Mussolini's *sventramenti* scarred the city while gouging out historic fabric and replacing it with over-scaled monumental architecture. And already decades before Fascism, after becoming capital of unified Italy, Roma Capitale saw the radical transformation of its most central historic infrastructure, the Tiber river. In today's global urbanization, city-making often means inserting new pieces of architecture, or even complete pieces of city, what Fumihiko Maki called 'collective form' especially in urban areas where large tracts are abandoned or devastated by disasters. Even in the Eternal City there is a role for big thinking, for regional strategies, and for projects which address infrastructure as a catalyst for urban regeneration.

But such bold moves are not the only way to shape cities. Equally frequently change comes from unforeseen sources. The choice of location of the Italian film director Paolo Pasolini for the film 'Accattone' was instrumental in cultivating a new collective identity for Rome's Pigneto neighborhood, as recent street art has revolutionized Ostiense. Such phenomena resemble the effect of mutagens on natural growth; a small deviation is often enough to change the course of evolution. Sometimes - and this is true especially in cities like Rome where architecture has had centuries to accrue - urban architects can leverage the existing fabric and artifacts and produce successful urbanism with the most minimal of interventions. Top-down initiatives very often result in over-determination of public space, resulting in what Richard Sennett calls the 'Brittle City' and which Jane Jacobs contrasted with the notion of 'Open City', one where juxtaposition of different and potentially contrasting uses and users enliven public space.

Jacobs' vision of vibrant urban space calls to mind the piazzas of Rome that her generation, especially architects like Robert Venturi and Denise Scott Brown, travelled to Italy to study. Today these historic spaces are more frequently focused on commerce and consumption and fall into the trap of crass tourism. While public spaces on the edge of town often boast more authenticity, a diversity of use and user, they lack the monuments that draw people and create identity. Nevertheless, in recent decades designers have been drawn to the *periferia* by this very quality of cultural marginalization. The historic centers have been left as lost causes sacrificed to mass tourism. Somewhere between the center and the city fringes lies the Tiber, neither geographically peripheral nor experientially central, an ambiguous *terrain vague* running through the heart of Rome. The Tiber Riverfront has not always been the desolate wasteland that presents itself to us today. In 1704 Alessandro Specchi completed the Porto di Ripetta, a bustling baroque *scalinata* descending from the city to its river banks, and inversely welcoming merchants and visitors arriving by boat up into the Campus Martius. Images of the Tiber from this time show lively boat traffic, floating mills, and great numbers of people lounging around the river banks. Fishing and swimming were so popular that they were regulated by papal decree. As Rome's most important economic, environmental, ecological, and recreational resource, according to architect and Tiber historian, Maria Margarita Segarra Lagunes, the Tiber didn't just run through the city; it was part of the city.

But the Tiber was both a blessing and a curse. The lifeblood of the city could also prove a menace when heavy rains upstream filled its narrow channels causing it to breach its banks. On 28 December 1870, just months after Italian nationalists breach the Aurelian Walls (establishing Rome as the nation's new capital), the Tiber river breached its banks and flooded the city to a level not seen since 1637. The nascent nation's capital was mortified by the embarrassing inaugural performance, and flood-prevention measures, which had been discussed and debated since the late Republic, became urgent. Smart solutions such as bypass canals to mitigate extreme water levels were set aside in favor of the most destructive option: demolition of the fabric along the river and construction of the tall embankments walls, the *muraglioni*, which we see today.

Between 1880 and 1900 vast tracts of land on both sides of the Tiber were commandeered and cleared. The narrow streets of the former Jewish ghetto and the dense wall of buildings, which had stood directly along the river, forming an occupied architectural edge, were all razed to be replaced by speculative modern structures. In fact, the creation of the Tiber embankment served both infrastructure and urban renewal, in the worst sense of the word, not unlike the cleansing efforts which would mar American cities and infuriate Jane Jacobs in the middle of the following century.

Rising forty feet from the lower riverside paths, these travertine walls effectively severed the city from its river. In her 2009 essay entitled 'Rome's Uncertain Tiberscape', Kay Bea Jones describes how

> "*with street life, bridge crossing, and public activities now thriving fifteen meters above the Tiber's water level, which rises and falls with little effect, the relationship of modern Romans to their river was detached and would be changed forever.*" (Jones, 2009)

Since the completion of the embankment walls, Rome's riverfront has stood as a piece of obsolete and abandoned infrastructure, marginalized like the distant periphery despite its location in the heart of Rome.

For many Romans and foreign *romaphiles* alike this neglect is unacceptable. Since the 1960s architectural proposals have addressed the role of the river, often with fantastic structural gestures (c.f. Franco Purini and Laura Termes' project for a new Tiber bridge, or James Stirling's Tiber-spanning entry in the 'Roma Interotta' exhibit) and the river continues to draw the attention of urban and landscape designers.

As a design instructor for various American architecture schools I have frequently used the riverfront as our laboratory. But it was in 2013 when I accepted the Tevereterno Onlus Board's invitation to serve as Director that I began to realize the challenges of carrying out real projects on the river.

Tevereterno was the creation of New York artist Kristin Jones who had come to Rome in the 1980s with a Fulbright, and later returned as a Fellow at the American Academy. At the Academy her project was focused on the potential of the Tiber riverfront as a site for artistic programming. Not the whole riverfront, but a particular section, between Ponte Sisto and Ponte Mazzini, which she dubbed 'Piazza Tevere', where the embankment walls run parallel to one another for a half a kilometer, cut perpendicularly by the two bridges to form a perfectly rectangular space. In order to turn the vision of Piazza Tevere into reality, an organization was needed. In 2004 Jones called on friends, old and new, in Rome's cultural community - Architects Carlo Gasparrini, Rosario Pavia and Luca Zevi - and, together, three Italian architects and one American artist, they formed the 'Associazione Tevereterno Onlus'[1].

Over the course of a decade Tevereterno promoted a series of cultural events on the site but it wasn't until the arrival of William Kentridge that the project took on a scale proportional to the river's role in the city and the city's role in Western culture.

The South African virtuoso is one of the most world's important living artists. Romans who attended his production of Refuse the Hour at the Teatro Argentina in Rome, in late 2012, were entranced by his rich interweaving of sound, text, image, of science, history, literature, and personal anecdote. At the same time Rome's MAXXI museum - the National Museum XXI's Century Arts - was showing Kentridge's installation entitled 'The Refusal of Time', built around the same themes from the work of Peter Galison, a Harvard-based historian of science.

In November 2012, while Kentridge was in Rome for 'Refuse the Hour', Tevereterno set up a test projection of images and video onto the embankment walls in order to show the artist the possibilities. He watched from above, and then descended to the riverbanks below, observing the scale of the images (his own drawings from the recent performance).

After the last performance of 'Refuse the Hour' there was a party in the spacious, art-filled home of a mutual friend off of Piazza Venezia. All eyes were on William Kentridge when, after years of discussions, he announced his decision to embark on his first ever experience in free public art, here, on Piazza Tevere. "If not now, when?" he announced. It was as if the floodgates had opened and the creative forces rushed on through. The proposed medium, selective cleaning of the river walls, had been tested and approved, but the exact subject had not yet been identified. Kentridge wasn't going to start drawing without assurance that permits and funding would be in place to make the project a reality, but ideas started to take form. He was interested in iconography from Rome's long and ongoing history, specifically images recognizable as victory or defeat, triumphs or

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[1] Associazione Tevereterno Onlus' - https://www.tevereterno.it/

laments. Under the direction of art historian Lila Yawn, professor at the nearby John Cabot University, a team was organized to collect images for Kentridge to draw from, and eventually a selection which he would draw in his studio. Two databases (one for triumphs and one for laments) were quickly merged into one when it became clear that every victory represented another's defeat, for every triumphal celebration someone else was mourning their losses.

Kentridge is remarkably humble for an artist of his stature. He listened with childlike fascination to explanations of images, to stories from Rome's history. He learned, he made connections, but as a visual artist, not a historian, he gravitated to the images themselves independent of the story they told. An emaciated horse from the base of Trajan's column, the Renault 4 with its hatch swung open to reveal the body of Aldo Moro (the chairman of the Italian Christian Democratic party and former Italian Prime Minister, who was killed by Red Brigades in 1978), the war-worn prisoners carrying their treasures from the Arch of Titus, all were chosen for the emotions evoked, not for the specific message conveyed.

Parallel to the first iconographic research, another process was underway, the quest for signatures. Tevereterno Vice-President Valeria Sassanelli and I sent around documents, scheduled appointments, rescheduled appointments, met with officials, and patiently and persistently pushed to obtain the necessary permits. At each pass I filed away contact information in our growing database and added nodes to a map I called 'Tiber Bureaucracy'. So many stakeholders played a role in Rome's river. Some thirteen were directly responsible, from the Lazio Region to Roma Capital down to the Primo Municipio, AMA (Rome's company in charge of waste collection), ACEA (Italian energy and water supply company) and the Polizia Fluviale, but many others had an indirect interest in the river's health: international cultural institutes, embassies, environmental organizations, sporting clubs, and many, many others. The map became a sort of octopus. And the process became what Kentridge would describe as an operatic drama:

> "*One could do an interesting timeline of refusals and newspaper articles and phone calls […] waiting for this politician to be thrown out or to resign and for a new one to come in*" (Kentridge, 2016).

We met with authorities on all levels. Many, like Rome's Mayor at the time, pledged their support informally but when asked to write a letter to that affect were less forthcoming. Our support went far beyond national boundaries: at one point I brought U.S. Ambassador John Phillips and his wife Linda Douglass to Piazza Tevere where they participated in our annual 'Tevere Pulito' clean-up and began spreading the word about the plans to revitalize Rome's Riverfront at high levels. The network of supporters mushroomed.

But at the same time there was a mixed reaction in the press, beginning with a headline in Rome's daily newspaper 'Il Messaggero' which included the word 'graffiti'. The mistaken idea that a foreign artist would be invited to scrawl his graffiti on the walls of Rome's monuments (not at all what the project entailed) obviously aroused the rage of many Romans and it took a huge public relations effort on our part to explain that as an organization we were cleaning up the site, and the artistic medium was actually cleaning the walls. But the press, especially the art journal 'Artribune', began to see the importance of the work and positive articles appeared worldwide.

In June 2014 Tevereterno organized an event at the MAXXI Museum, an artists' workshop culminating in a projection and performance. Rome's art world was present in numbers, as were journalists, but with few exceptions the event was boycotted by all levels of public administration. Each time I spoke with Mayor Ignazio Marino, he said he supported the project, but he never made a proactive effort to bring it to fruition. When a meeting between Marino and Kentridge finally took place, it was a fortuitous one, the artist on a boat, filming footage for a future documentary, the Mayor on his bike along the riverside path.

By mid 2015 the arduous permitting process was achieving its desired results and Kentridge began drawing without reserve. Now that 'Triumphs and Laments' was moving forward, it became urgent to raise the required funds, but management of the project was problematic. Artistic Director Kristin Jones, who was to report to me as Tevereterno Director in order to coordinate fundraising efforts, continued to act autonomously as she had always done. Kentridge's studio chose a professional outside producer with whom they had worked in the past. The project soon had three competing fundraising efforts running in parallel, only one of which brought funds to the organization that had launched the project years earlier and was working full-time to make it happen. As the deadline came closer, the strategic plan which the Tevereterno board had approved was boldly and bombastically disregarded, like the traffic laws on Rome's streets. The whole communications and outreach plan came to a standstill just months from the anticipated initiation date of the selective cleaning work.

If it weren't for Kentridge's galleries taking on the responsibility for paying for the cleaning and the inaugural events, the project would have failed at this point. There was simply not enough money. Some compensation was also paid to certain Tevereterno board members but not to the administrative staff nor the development team who continued to work for free. However, the project was too exciting to be sidetracked by financial limitations.

Despite these obstacles, 'Triumphs and Laments' moved forward to completion. Gianfranco Lucchini oversaw the technical production, specifically the transformation of the digital drawings emerging from Kentridge's studio into polycarbonate stencils. Starting in early March 2016, these were suspended against the embankment walls while workers in cherry pickers sprayed water against the stone surface, cleaning away the dirt. As the first stencils were removed, the figure of Mussolini on a horse emerged, his raised hand severed and floating ominously in a Roman salute just above the horse's tail, the whole thing riddled with what looked like shrapnel. Then Pasolini's body, Remus, the head of Cicero, and Minerva. The cleaning started in the middle and worked outwards until early April when all eighty or ninety figures (depending on how one counts them) were visible. Soon preparations would be underway for the inaugural events, the most ambitious theatrical spectacle William Kentridge had envisioned to date.

Figure 2 and 3. 'Triumphs and Laments' art work by William Kentridge in Rome, on the Tiber riverfront.
Source: the author.

From the moment the 500-meter long frieze was completed it began to decay back into nature. This is inherent in the ephemeral nature of the technique, and one of the reasons there was a sense of urgency to shine the spotlight on the work while it was fresh. Ironically the same authorities who had voiced opposition to the project early on, and who we had attempted to assuage with assurances that it was just a temporary work, now bemoaned the figure's impermanence. Once they realized that Rome had its own William Kentridge piece, they wanted it to be eternal, but Kentridge refused any suggestions of conserving it artificially. Rome, we pointed out, has a long tradition of ephemeral phenomena, from triumphal processions to Baroque processions to the 'Estate Romana' festivals under cultural commissioner Renato Nicolini (1977-1985). The ephemeral actually leaves a more lasting impression on the viewer, Claudio Strinati pointed out, because the memories are left unadulterated by later transformations. What is certain is that anyone present at the performances of 'Triumphs and Laments' on Piazza Tevere, on 21-22 April 2016, will remember the experience for the rest of their lives. That night, on a boat in the middle of the Tiber with good friends, in the company of William Kentridge who was also watching for the first time the unfolding of this performance, I felt that it had all been worth it. Thousands of people who thronged the river's left bank and bridges to watch and experience the spectacle. It was evident that our mission, to reactivate the Tiber riverfront with site-specific art, had been achieved. The world had rediscovered Rome's river, and now things would change.

It would be nice if the story ended here, with the anticipation of improvements, of the physical transformation of the riverfront to make it more amenable to visitors, now that city officials had been shown what an important resource they had. An article in the New York Times by Elisabetta Povoledo (2016)[2], right after the inauguration, focused on the grassroots volunteer efforts of Tevereterno and others which indicated a change of current for Rome's river. It was clear that the next step would be to improve access, seating, lighting, to improve upgrade maintenance, in short to render Piazza Tevere a more presentable civic space on the international stage. Days before the inauguration, Tevereterno had been busy with almost a hundred volunteers cleaning the site, urging officials to find a reasonable solution for the homeless under the bridge. With the huge success of the event, I had no doubt that the playing field had changed.

But even so, Piazza Tevere fell back into a state of abandon. The homeless living under Ponte Mazzini returned, the weeds began to grow back, the stench, broken bottles and syringes again filled the stairs. In early July a young American student enrolled in a study abroad program at John Cabot University was found dead in the Tiber. The last people to see him alive were the denizens of Ponte Mazzini with whom he had been seen having an altercation, the same people who apparently still occupy the public space illegally today. People came to see Kentridge's masterpiece but the dirty Tiber and its abandoned riverfront left an uncertain impression. When tagging showed up on the frieze in April 2016 the city acted to have it removed. But the tagging elsewhere on the site remained, although AMA was ready to clean it if the city gave the go-ahead. When the annual 'Tevere Pulito' civic cleanup came around on Earth Day 2017 no one from Tevereterno or from the city government showed up.

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[2] Povoledo, E. (2016), *A Roman Legion of Volunteers Retakes the Tiber*, The New York Times, April 26. Available at: https://www.nytimes.com/2016/04/27/world/europe/tiber-river-rome-cleanup.html

Even Google recognizes Piazza Tevere as a place in its map database, located between Ponte Sisto and Ponte Giuseppe Mazzini. Thousands of people have made the pilgrimage to the site to see Kentridge's biggest art work. However, even after the huge international success of Triumphs and Laments, the city of Rome may not be ready to rethink its riverfront.

What could Piazza Tevere become with proper public investment, interventions, regulation and maintenance? 'Triumphs and Laments' made its potential clear as a public space. It fills a void in Rome's rich offerings. The city has a plethora of piazze but they are, for the most part, hard-scaped urban spaces with a dearth of green space, little public seating, and no real sanctuary from ubiquitous motor vehicles.

Figure 4. 'Triumphs and Laments' art work by William Kentridge in Rome, on the Tiber riverfront.
Source: the author.

Piazza Tevere and the Tiber riverfront in general would provide an alternative public space for Rome, a linear green park where residents and guests could unwind from the intensity of urban life.

In lower Manhattan the transformation of the abandoned rail lines into the High Line brought about enormous change in the way that neighborhood is perceived and used. It also led to a huge increase in property value and tourist revenues. Similarly, Rome's forgotten infrastructure, its riverfront, could spawn an urban renaissance. The hard part has been done. Now is when – in a normal city – the administration would step in to provide the much needed upgrades and maintenance. Working with local associations, first and foremost with Tevereterno, it could fund competitions for public seating, lighting, and new ramps and elevators to make the site accessible. In place of the large-

scale disorderly and banal tents which infest the riverfront each summer, a competition could be launched for limited-scale, high-quality, temporary constructions, more Venice Biennale than country fair. The administration would treasure Rome's resources, especially its abandoned infrastructure, and work to instill new vitality in the city's many forgotten places.

Good architecture is like editing; we take what has come down to us over the ages, and analyze it critically, evaluating what works and what doesn't work. We use the existing as our raw material, whether it be vertical facades, stratified landscape, perspectival views or consolidated culture and commerce. The challenge for designers in a rich and complex urban context (none more so than Rome) is not to compete and to stand out. Nor should our objective be to embalm the past under glass, as if history has ended.

The early history of Piazza Tevere has shown that sometimes the most promising resources are right before our eyes, awaiting a fresh approach and a vision that artists serve to provide. The experience of 'Triumphs and Laments' teaches us that good ideas are very often met with opposition or indifference, but that with perseverance they can reach fruition. Like so many initiatives in Rome, the creation of public art on Piazza Tevere was possible despite all of the obstacles the public administration placed in its way. Imagine what could result from a collaborative process involving progressive leaders and a motivated, innovative and international private sector.

VIEWPOINT

Long Live Southbank:
skateboarding, citizenship and the city

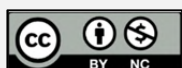Robbie Warin
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Abstract

'The Undercroft' underneath Queen Elizabeth's Hall on London's Southbank is one of London's best known skate spots and plans, released in 2013, to fill the space with retail outlets and relocate the skateboarders to an alternative site were met with fierce opposition by the skateboarding community. In response, the group 'Long Live Southbank' was founded to campaign for the site's preservation. This essay will focus on the Long Live Southbank's 17 month campaign, asking why the local community were so opposed to the relocation of 'the Undercroft' to a purpose built site. By analysing a range of different media produced by Long Live Southbank this essay will look at the phenomenology of skateboarding and how the act of skateboarding affects the individual's lived experience, arguing that the skateboarders' resistance to relocation was tied in with their desire to be included in the ongoing production of public space, and therefore deeply embedded within their own individual and collective senses of citizenship.

Keywords: skateboarding, citizenship, public space, cities, contestation

"What it was for nobody knows, least of all the architects"
(Iain Borden in Edwards-Wood, 2013)

Underneath Queen Elizabeth's Hall on London's Southbank is a small collection of sloped stone banks, a staircase and number of stark concrete blocks marked with chips and scratches, known locally as 'the Undercroft', or simply 'Southbank'. Built in 1968 (Southbank Centre, n.d.), the space was a blank canvas, a collection of brutalist concrete structures without use or meaning, and from this emerged the opportunity for different groups to project *their own meaning(s)*; a public space onto which different publics could shape its various ends (Mitchell, 2015). Far from sitting unused, it quickly became colonised by a number of different groups. At first it was the homeless. Then in 1973, attracted by the large open space, the steep banks and the protection from rain, skateboarders descended in large numbers; followed quickly by graffiti artists and BMXers, but with skateboarding remaining the most common, and the source of the Undercroft's global renown (Edwards-Wood, 2013).

Figure 1. The Undercroft area of the Southbank.
Source: Mould, 2016.

The relationship between the skateboarders and the Southbank Centre - who gained ownership of the Hayward Gallery in 1987 (Southbank Centre, n.d.) – has always been fractious, with frequent attempts to remove the skaters, through measures such as

placing down gravel and the large scale reduction of the overall space (Woodhead L., 2014a). In 2013, the Southbank Centre announced its Festival Wing plan, which involved the infilling of the Undercroft with retails outlets and a proposed plan to relocate the skateboarders to a purpose built site 120 metres away, under Hungerford Bridge (Southbank Centre, 2013).

In response, the skateboarding community established the group 'Long Live Southbank' (LLSB), campaigning for the preservation of the Undercroft and opposing the relocation to the Hungerford Bridge site. After 17 months of campaigning, including collecting 150,000 signatures, taking part in TV and media debates, as well as the more covert tactics of undercover filming and the disruption of planning meetings (Long Live Southbank, 2014e), LLSB and the Southbank Centre released a joint statement announcing the indefinite preservation of the Undercroft (Brown, 2014).

The case study of the battle to save the Undercroft is an interesting example of the struggle over public space in the contemporary capitalist city. Yet, whilst the LLSB campaign has not escaped the interest of scholarly work, this work has predominantly focused on analysing the struggle over the Undercroft as a means to explain the wider forces which lead to the abstraction of space and the end of public space (Cullinane, 2015; Mould, 2016). Far less attention has been paid to the skateboarders themselves.

Why was it that the purpose built Hungerford Bridge facility, at a potential cost of £1 million, was deemed to be worse than, what one skateboarder once called, "a collection of shitty little banks" (Mike John in Borden, 2001: 188)? And why was the Undercroft deemed to be a space so worth fighting for?

This essay will aim to explore and answer these questions by looking at how the skateboarders themselves presented their arguments in the LLSB campaign. To do this I will draw on the wide range of media sources released by the LLSB campaign, aiming to understand how this particular community's relationship with the the Undercroft was shaped. As such, this essay will not be a historical analysis of the LLSB campaign. Nor will it aim to include all aspects which influenced the skateboarders decision to fight the Southbanks Centre's decision; factors such as the history of the Undercroft and the communities deep relationship with this history, as well as the very real fear that the Hungerford Bridge skatepark would never come to fruition, are recognised, but not touched upon.

Instead this essay will be an exploration of the way in which the act of skateboarding affects the relationship between self and landscape, individual and community, community and society. Aiming to explore how conflict over public space represents wider conflicts in society, as different publics try and shape, and in turn are shaped by, the built environment.

In the hope that, whilst related to a specific site and case, it can inform wider debates around conflict and contestation over public space.

"I don't want the new skate park; we don't want the new skate park"
(Rueben Russo in Long Live Southbank, 2013c)

LLSB made frequent claims that the Hungerford Bridge plan was not simply inadequate, but rejected the entire proposal out hand, refusing to engage with the planning of the new space and thereby relinquishing an opportunity to help to shape the new development in

a way that suited them. To understand why requires taking a look at the phenomenology of skateboarding, to understand how the practices of skateboarding are undertaken, and how they shape the being-in-the-world of the practitioner.

The act of skateboarding involves the appropriation of the built environment to create new bodily experiences (Borden, 2001), with creativity in skating emerging from the ability of skaters to reinterpret space designed for one purpose and inscribe it with new meaning (Mould, 2016). In the process forming an understanding of the built environment as a series of objects to overcome and master both mentally and physically (Clegg & Butryn, 2012: 11):

> *"You look for interesting bits of architecture that can be skated in a unique way. You spend every bus journey looking out the window, scouring the area for interesting looking places to skate."* (Woodhead L., 2014b)

Key to this way of looking at and understanding the city, is that it does not relate to specific locations, such as a skate park, but applies to a wider urban landscape, with the practice of skateboarding helping to shape the way in which the skateboarder understands and interprets the city.

Here we can refer to Wiley (2005) who argues that the act of physical exertion shapes the way in which the relationship between self and landscape is articulated and maintained, arguing that "exhilarating encounters with elemental configurations of land, sea and sky are less a distanced looking-at and more a *seeing-with*." (Wiley 2005: 242 emphasis in original). This approach can equally be applied to the context of skateboarding, whereby the landscape is understood based on direct physical contact and emotional experience.

In the context of skateboarding, certain landscapes and type of architectural structures are used specifically for the bodily and emotional experiences which they create. Subsequently, these change the way in which the landscape is understood, whereby the landscape is not simply looked at but *seen-with*. As one skateboarder puts it

> *"(t)he technique of skateboarding isn't skateboarding. Your ability to do tricks is like a vocabulary and you can use in that language of tricks. You can communicate with the stuff that you find in the street and turn it into something else. [sic]"* (Ben Powell in Edwards-Wood, 2013)

In this process, the skateboard is not simply a vehicle on which to travel, but an extension of the body, 'a fifth limb' (Borden 2001: 100) with which the skaters' relationship with the landscape is mediated. Applying this understanding to the Undercroft, we see that the very benefit of the Undercroft is its status as 'found space' – space not constructed specifically for skateboarding (Borden, 2001) – and the ability for skateboarders to communicate with this landscape and "*turn it into something else*".

For this reason, the LLSB community felt that the destruction of the Undercroft, and the relocation to the Hungerford Bridge site,

> *"would not only destroy the history, but the entire ethos of the undercroft which is the birth place of British street skating; an art form based on the interpretation of space"* (Edwards-Wood, 2013).

With the replacement of the Undercroft's found space with purposely constructed space being seen to restrict the activity and remove an aspect of creativity (Nemeth, 2006). Whilst this analysis helps to explain why the Hungerford bridge site was rejected by the skateboarding community, it does not on its own explain why the undercroft was so fiercely protected. Indeed, if skateboarding is about an engagement with the city as a whole, why was so much emphasis placed on one specific location? For this to be understood it must be looked at in the context of the wider exclusion of skateboarders from public space. A number of authors have documented the widespread exclusion of skateboarders (Nemeth, 2006; Woolley, Hazelwood, & Simkins, 2011; Wooley & Johns, 2001), with the increase in popularity of skateboarding being equally matched with a focus on urban design aimed at making skateboarding impossible (Woolley, Hazelwood, & Simkins, 2011).

This has the impact of putting greater pressure on the remaining spaces where skateboarding is possible:

> *"I have spent far too many days, skating around the city, coming across spots I used to skate but now have those ugly metal caps on them* [skatestoppers], *getting the police called on us by security and then seeing the same happen to buskers and BMXers and everyone else. These days it always ends up with us returning to Southbank. The more time we spend trying to skate the rest of the city, the more Southbank feels like a little haven of freedom where people can go about expressing themselves without constantly getting shut down."*
> (Woodhead L. b., 2014)

What the above quote shows is that the undercroft represents more than just a space which is good for skateboarding; it is also an area where this group feel able to express themselves without fear of being moved on or criticized. They are afforded a freedom, one that emerges from the capability of the skaters to shape the landscape discourse, allowing for the acceptance of practices and performances which elsewhere are deemed deviant and unnatural (Wiley, 2007). In this way, the skaters exert a power onto the landscape, imbuing the architectural forms with new meaning through endless repetition of physical acts and as such, transform how and what we understand these architectural forms to be.

Thus, through the direct agency of the skaters they were able to carve out and appropriate the space in a way which suited the needs and wants of the community.

> *"It's home for a lot of people, not in the sense of somewhere that you live, but somewhere that you feel comfortable. (Whitter, 2016)"*

Furthermore, this occurs within a wider landscape where skateboarding is heavily excluded and the skateboarders themselves often feel marginalized. As one LLSB member states: *"We often feel like we're maybe always existing outside of society* (Long Live Southbank, 2013b)" with skateboard culture largely organized around the rejection of societal values (Borden, 2001). The ability to maintain control over small aspects of the city, therefore, takes on amplified importance (Cresswell, 2004). Emerging from this, contestation over the Undercroft became not simply a contestation over where people could, or could not skate, but part of the wider struggle of who feels welcome in society

(Mitchell & Lynn, 2005). As a result, the ability to shape and define the meaning of the Undercroft - the end to which it was put – and the resistance of exclusion and removal from the physical space, was deeply tied up with the skateboarder's individual and communal sense of *citizenship*. Citizenship in this sense transcends the legal relationship with the state, seeing it as an ongoing negotiation of identity and difference which comes into being through practice (Spinney, Aldred, & Brown, 2015). Skateboarding therefore represents one such practice which helps shape both the individual and communal sense of societal membership, one which works alongside a range of other practises to constitute citizenship as 'an ensemble of different and unstable belongings' (Spinney, Aldred, & Brown, 2015: 326).

The act of skateboarding can therefore be seen to help to mediate the relationship between both the skateboarders themselves and society at large, constituting the basis by which individuals can form a political identity and argue for political entitlement (ibid). Consequently, the Undercroft can be seen as an area in which this group were able to state their claim to acceptance with its removal being a signal in a wider sense of their position in society and was closely wrapped up with their individual senses of citizenship. As such, the battle for the Undercroft became representative of a wider battle to 'not be excluded from the on-going creation of public space' (Mould, 2016: 16) and a means to stake their claim to their right to the city.

An important facet of this is the way in which the LLSB campaign deemed itself to be in direct opposition to the forces of capital which were leading to the destruction of the Undercroft, releasing videos such as "Southbank Centre - Consumerism over Culture", "Southbank Centre - A Festival of Irony" and "Undercroft users' opinions outside the Festival Wing "Open Forum" #1", with statements such as - *"Capitalism, that's what it is, it's all about the money… all they think about is money* (Tomach Lipa in Long Live Soutbank, 2013a)" and *"I'm probably using this space 5 times as much as the people enjoying the art, it's just that I'm not spending 5 times the amount of money that they are* (Jason Caines in Long Live Southbank, 2014d)"

Part of this opposition is related to the fundamental nature of skateboarding, its prioritization of use over exchange value and the critique this offers for a city organized primarily for the accumulation of capital (Borden, 2001). In addition to this, the resistance of the relocation was about being able to maintain and exercise the right to be involved in the creation of the city and resist the coopting of citizenship into state and capital sanctioned channels. Therefore, resistance was about the ability to practice citizenship on their own terms.

Here we can look to Miraftab's (2004) distinction between 'invited' and 'invented' spaces of citizenship to offer a distinction between the Undercroft and the Hungerford Bridge site.

The Undercroft, as a space which has been claimed by the skateboarders themselves through their own actions, and standing in opposition to authority, represents what Miraftab (2004) terms 'invented space'. It therefore represents a space where skaters could practice citizenship on their own terms, shaping the world in a meaningful way through their actions, and in the process, achieving more substantive forms of citizenship. The colonization of the Undercroft was therefore deeply embedded with the communities right to appropriation, a right not just to occupy, access and use the space but also to be involved in the production of it, and help shape its production to meet the needs of its inhabitants (Purcell, 2002).

In contrast, the Hungerford Bridge site represented a state sanctioned, invited space; whereby the power to determine spaces of citizenship are held by government and affiliated organizations. The move to Hungerford bridge would, therefore, not only have been seen to have the impact of controlling and coopting their culture - distilling it to a thinly veiled strain of consumption values (Mould, 2016), but also of denying the communities agency to define their own spaces to practice citizenship. Leading them to argue that "*The (Hungerford) skate park would have been a pastiche of our culture*" (Edwards-Wood, 2013).

Accordingly, LLSB's campaign can be seen as an example of the struggle through alternative practice to carve out and create space against the tendency towards abstraction and the end of public space (Mitchell, 2015).

One aspect linked with this is the undercrofts high level of visibility, with a key difference between the undercroft and many other skate spots being that over the course of a day many thousands come to watch the skateboarders (Edwards-Wood, 2013). Nemeth (2006) argues that this visibility is a key part of how different group stake their claim as citizens to representation in the public sphere, with removal therefore signifying a means of marginalization. From this perspective, we can therefore see that the purpose of public space is to be a space in which the multiple different publics are able to represent themselves through appearance (Mitchell, 2015), with relocation posing a potential threat to the skater's citizenship. This argument is supported by Spinney (2010) who finds that trial bike riders on the South Bank (but not at the undercroft itself), regarded encouragement from members of the public as a major motivation for choosing to ride in particular spots. This leads him to conclude that 'the reactions of other users are vital in interpreting the actions of trials and BMX riders as appropriate' (Spinney, 2010, p. 2927). However this perspective is challenged by a statements made by one skater who said that:

> "*(Whilst) the constant flow of spectators does make Southbank unique … Sometimes it feels a bit like there are lots of people watching and expecting to see something good - either a slam or a trick. So in that sense it can feel a bit like your part of a 'performance'…I do prefer skating there in the evenings and at night, you don't feel so much 'on show'* (Local Southbank Skater, 2016).*"

The individuality of experience evident here illustrates that whilst the practice of skateboarding does, to a certain extent, help mediate the relationship between individual and society, it does so in a highly personal way that occurs alongside a range of over practices (Spinney, Aldred, & Brown, 2015). Therefore, it is important to resist the tendency to proscribe homogenous views to a diverse subculture, which undoubtedly comprises a range of different worldviews and lived experiences. To a certain extent, the above quote (obtained through an interview), poses a critique of the methodology of this essay in assuming that the LLSB campaign represents the general consensus amongst the Undercroft community; it presupposes that the view of the skateboarders is broadly the same. This leads to the conclusion that more expansive means of research is necessary to explore the multitude of ways in which the skateboarding community experiences and views these issues.

Conclusion

Whilst skateboarding continues its ascension into the realm of recognised sport - exemplified through the inclusion of street skateboarding in the 2020 Olympics (BBC, 2016) – it continues to fall victim to the dominant discourse which frames it as an anti-social activity (Nemeth, 2006), and as a result, exclusion from the urban city continues unchecked (Mersom, 2015).

What I have hoped to highlight in this essay is that the prevailing policy measures of provision and exclusion are inadequate in the context of skateboarding. As a means of engagement with the city, the constructed environment of the skate park cannot encapsulate the full experience of skateboarding. Moreover, when skateboarding represents a means by which the individual comes to understand their position and relationship with society at large, the exclusion of skateboarding becomes a question of citizenship. And when, as in the case of skateboarding, the majority of participants are young (Wooley & Johns, 2001), or do not prescribe to dominant societal values (Borden, 2001), the exclusion of skateboarding from public space poses crucial questions about the way in which different voices are heard, and the influence these voices are given in shaping the ends of our public spaces. The critique that skateboarding offers of the modern capitalist city, through its emphasis on use over exchange value (Borden, 2001), means that how we treat skateboarding and, as a result, skateboarders, is therefore a lens with which to view the commodification of citizenship; the extent to which we value individuals as people rather than producers and consumers.

Figure 2. The Undercroft area of the Southbank.
Source: joannapoe via Flickr. Used under Creative Commons.

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The spatial impact of migration

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Abstract

Migration across national borders has an increasing impact on cities. Traditionally, cities have been the locus of cultural, religious, social, and economic exchange, which is a fundamental characteristic of a thriving network. However, the urban division of inside (local) and outside (global) is still problematic even though we are moving toward true heterogeneous metropolis. This division results in "inequity" within society, urbanism, architecture and their related fields. A key to improving this societal issue is to understand, rethink, and challenge the division between "inside" and "outside". To do so, we (XCOOP Rotterdam and the Centros Urbanos Javeriana, Bogotà) have proposed a "hypothetical sustainable multi-cultural city" that aims at integration of immigrants through the creation of an "in-between" space that encourages integration among immigrants and receiving communities. The success of this space will depend on the degree of inclusiveness: local and global residents will need to lead the transformation and any new intervention ought to satisfy communal interests. We have been studying this design-based proposal for a while and since May 2017, we have been working with students and communities (interactive workshops), experts in the field (international conferences), and universities (on-site performances and exhibition) in the following four cities: Bogotà, a city that is economically unbalanced and lacks accessibility to essential goods; Tucson, a city that faces issues of homelessness and segregation; Baltimore, an urban setting that confronts geographical segregation and inequity; Rotterdam, a metropolis focusing on the growth and development of global companies rather than its local residents.

The results of these efforts include the following conclusions:
  - the "in-between" spaces foster opportunities for positive encounters among different groups in public spaces;
  - the "in-between" spaces rely on equal accesses to public services and goods;
  - successful implementation of "in-between" spaces requires new typologies and improved methods of participatory design.

Keywords: migration, globalization, inequity, inclusiveness, design

Introduction: "designing for immigration"

Immigration is, today, a common condition in urban conditions around the world. What's more, we are increasingly becoming an urban world, across the spectrum of developed and developing economies.[1] Cities have long been the locus of cultural, religious, social, and economic exchange, which is a fundamental characteristic of a thriving urban economy. Yet designing adequately for immigrants in Western cities is challenging due to the lack of comprehensive immigration policies and the increasing sense of insecurity experienced by both the immigrants and the host communities. Immigrants face significant barriers to integration associated with their sometimes-precarious legal status and their experience of hostility and discrimination. Accordingly, urban planners and designers have a significant role to play in addressing the needs of immigrants and local residents alike. Through the design of spaces, we can promote, sustain, or undermine the requirements of diverse and multicultural cities. What follows explores whether the design of the built environment can play a role in the daily lives of immigrants by providing spaces that support integration and help cities thrive.[2]

Immigration and the city

> *Diversity represents a vital asset that opens up new possibilities,*
> *better solutions, and innovations.*
> Jane Jacobs[3]

The relatively permanent movement of people across national and international boundaries is referred to as immigration. International immigrants are further classified as legal immigrants (those who moved with the permission of the receiver nation), illegal immigrants (those who moved without permission), and refugees (those crossing an international boundary to escape persecution).[4] Jay Weinstein and Vijayan Pillai, in their book Demography: The Science of Population (2001), denote another classification: forced immigrants, those who move against their will (slaves or victims of natural disaster or civil war).[5] Other people leave their countries of birth in search of new lives abroad. This migratory phenomenon is called the Push-Pull factor, in which something bad about where someone lives pushes them away from where they currently live. When immigrating, people often believe that the country they are moving to will offer plenty of new opportunities, including more and better-paying jobs and improved living conditions and educational opportunities. Yet, whatever the motivation, crossing borders always involves challenges in the new country: meeting administrative requirements and

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expenses, difficulties in obtaining employment and accessing state services, learning a new language and new customs.[6]

Figure 1: A Tide of Return by Alex Majoli.

The greatest Western misunderstanding about immigration is that the newcomers are "other people," that "we are not all immigrants." In fact, as former World Bank administrator Ian Goldin suggests, the whole world – or, at least, the "the greatest civilizations" - established themselves as a result of immigration.[7] Ironically, while the issue of immigration - both legal and illegal - garners considerable domestic press coverage, the United States is actually experiencing a lower rate of immigration now than at any time in history.[8] Furthermore, most countries in the West have currently greater control over who crosses their national borders than we did a hundred years ago, when passports barely existed.[9] The Western world has become exclusive, almost a fortress, living under the illusion that one country can be a "community" without strangers. It appears that the West today is inhabited by a strong desire for apartheid, separateness. Our world is more divided then ever and the militarization of boundaries, where our borders become

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war zones against foreigners, contradicts all the democratic ideas upon which the Western world claims to be founded.[10]

Identifying urban "in-betweeness"

In spite of the resistance to immigration, the world is becoming more mixed and diverse. Due to a dramatic decline in the working age population over the next 35 years, it is anticipated that immigration will sustain current population growth and drive world economic development. [11]

As philosopher Achille Mbembe affirms, the stage has been set in which we have, on the one hand, the West which, due to its conservative approach to immigration, is a dormant, complacent and nostalgic society worried about where it used to be and not really knowing where it wants to go.[12] On the other hand, there are dynamic regions with emergent societies, like China, Brazil, India, and Africa, where people are in motion and tolerate immigrants within their midst. In an interview with VPRO in 2013, Professor Mbembe goes on to say that the West needs to understand that the world we live in now is a totally different one and that the future sustainability of our economies more and more won't be solely decided at this end of the planet.[13] At the same time, experiences of discrimination toward immigrants are increasing worldwide. Socially and economically, discrimination is tied to negative narratives fueling fear of stolen jobs, radical ideologies, crime, and poverty. Discrimination against new immigrant groups may be a "natural aspect of our psychology". According to Steven Neuberg, a professor of psychology at Arizona State University, human development made us highly dependent on people in our own groups.[14] Therefore, we tend to believe that people who are foreign to us are more likely to pose certain kinds of threats, such as taking our resources, violating our norms and values, taking more than their fair share, and the like. These perceptions are false narratives that chip away at the spirit of community by limiting a welcoming attitude and increasing suspicion. Resistance toward immigrant communities becomes, at times, irrational and uncontrollable, discouraging migrants from moving to places with more economic and educational opportunities.

Literature on transnationality highlights the ambivalent nature of immigrant lives "in-between" their country of origin and the host country. The "in-betweenness" experienced by immigrants refers primarily to their cultural/social existence.[15] They live in one country while being linked to the cultures and traditions of their country of origin and, sometimes, these may not even be compatible. The ways in which one negotiates

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[10] African migration from Europe to China. VPRO documentary. 2013. *YouTube*. Available from: https://www.youtube.com/watch?v=fsnY1EUbO8M. Accessed February 6, 2018

[11] African migration from Europe to China. VPRO documentary. 2013. *YouTube*. Available from: https://www.youtube.com/watch?v=fsnY1EUbO8M. Accessed February 6, 2018

[12] African migration from Europe to China. VPRO documentary. 2013. *YouTube*. Available from: https://www.youtube.com/watch?v=fsnY1EUbO8M. Accessed February 6, 2018.

[13] African migration from Europe to China. VPRO documentary. 2013. *YouTube*. Available from: https://www.youtube.com/watch?v=fsnY1EUbO8M. Accessed February 6, 2018.

[14] Cottrell, C.A. and Neuberg, S.L. (2004). *Different Emotional Reactions to Different Groups: A Sociofunctional Threat-Based Approach to "Prejudice"*, Arizona State University.

[15] Trikalinou, L. (2018). *Making Visible: The inhabitation of urban public space by irregular immigrants.* Department of Sociology Goldsmiths University of London. Available from: https://research.gold.ac.uk/11638/1/SOC_thesis_TrikalinouL_2015.pdf. Accessed March 13, 2018.

with the new culture and manages to maintain the traditions of one's country of origin illustrates the concept of "in-betweenness." The transferability, if any, of cultural capital and its use in the forms of cultural practices reflects and informs the public space. It is here that we get the opportunity to explore the interrelationships between immigrant groups (globals) and their occupation and inhabitation of the local urban public space.[16] This "in-between" space is almost always unfashionable, dangerous, undesirable, geographically unsuitable, and has poor infrastructure. It is located on the outskirts of the metropolis, alienated and low in density, a place where immigrants cannot express their best due to the lack of commercial spaces and access to public transportation. Yet, this space remains the only interface between their country of origin and the host city, and it serves as the place where people start to speculate about their future as individuals, as families and as whole urban communities.

The continuing connection to their country of origin is partly what creates the ambivalent, in-between position of urban immigrants. They belong to an ethnic community that acts as both a safety net and as the main means of socialization and support. At the same time, they are operating at the margins of a structured society, which creates the need to find a balance between the old and the new. Ultimately, one must be able to function in two often completely different, realities, and adjust to two parallel ways of life that need to be experienced as a single, coherent one. When trying to understand the immigrants' position, we must have the concept of the in-between space at the focus of our attention.[17]

In these spaces, global and local ideas contribute to a learning process based on acceptance, respect, and integration. Three factors prevent the in-between space from succeeding:

1. Physical barriers, caused by long distances between city centers, limited public transportation, residential buildings lacking suitable commercial spaces.
2. Institutional barriers, caused by regulations, which may be obsolete. Strict rules on hygiene and education, for instance, make it impossible for immigrants to open their own businesses.
3. Citizenship barriers, caused by complicated and possible unfeasible paths to citizenship. these barriers discourage investment by immigrants with little chance of successful integration.

Addressing these barriers require both design-based and policy-based solutions. To do so, XCOOP Rotterdam and the Centros Urbanos Javeriana, Bogotà (XCOOP+UC) have studied ways to accommodate the foreigners within the traditional urban grid by proposing a "hypothetical sustainable multi-cultural city," conceived to promote the robust inclusion of immigrants. Through a vision for the "in-between" spaces, these designers' proposals improve integration among immigrants and the communities in which they settle.

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[16] Trikalinou, L. (2018). *Making Visible: The inhabitation of urban public space by irregular immigrants.* Department of Sociology Goldsmiths University of London. Available from: https://research.gold.ac.uk/11638/1/SOC_thesis_TrikalinouL_2015.pdf. Accessed March 13, 2018.
[17] Trikalinou, L. (2018). *Making Visible: The inhabitation of urban public space by irregular immigrants.* Department of Sociology Goldsmiths University of London. Available from: https://research.gold.ac.uk/11638/1/SOC_thesis_TrikalinouL_2015.pdf. Accessed March 13, 2018.
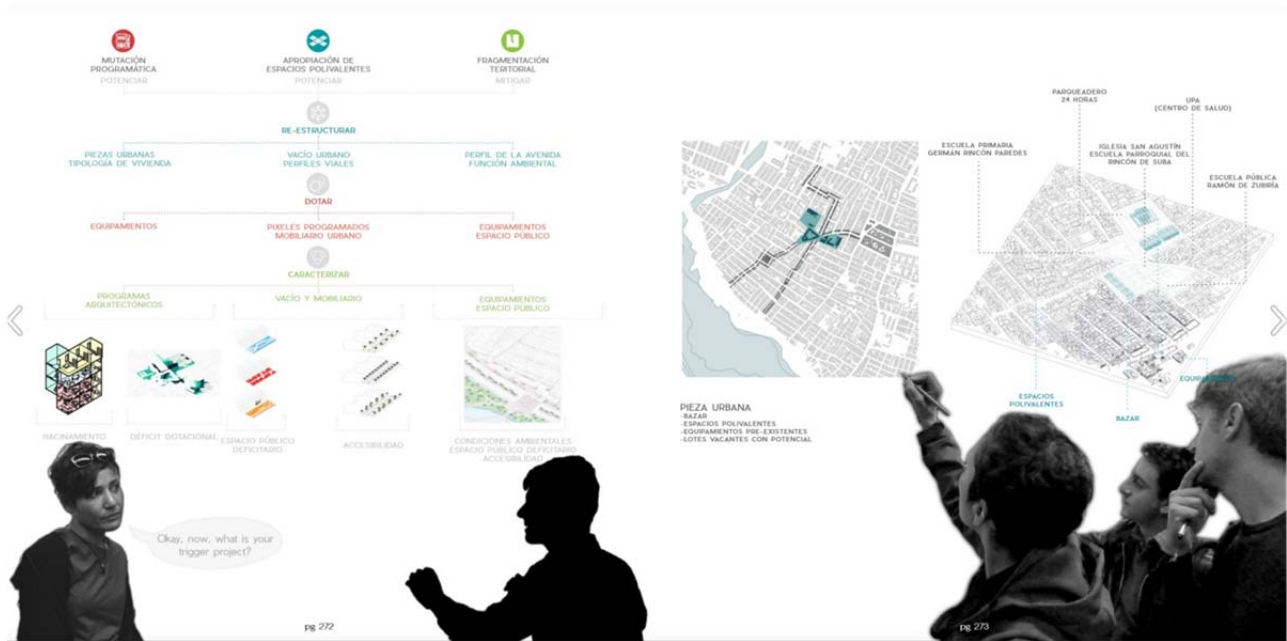
Figure 2: Urban Centers A + U Lab

The in-between space first incubates immigrant success. "[It is here] that serious and sustained investments from governments and agencies are most likely to create lasting and incorruptible benefit."[18] It is here, too, where the transition from "outsider" occurs, where the next middle class is forged, and where the next generation's dreams, movements, and governments are created. Accordingly, among the proposals by XCOOP+UC are the following:

- building public spaces designed for positive encounters among different groups;
- identifying and implementing new architectural typologies;
- improved methods of participatory design.

XCOOP+UC plan to achieve these and other objectives by collaborating with native and foreign communities, professionals such as urban planners and social behaviorists, and colleges and universities.

Challenging the division between "inside" and "outside"
XCOOP+UC's hypothetical sustainable multi-cultural city is equipped with tools that encourage growth and support the possibility for everyone to develop and live dignified lives. Moreover, it is fundamental to allow immigrants to shape the space around them and fill the economic gap when opportunities arise. The more we can bridge between local and global communities, the more neighborhoods will continue to be revitalized. The key is to focus on quality of life for both the people who live in the city already and people who are interested in moving there. In order to make the city a welcoming place, governance needs to plan for inclusiveness, open the city to the outer world, sponsor

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[18] Saunders, D. (2012). *Arrival City: How the Largest Migration in History Is Reshaping Our World.* New York: Vintage Books.

growth and revitalization, maintain parks and public places, provide strong schools, and create a safe and welcoming downtown that is pedestrian-friendly and full of services. When newcomers look for places to live, they value safety, political stability, an affordable lifestyle, economic opportunity, family-friendliness, healthcare, culture, recreation, public transportation, immigrant-friendly policies, and diversity. Immigrant parents place great importance on high-quality and affordable education for their children. Good education provides future opportunities to children that the parents might not otherwise have access to.[19] Without these fundamental assets, who would want to live there? Doug Saunders author of Arrival Cities, says that arrival cities are "where the new creative and commercial class will be born, or where the next wave of tension and violence will erupt." The difference, he cautions, "depends on how we approach these districts both organizationally and politically, and, crucially, in terms of physical structures and built form." It is important to keep the locals in and welcome globals from the outside to participate to the growth and redevelopment of cities.

According to the German sociologist and philosopher Georg Simmel, "Spatial relations are not only determining conditions of relationships among human beings, but are also symbolic of those relations," (1971: 143).[20] Simmel continues by clarifying that "The stranger will thus not be considered here in the usual sense of term, as a wanderer who comes today and goes tomorrow, but rather as the man who comes today and stays tomorrow." This realization that the place in-between actually translates into the public space is fundamental for the team (XCOOP+UC) that starts looking at the design of a sustainable multi-cultural city as an open public space rather than a neighborhood within a neighborhood (Saunders' Arrival City). The new city is an open source environment where people meet, interact and exchange of ideas.

Public space can be seen as the "stage upon which the drama of communal life unfolds" (Carr et al., 1992: 3). Public space is the juncture of the different elements that comprise society. It is the physical place where the manifestation of the political meets individual habitation and it may shed light on questions about democracy and participation.[21] Projects like BIG Superkilen in Copenhagen are of major importance to the immigrant population. A mile-long urban park wedged into one of the most ethnically diverse and socially challenged neighborhoods in Denmark, the Superkilen is a giant collection of found objects from the 60 different nationalities of the people inhabiting the area surrounding it.[22] The objective was to upgrade a neighborhood to a high standard of urban redevelopment that celebrated diversity and would be likely to inspire other cities.

It is fundamental for immigrants to feel part of the design project and finally, to design the spaces they will inhabit. Ultimately, what we're looking at is "how to create healthy, high performance communities, and how do we take advantage of all the systems related to how people live and work…to create places that are much more livable and healthy." The

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[19] Canadian Immigration & Citizenship Lawyer 2018.

[20] Simmel, G. (2011). *On Individuality and Social Forms*, University of Chicago Press.

[21] Trikalinou, L. (2018). *Making Visible: The inhabitation of urban public space by irregular immigrants.* Department of Sociology Goldsmiths University of London. Available from: https://research.gold.ac.uk/11638/1/SOC_thesis_TrikalinouL_2015.pdf. Accessed March 13, 2018

[22] ArchiDaily (2012). *Superkilen / Topotek 1 + BIG Architects + Superflex.* ArchiDaily. Available from: https://www.archdaily.com/286223/superkilen-topotek-1-big-architects-superflex. Accessed November 16, 2017.

goal is a community that collectively and efficiently uses its resources to facilitate growth and inclusion (Zanghi, 2016)[23].

Figure 3: Collage by XCOOP

Today, public programs like Edible Alphabet at the Free Library of Philadelphia use cooking classes to teach new skills and celebrate heritage. These programs are increasingly taking the approach of meeting new immigrants halfway. The system develops around an attitude that works by cultivating the students' pre-existing expertise while simultaneously transmitting skills—like the English language—that may be helpful for adjusting to life in the welcoming country.

The International Rescue Committee's New Roots program takes a similar approach. Through a network of community farms across the U.S., New Roots offers work and training to recently arrived refugees. Urban Omnibus writes that the New Roots farm in the Bronx provides "a locale for English as a Second Language classes based on bonds beyond language forged through labor and food." The farm has also benefited the local Bronx community.

By remaining flexible and open, it's possible to strike a balance between teaching new skills and respecting people's culture. Quoting a former student, Dr. Melva Burke Leichter says: "We have to find a situation where the need to know meets the need to tell" (Anzilotti, 2016)[24].

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[23] Zanghi, A. (2016)The Importance of 'Arrival Cities'. CITYLAB.
[24] Anzilotti, E. (2016). *How Community Centers Evolved to Help Immigrants Adjust to Life in America*. CITYLAB. Available from: https://www.citylab.com/life/2016/02/community-centers-immigrants-america/463818/. Accessed October 5, 2017.

In the U.S., churches have a long history of devoting resources to caring for marginalized communities. Parishes around the country run soup kitchens, homeless shelters, and refugee resettlement programs. Pyong Gap Min, a professor at Queens College and CUNY's Graduate School, believes that the most powerful function a church serves is ethnic retention—a place for the next generation to learn cultural touchstones and mother tongues. These churches also give new immigrants a course in America 101 by teaching everything from how to apply for a social security card to how insurance works, (Mathew, 2017).[25]

Programs providing such "survival" services to newcomers can greatly inform the designer. It becomes clear that when exploring spaces for immigrants and their communities, parameters such as information exchange and security should be addressed by the design group.

Designing cities where everyone can thrive

In times of economic uncertainty and rapid demographic change, how can urban policymakers ensure and maintain equity among all citizens? What are the social and political processes that shape the responses of residents and facilitate the incorporation of foreign-born residents into local economic, social, and political life?[26]

Cities organize and regulate many of the activities of daily life that are crucial to the social and economic inclusion of residents. Cities can encourage two-way integration between immigrants and receiving communities revolving around opportunities for positive access of public spaces and goods.[27] Within this dynamic and culturally smart urban environment, immigrants play a key role. It is a myth that immigrants take more than they give back to society. On average, immigrants (both skilled and unskilled) contribute much more than they take.[28] Referring to a study done by the Center for American Entrepreneurship, Richard Florida points out that cities with high immigrant diversity are better off economically in the short, medium, and long term.[29] The study describes the role that immigrants have played in creating America's largest and best-performing companies. The study points out that 43 percent of today's Fortune 500 had a first- or second-generation immigrant among their founders. Nearly a fifth (18.4 percent) of these companies were founded by first-generation immigrants, and another quarter (24.8 percent) were founded by their children. All together this accounted for $5.3 trillion in global revenue in 2016 and the employment of more than 12 million workers worldwide.[30] Immigrants of all skill

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[25] Mathew, T. (2017). *How Houses of Worship Help Immigrants Adjust to America*. CITYLAB. Available from: https://www.citylab.com/life/2017/08/how-houses-of-worship-are-helping-immigrants-adapt-to-america/535992/. Accessed September 18, 2017-

[26] Steil, J. (2016). *Cities and Immigration*. MIT Urban Planning.

[27] Ray, B. 2003. *The Role of Cities in Immigrant Integration*. Migration Policy Institute.

[28] Florida, R. (2017). *Without Immigrants, the Fortune 500 Would Be the Fortune 284*. CITYLAB. Available from: https://www.citylab.com/equity/2017/12/without-immigrants-the-fortune-500-would-be-the-fortune-284/547421/. Accessed September 25, 2017.

[29] Florida, R. (2017). *Without Immigrants, the Fortune 500 Would Be the Fortune 284*. CITYLAB. Available from: https://www.citylab.com/equity/2017/12/without-immigrants-the-fortune-500-would-be-the-fortune-284/547421/.Accessed September 25, 2017.

[30] Florida, R. (2017). *Without Immigrants, the Fortune 500 Would Be the Fortune 284*. CITYLAB. Available from: https://www.citylab.com/equity/2017/12/without-immigrants-the-fortune-500-would-be-the-fortune-284/547421/. Accessed September 25, 2017.

levels, therefore, are not only creating and sustaining big companies, they are building thriving urban economies. Ian Goldin's interview with VPRO in 2013 reports that we see this most acutely in Silicon Valley, where half of the start-ups (all the greatest iconic firms we can think of, including Google, Yahoo, and Apple), were founded by very recent immigrants.[31]

At a time when some countries are facing a dramatic decline in the size of the working age population, some cities are actively trying to lure immigrants as a strategy for economic and population growth.[32] In Baltimore, Maryland, Mayor Stephanie Rawlings-Blake said that she was counting on immigrants to help Baltimore gain 10,000 families within a decade. In Pittsburgh, Pennsylvania, immigrants have helped boost housing markets in otherwise neglected neighbourhoods, fostering new opportunities for affordable development.[33] Welcoming immigrants is a logical tactic for cities trying to repopulate their neighbourhoods. Immigration must be encouraged, therefore, to contribute towards the shaping of urban space.[34] Accordingly, it is now the designer's challenge to plan for sustainable cities by including the multi-cultural aspect in the new urban landscape. Key for doing so is to understand, rethink, and challenge implicit divisions between "inside" and "outside."

Conclusion: moving beyond "welcoming"

Multi-culturalism is a fact, and we are responsible for planning sustainable cities that are open and accessible to all. What will likely be remembered about this century, more than anything except perhaps changes to the climate, is the shift of populations from the South to the West, from agricultural life to cities.

Western nations that in the past have had relatively homogeneous populations are experiencing an influx of immigrants from the South, (Fuchs, L. H., 1990)[35].

Immigration will continue: we cannot stop it because there are always powerful forces leading people to move from place to place in search of better lives. People living in the West cannot develop and move forward alone; we need immigrants and we need to come up with a strategy that allows us to grow, together. We need to start looking at the global citizen as one who shares a common and collective intention to develop and embrace a new direction to take.

In his book, Arrival Cities, Doug Saunders makes clear that the cities and nations that see the opportunity offered by immigrants stand to gain the most. By providing citizenship, a chance to own property, education, public transportation, and safety, such cities and host nations succeed in integrating their new arrivals, ultimately benefiting as the immigrant

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[31] Florida, R. (2017). *Without Immigrants, the Fortune 500 Would Be the Fortune 284*. CITYLAB. Available from: https://www.citylab.com/equity/2017/12/without-immigrants-the-fortune-500-would-be-the-fortune-284/547421/. Accessed September 25, 2017.

[32] Badger, E. (2013). *Why Cities Should Be Leading the Push for Immigration Reform*. CITYLAB. Available from: https://www.citylab.com/equity/2013/06/why-cities-should-be-leading-push-immigration-reform/5992/. Accessed November 27, 2017.

[33] Wenger, Y. (2016). *Mayor: Baltimore is a 'welcoming city' for immigrants and refugees*. The Baltimore Sun.

[34] Cities of Migration. Beyond welcoming. *TouTube* 2017. Available from: https://www.youtube.com/watch?v=S6SodqNcrwk and https://www.youtube.com/watch?v=yUdHJdHDH7Q. Accessed November 30, 2017.

[35] Fuchs, L.H. (1990). *The American Kaleidoscope: Race, Ethnicity and the Civic Culture*. Wesleyan University Press.

class evolves into a middle class. The "in-between" places are not a static condition but a point of interchange, a place where some of the most important and surprising changes of the 21st century are taking place.

For urban designers, the key question raised by immigration is how to acknowledge, respect, and accommodate diversity through the built environment. As urban designers, our responsibility is to provide citizens with the opportunity for positive encounters among different groups in public spaces, equal accesses to public services and goods, implementation of new typologies, and improved methods of participatory design. We can achieve this only if all interested parties are involved in the discussion about experiences, knowledge and funding.

Spatially speaking, the influx of immigrants helps blighted neighborhoods come back to life. In Baltimore, the mayor's office is offering immigrant-friendly services such as translation, interpretation and document preparation to attract immigrants to the city. Baltimore was built for 900,000 inhabitants, but as manufacturing jobs left, and crime increased, the city's population has shrunk to about 600,000. When cities invest in dynamic transformations and the number of abandoned buildings decreases, that provides room for individual and societal growth.[36]

One of the most striking examples of a city embracing diversity is New York City. Projects like nARCHITECTS' Carmel Place represent an interesting example of the successful interaction between architecture and city policy. Their proposal for micro-apartments in downtown Manhattan as a way of providing cost-effective, single-occupancy dwellings is largely about preserving and encouraging the diversity of the city.

"It's incredibly important to keep [the cores of the cities] as diverse as possible," explains Mimi Hoang, principal of nARCHITECTS. "I think the warning signs are in Paris, where they tend to put immigrants in this kind of immigrant belt. This obviously creates feelings of ostracization and marginalization for some in society. We have our own problems in the states of course, but the reality is that if the working class is in the periphery of the city, that is creating a hotbed of resentment."

Representing a very different approach is Catalytic Action, a Lebanese non-profit organization that sees huge opportunities in the reuse of temporary structures (such as pavilions from Expos) in the urban scape to accommodate newcomers. The concept is, basically, a simple act of recycling. Catalytic Action's Executive Director Riccardo Conti says, "The project also implies that Western countries could examine where they are producing waste and think more carefully about how they could design their products to have a useful afterlife." Although one project will not change the situation of immigrants and waste in the city, it will raise awareness of the need for spaces for immigrants in the city.[37]

XCOOP+UC's sustainable city creates spaces that would be points of interchange, in which people could thrive as individuals and families, and in healthy communities. It is here that the most important and surprising changes take place.

[36] Blanco, O. (2015). *Immigrants: These cities want you!* @CNNMoney. Available from: http://money.cnn.com/2015/12/21/news/economy/immigrant-cities/index.html. Accessed November 7, 2017.
[37] Stott, R. (2016). *How Migration Will Define the Future of Urbanism and Architecture*. ArchDaily. Available from: https://www.archdaily.com/790818/how-migration-will-define-the-future-of-urbanism-and-architecture. Accessed December 15, 2017.

The global community is at the forefront of a major trend that will determine the economic and political development of the first half of the 21st century: the rate of immigration that flows from low wage countries is moving forward and if the West does not take advantage of this opportunity, it will have disastrous consequences for its economy, and thus for the future of its citizens.
Globalization is where we are and the whole question of immigration allows designers to rethink what cities should look like in the future.

Thank you for reading!