We Live Here: Media Architecture as Critical Spatial Practice

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Abstract

This article asks how media architecture in the form of urban screens, LED façades, and public projection might function as a critical spatial practice in the hybrid digital and physical spaces of smart cities thereby challenging prevailing practices and theories of monumentality. The activist work of The Illuminator's guerilla projections of the 99% symbol on buildings in Manhattan, the treatment of highly visible and iconic structures as media channels and sites of public discourse such as an ongoing research-creation project with a community-led media façade in downtown Toronto, and the #WeLiveHere2017 project at the Waterloo Estate in Sydney which supports tenants in protesting gentrification by illuminating their windows, demonstrate how new forms and practices of monumentality through media architecture can better engage citizens and cities in addressing important societal issues such as housing, poverty, indigenous rights, and discrimination in increasingly privatized public spaces.

Keywords

architecture, public art, public space, smart cities, equity, inclusion

Some of the biggest challenges architects, urban designers, planners, and artists face today are how to support equity, access, and inclusivity in all aspects of city building (Amin, 2014). Increased divisions of wealth and income in our cities (Florida, 2017) exacerbated by large-scale corporate acquisition and agglomeration of urban land (Sassen, 2015) and urban data (Canon, 2018) have eroded the fabric of public life. One relatively new site for this struggle within cities is that of media architecture (Media Architecture Institute, 2015): the expressive, often digital and networked, mostly "screen-reliant" (Mondloch, 2010, p. xii), sometimes interactive architectural displays of urban screens, public projections, and media façades. The proliferation of these sites and events, large and small, sanctioned or not, public or private, commercial or community focused, have transposed some of the functional characteristics of cinema (McQuire, 2008) and digital, networked, interfaces onto the urban experience. Along with these transpositions comes a mapping and remapping of the power relations therein via the politics of aesthetics, representation (Rancière, 2004), spectatorship, and participation (Bishop, 2012). It is this powerful combination of media, architecture, and sociality that I investigate in this article through a critical lens that considers the role that such sites can play in questions of equity and inclusion. How can

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media architecture support counterhegemonic practices within contemporary cities that aim to counteract inequalities of wealth, access, and power?

Specifically, this article asks how media architecture can function as a critical spatial practice (Rendell, 2006) of equity and inclusion in so-called "smart cities" (Foth, Tomitsch, Forlano, Haeusler, & Satchell, 2016; Greenfield, 2013; Kitchin, 2016; Mattern, 2017), and thus represent a *new* "new monumentality" (Mumford, 2000, p. 151), a necessary update to the theories of early 20th-century thinkers and makers from the Congrès International d'Architecture Moderne (CIAM) and the Bauhaus (Ebeling, 2010; Neumann, 2002). Throughout the article, I will unpack these terms and develop perspectives on media architecture as a critical spatial practice; namely, through discussions of monumentality and the history of expressive architectural displays (Lefebvre, 1991; Mumford, 2000), more recent discussions of relationality and "geomedia" in the "media city" (McQuire, 2008, 2016), hybridity with respect to ubiquitous, networked, mobile interfaces (Kluitenberg, 2016), and tactical urbanism as a lever for political and cultural change (Lydon & Garcia, 2015). I will apply and illustrate these concepts through case studies which anchor three distinct categories for media architecture as critical spatial practice: First, through temporary activist interventions such as the work of The Illuminator's guerilla projections; second, through the treatment of highly visible and iconic structures and monuments such as the Ryerson Image Centre and Ryerson School of Image Arts building in Toronto, a permanent media channel for the public display of diverse causes and concerns; and third, through the organization of grass-roots, DIY (Do-it-yourself), DIWO (Do-it-with-others), and/or DIT (Do-it-together; Caldwell & Foth, 2014; McKim, 2014) tactical actions such as the #WeLiveHere2017 project at the Waterloo council housing estate in Sydney. These examples have been selected as they are explicitly critical approaches in their respective categories and thus may be evaluated on such grounds, as well as for their relative geographical dispersion which demonstrates, to a degree, the pervasiveness of these practices and contexts of urban struggle.

As a result of this analysis, I argue that media architecture offers a broad range of creative and structural tools for the critique and reconstruction of collectivity, power, and meaning, and is crucial in developing new approaches to monumentality that address important contemporary issues such as housing, poverty, indigenous rights, climate change, and discrimination. To develop a critical spatial practice of media architecture cities and citizens must see these tools and techniques as core elements in a contested and ever-evolving public sphere of experience, emotion, information, and ideology, and stakeholders must develop forms, skills, and attitudes that support diverse and equitable access to the making and experiencing of media architecture. I conclude that a critical spatial practice of media architecture requires long-term and direct involvement of members of marginalized communities in planning, production, and design stages in order to develop their "civic capital" (Foth, Hudson-Smith, & Gifford, 2016) and to challenge increasing physical and digital privatization with critiques and alternative forms of urban intelligence enacted through light, information, and architecture.

Critical Spatial Practices of Monumentality in the Smart City

> . . . art, as a form of critical spatial practice, holds a special potential for transforming places into spaces of social critique. (Rendell, 2006, p. 2)

Architectural designer, historian, and critic Jane Rendell draws attention to the unique position that art holds as a catalyst for the latent potential for social critique within architectural sites. In this article, I would like to consider Rendell's concept of critical spatial practice with respect to a shifting sense of architecture and site enacted by the digital, networked, sometimes interactive and often screen-reliant displays of media architecture. What is the relationship between a critical spatial practice of media architecture and the concept of monumentality

amid the growing debate around the privatization of land and data in "smart cities" (Batty et al., 2012, p. 482)?

To begin, the concept of critical spatial practice aligns with a reconsideration of a number of binaries and divisions that are spatial, temporal, and social, and something that media architecture may be well-suited to addressing. While Rendell (2006) labels critical spatial practice as explicitly "spatial" her concept of critical spatial practice is one that reaches beyond the spatial. For Rendell, the transformation of a site through artistic intervention opens up temporal as well as social dimensions. Furthermore, the exchanges that Rendell is particularly interested in are also demonstrated in the reinsertion of marginalized voices and "material traces of actions written out of history" (Rendell, 2006, p. 83) in critical spatial practices, which provide glimpses of alternative futures of understanding, action, and inclusion.

The concept of critical spatial practice can also be related to the "media city" and "geomedia" as outlined by media theorist Scott McQuire (2008, 2016), thus bringing us closer to an understanding of the connections between critical spatial practice and media architecture. Building on Lefebvre's (1991) foundational work on the social construction of space, McQuire (2008) exposes the ways that media technologies are central in the dynamic production of contemporary urban space. He notes that media such as film, newspapers, and more recently mobile media and media architecture are involved in "binding affect and cognition to space" (p. vii) in ways that are relational, that is, in ways that are both contingent and ambivalent, creating spaces of attraction and distraction, connection and disconnection. Taken together, this agglomeration and expansion of screen ecologies provides new dimensions and textures to the space, time, and sociality that Rendell puts into question, as well as expanding the possibilities of artistic, technological, and architectural intervention and intermingling.

Advances in cities and how space is managed and socially constructed through technology provide new challenges and possibilities for critical spatial practice through media architecture. Updating his concept of the media city, McQuire (2016) uses the term "geomedia" to describe a state of mediated urban experience more distinctly, powerfully, and dangerously shaping the contours of contemporary public space, identity, and discourse within what is often now referred to as the "smart city." McQuire (2016) characterizes geomedia as "the convergence of media sectors, the ubiquity of digital devices and platforms, the everyday use of place-specific data and location-aware services, and the routinization of distributed, real-time feedback" (p. 19). Similarly, the smart city has been defined as "constellations of instruments across many scales that are connected through multiple networks which provide continuous data regarding the movement of people and materials" (Batty et al., 2012, p. 482). Examples of elements of smart cities include WiFi and infrared sensor-equipped light posts that gather information about people (and their devices) as they pass, aiding in urban wayfinding and traffic management (particularly with the advent of driverless vehicle technology), and "smart" trash bins that optimize sanitation services. The overall goals of smart cities and their attendant technological constellations of sensors, monitors, relays, and screens is to create efficiencies, thus reducing costs and decreasing urban frictions and challenges such as traffic congestion, pollution, and disorientation. With this in mind, McQuire warns that while smart cities may be beneficial in some ways, advancing a rhetoric of informational transparency and citizen empowerment, they have yet to demonstrate how largely inaccessible and proprietary infrastructure can achieve either of these goals and may simply open new sites for the agglomeration of power.

McQuire (2016) is also skeptical of what he calls a "technological rationality" (p. 159) which smart cities, and contemporary capitalism in general, are built on, and perhaps even dependent on, in which innovation arises not from human-centered invention but from the instabilities and needs that technology articulates for itself. Furthermore, Adam Greenfield (2013) notes that in privileging flow through hidden infrastructures and decisions, smart cities remove the necessary friction of public urban life which is central to advancing principles of dissensus and agonism

(Mouffe, 2007), that is, of holding many identities, goals, values, and opinions together instead of seeking consensus and conformity. More recent critiques of the smart city advance similar arguments. Mattern (2017) notes that while the "city as computer" is attractive as it evokes a sense of order and control, ultimately "urban intelligence is more than information processing" and must be actively and sometimes militantly shown to be as such. Forlano (2016) suggests that a critical design of smart cities includes "seams" (p. 44) that make access and use of often black-boxed, automated, privatized systems of representation and control possible by citizens. Other critics call for an active reframing of the smart city as one that is fluid, not-neutral, complex, and open (Kitchin, 2016) through the expansion of citizen control, or what Foth, Hudson-Smith, et al. (2016) refer to as "civic capital," a measure of a citizen's actual and potential impact on systems of representation and control at the scale of their street, neighborhood, and city. Knowing that a future with fewer sensors and screens is not an option, Greenfield (2013) productively asks, "How might we leverage the potential of data-gathering, analysis and visualization tools to improve a community's sense of the challenges, risks, and opportunities facing it, and support it in the aim of autonomous self-governance?" (p. 23). And how might more nuanced and distinctive orientations toward urban intelligence be enacted and represented? As dense transfer points for data, analysis, visualization, and participation, similar challenges can be extended to a critical spatial practice of media architecture, one that may be able to create and expose seams or tears in the obfuscating curtains of civic technologies at physical and virtual scales of consequence.

As a result of scale, media architecture may also play a role in intensifying, augmenting, and transforming the role of monumentality in critical spatial practices. Iconic statues, structures, and buildings such as the Empire State Building in New York, the Eiffel Tower in Paris, and Christ the Redeemer in São Paolo are just a few examples of how digital media have changed the role of the monument and the production and consumption of space in the smart city. With the addition of state-of-the-art digital lighting systems and networked interactivity that produce public data visualizations (Colangelo, 2015), these structures have now become emblematic of a hybridized, contingent, and relational monumentality, broadcasting various causes, concerns, and commercial interests via voluminous façades. For example, the Empire State Building, a privately owned totem of American capitalist ambition presents a yearly promotion for Verizon which asks people to vote for their favorite NFL Super Bowl contestant using the hashtag #WhosGonnaWin, displaying the results every night for a week leading up to the game ("Kicking off Super Bowl," 2014). The Eiffel Tower, an emblem of liberty, equality, and fraternity, regularly changes colours in solidarity with various events from the celebratory to the somber such as glowing green for the signing of the Paris Climate Change agreement or turning its lights off completely in honor of the victims of attacks in Marseille and Las Vegas (LaTourEiffel, 2017). Finally, Christ The Redeemer, a statue that watches over the city of São Paolo and its soccer-loving populace was lit up in the colours of different countries in the latest World Cup based on the proportion of tweets for each participating nation (Israel, 2014). With or without ephemeral lighting displays, structures and sites that we consider monumental and commemorative remain dense focal points that condense memory and ideological meanings and transfer them to a collective. As media architecture, these functions of monumentality can be intensified.

The transferring of condensed meaning and memory through the monumental is facilitated through the performance of rites and rituals associated with them, and with media architecture, these rites and rituals are accelerated, modifying the time, space, and sociality of a site. While more traditional rites and rituals involve simply looking *en masse* at a structure, or affixing objects to it and performing ceremonial rights around it (i.e., laying wreathes), the rituals associated with contemporary forms of digital, hybrid monumentality quickly and easily move beyond the time and space of a site. To the list of rituals more commonly associated with monumentality, we might now add taking, reproducing, and circulating photos and video of the monument on social media, the capturing and broadcasting of location and personal data, and the digital

interfacing and interaction with monuments by way of ubiquitous computing, networks, and application programming interfaces (APIs). These rituals are compelling in the way they allow for the monumental to be appropriated and circulated by citizens and are equally dangerous for the ways this participation can be captured and commodified.

An understanding of the hybridity and relationality of space that media architecture exhibits is central to Eric Kluitenberg's (2016) claim that public space today is a "hybrid monster" (p. 76), and something that a contemporary concept of critical spatial practice must consider. He argues that publics in real space (crowds and individuals) need connections to the Internet, but just as importantly, Internet publics need connections to real space. To break the isolation and ghettoization of the Internet (i.e., "filter bubbles") virtual publics need to get outside. Toward the ends of inclusion, they also need to find expression in the messy physicality (Foth, Tomitsch, et al., 2016) of the street. Similarly, real publics need network access to be included in the hybrid monster that is the contemporary public sphere. It is for these reasons that media architecture may be well-suited to bridging the gap, acting as a public onramp for the messiness of the street to enter the media interfaces and databases of the online world, and a release valve for the immense pressure produced by torrents of digital data, making these apparent and actionable in relevant physical contexts.

Finally, an appreciation of critical spatial practice through media architecture may benefit from historical grounding. Reacting against what they saw as stoic and stuffy monuments of premodernity and early modernity, Siegfried Giedion, in his *Nine Points on Monumentality* (Giedion, Léger, & Sert, 1958) written with fellow members of the CIAM, first proposed the idea of a "new monumentality" in 1944 which would be composed of sites for "collective emotional events, where the people play as important a role as the spectacle itself, and where a unity of the architectural background, the people and the symbols conveyed by the spectacles will arise" (as cited in Mumford, 2000, p. 151). Presciently, their proposals imagined that "During night hours, colour and forms can be projected on vast surfaces for purposes of publicity or propaganda" (Giedion et al., 1958, p. 50). Similarly, and slightly predating the work of CIAM, is the work of Bauhaus thinkers and makers László Moholy-Nagy and Siegfried Ebeling. Moholy-Nagy (1970a, 1970b) published two essays on *Lichtarchitektur*, which as Dietrich Neumann (2002) notes was "an artform he considered to be the ultimate goal of his work" (p. 44). He envisioned a time when "frescoes of coloured light [would] become an architectural unit of buildings" (as cited in Neumann, 2002, p. 44) supporting community festivals and new experiences for city dwellers, and even those circling overhead in airplanes. A lesser known but no less important Bauhaus figure, Siegfried Ebeling, also explored the intermedial relationship between architecture and the modern world. He lamented that "in a world where things and experiences are fantastically mutable" (Ebeling, 2010, p. 8) structures remained relatively rigid and self-contained, and argued that architecture should be better connected to the "more finely graded relations between human being and human being" (p. 12). Ebeling (2010) states,

> We should not affix it [architecture] a seal of eternity. Far from monumentality or representation through mass effect or mass coupling, style must instead be incarnated through our body and the way in which we raise the physical onto a mental plane. (p. 18)

Here, Ebeling in particular has grasped on the importance of the individual human presence as an essential link in expression of progressive architecture. While the work of the Bauhaus and of modernist architectural theory and practice in general from the early 20th century is not explicitly concerned with structural inequalities such as race, class, and gender it does lay the groundwork for more critical practices of monumentality by addressing alienation and advocating for stronger personal connections to public spaces.
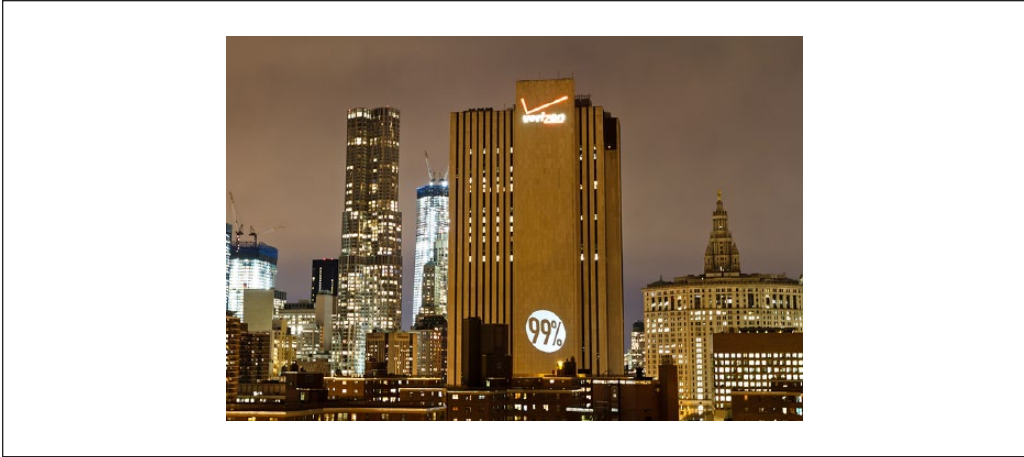
Figure 1. The Illuminator, Occupy Wall Street Bat Signal, 2011, projection.
Source. Image courtesy of The Illuminator.

The question remains whether examples of what we might call a *new* "new monumentality" via media façades, urban screens, and public projections materialize and extend such visions and ideals presented by modernist thinkers such as Ebeling, Moholy-Nagy, and Giedion through a critical spatial practice aimed at the problems of increasingly privatized and digitized cities. It is this question that I seek to answer in this article. Can works of media architecture challenge the hegemonic smart city ideals of automatic efficiency and rationality to provide a means for social justice by enacting and reframing what it means to be a citizen? Or do they, despite their intentions, conscript citizens in dramatizing "someone else's vision of the good city" (Iveson, 2011, p. 68)? Why, how, and by whom the critical spatial practices of media architecture are performed also drives this inquiry via the three case studies that follow. How can a critical spatial practice of media architecture move beyond the static commemoration of historical monumentality and invoke and evoke individual and civic action and experience? How can it address the urban crises of social inequity and exclusion and how can it go beyond information and utility (Caldwell & Foth, 2014) to rethink activism in an age of pervasive and connected displays and data?

Shining a Light: Temporary Activist Interventions

99% / MIC CHECK! / LOOK AROUND / YOU ARE A PART / OF A GLOBAL UPRISING / WE ARE A CRY / FROM THE HEART / OF THE WORLD / WE ARE UNSTOPPABLE / ANOTHER WORLD IS POSSIBLE / HAPPY BIRTHDAY / #OCCUPY MOVEMENT / OCCUPY WALL ST / OCCUPY OAKLAND / OCCUPY PORTLAND / OCCUPY CHICAGO / [list of numerous cities, states, and countries involved in the movement] / OCCUPY EARTH / WE ARE WINNING / IT IS THE BEGINNING OF THE BEGINNING / DO NOT BE AFRAID / LOVE. (AnonOps1337, 2011)

On the 2-week anniversary of the Occupy Wall Street (OWS) movement, Brooklyn-based artist, educator, and activist Mark Read led efforts to present what has come to be known as the Occupy Wall Street Bat Signal (The Illuminator, 2011b) on the Verizon Building in New York City. Projecting the "99%" symbol and other messages related to the ongoing global resistance to austerity and the demand for infrastructure improvements and jobs, popularly referred to as the Occupy movement, Read, along with a number of activists, filmmakers, and citizens, helped to address and galvanize a 20,000-strong crowd participating in a march across the Brooklyn Bridge

and capture widespread media attention by projecting large, high-contrast text on a towering, concrete structure looming over the cityscape (Figure 1).

The success of the OWS Bat Signal encouraged a number of the participants in this action to come together to form The Illuminator (2011a), an art activist collective composed of visual artists, educators, filmmakers, and technologists living and working in New York City. Since the OWS projection, The Illuminator has staged hundreds of projection interventions in public spaces including the projection of #STOMPtheBAN on the Brooklyn Borough Hall on October 17, 2017. This simple message, once again writ large in high-contrast text, sought to support the work of the National Network for Arab American Communities "Take on Hate" campaign. The campaign had organized a protest and dance rally in front of the building, the heart of Brooklyn's Civic Center and the former Brooklyn City Hall, in response to the Trump administration's travel ban targeting individuals from six Muslim-majority countries as well as Venezuela and North Korea. Like most of The Illuminator's work, this intervention used high-contrast imagery focused on augmenting the protests and actions of an activist group. As in most of their works, The Illuminator provided support in helping their collaborators craft their message (e.g., encouraging the sparse use of words in high-contrast), scout locations (seeking blank surfaces with ample parking adjacent to them), and produce projections with their customized cargo van which functions as a mobile projection unit. They do so in order to "transform the street from a space of passive consumption and transit into a site of engagement, conflict, and dialogue" (The Illuminator, 2011a). By deploying spectacle and art in the service of radical politics they aim to call attention to various crises in support of "the ongoing struggle for a more just, peaceful and sustainable world" (The Illuminator, 2011a).

An explicit focus on equity and inclusion makes the work of The Illuminator an example worth considering with respect to the role of media architecture as a critical spatial practice. Just as Rendell (2006, p. 2) notes that critical spatial practice "holds a special potential for transforming places into spaces of social critique," large-scale public projections that juxtapose anticapitalist messages on the soaring edifices of global capital and antixenophobic messages on the surfaces of government buildings augment and support social critique. Through the use of hashtags and references to other locations engaged in similar actions (i.e., OWS's listing of multiple cities and countries) the work of The Illuminator also seeks to open up temporal and social dimensions that acknowledge and engage the hybridity of contemporary public space and translocal, pan-urban concern.

The work of OWS demonstrates how digital projection can be employed as a tool for critical spatial practice as it also privileges mobility and thus easily allows siting to be variable and dynamic. Their work, itself not without precedent (see, e.g., Troika's *SMS Guerilla Projector,* 2003; Troika, n.d.) and the work of Krzysztof Wodiczko), has inspired similar projects around the world including Sampson Wong, Chris Cheung, and Jason Lam's *Add Oil Machine*. This project galvanized protests in Hong Kong by projecting messages of support from sympathizers and fellow activists around the world (Human Rights in China, 2014). Similarly, Robin Bell's work casts messages such as "criminal," "guilty," and "felons welcome here" on properties owned by The Trump Organization which are captured and circulated on social media as a form of protest (Khalil, 2018).

Large-scale projection art and activism allows for changes in content and scale to be made spontaneously in response to crowd behavior and for the connection to networked activities. This form of media architecture demonstrates an understanding of public space as a "hybrid monster" (Kluitenberg, 2016, p. 76) and highlights the power that remains to be exploited within bricks-and-mortar monumentality coupled with digital tools and structures. In these works, the messy physicality of the street is amplified and mirrored by the ephemeral, provisional projections which make explicit reference to wider online publics organized by terms of engagement that are too large, literally and figuratively, to be silenced or contained. Projection-based works like those

of The Illuminator can break through the seeming seamlessness of the increasingly privatized physical monumentality of the built environment and foreground competing narratives, displaying and fostering a different kind of urban intelligence in the smart city.

We might also count the temporary activist interventions of The Illuminator as a much-needed update to the concepts of Giedion et al.'s "new monumentality." Like the members of CIAM, as well as Bauhaus thinkers Ebeling and Moholy-Nagy, these works seek to create a "collective emotional event" (Mumford, 2000, p. 151) instead of one predicated on rationality and efficiency, where people, symbols, and structures are unified through ephemeral light. Yet, unlike these thinkers, the efforts of The Illuminator go beyond general aesthetic shifts and address specific social and political issues of inequality and exclusion such as gentrification and racism. They do so by creating tactical urbanist interventions (i.e., temporary, short-term, low-cost, community-based, creative, and action-oriented interventions [Lydon & Garcia, 2015]) into public space that expose the advantages and prejudices hidden therein, primarily in the power that highly visible structures simultaneously evoke and mask. Finally, this work can help prepare community members for participation in other civic processes such as protests, sharing information, lobbying politicians, and demonstrating visibility of important causes and issues, thus proposing and potentially enabling more engaged citizenry and civic capital.

While the versatility, flexibility, and ephemerality of temporary, activist interventions via large-scale projections may support equity and inclusion, these very qualities also bring about general critiques of this form of media architecture as critical practice. Although the work of The Illuminator reinserts marginalized voices into the public sphere, the impermanence and guerilla nature of the work, and other works like it, means that projection-based interventions remain temporarily visible both on and offline and thus are linked in their limited ability to challenge existing power structures. While the 99% symbol critiqued the power of the Verizon building it was projected on the fact remains that most urban, visual, and spatial environments and their digital infrastructures of data acquisition, access, and display are owned, operated, and controlled by private corporations. Corporate logos in the form of advertisements and corporate branding of buildings and expanses of opaque, translucent, and reflective surfaces are the enduring images of impenetrability that define the contemporary urban experience. As Davis (2006, p. 159) notes, specifically of Los Angeles, "Ramparts and battlements, reflective glass and elevated pedways, are tropes in an architectural language warning off the underclass Other." This serves to reinforce Sassen's (2015) claims that the large-scale, coordinated acquisition and privatization of cities has had an increasingly significant impact on equity, democracy, and rights, foreclosing the "right to the city" (Lefebvre, 1996) both physically and psychogeographically. To this, we should also add the ongoing parallel restructuring of electronic and digital space with which physical spaces of the city are increasingly codependent. While temporary activist projections provide necessary fissures in the pervasive private fabric of hybrid public space they also run the risk of turning oppositional and radical politics into temporary spectacle with little long-term gain to be had in infrastructural change. More permanent public platforms, monuments, and iconic buildings that embody the concerns of equity and inclusion from the ground (and code) up may be required to more effectively and sustainably challenge power through light, information, and architecture.

Mass Messages: Permanent, Iconic Media Channels

Infrastructure is proposed as a gathering force and political intermediary of considerable significance in shaping the rights of the poor to the city and their capacity to claim those rights. (Amin, 2014, p. 137)
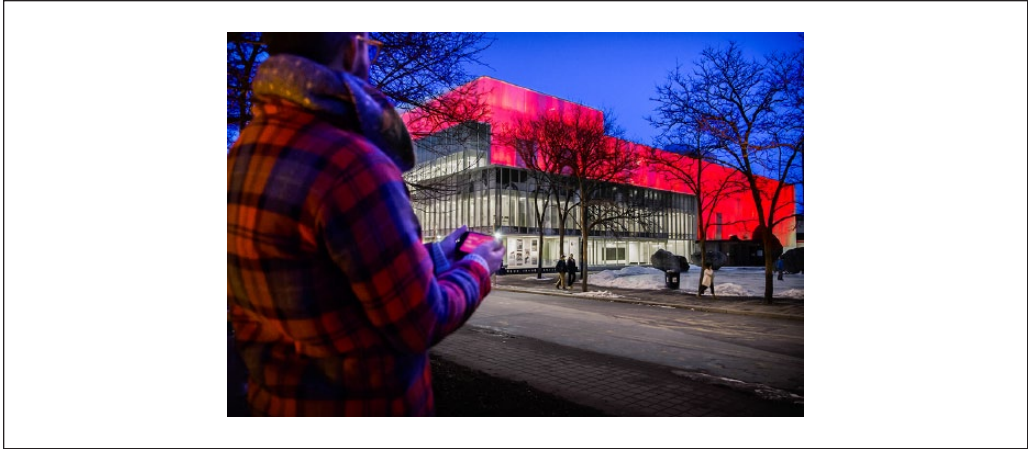
Figure 2. RyeLights, media façade.
Source. Image courtesy of Public Visualization Studio.

We might extend urbanist and geographer Ash Amin's quote regarding more common forms of infrastructure such as roads, pipes, and wires to include the communicative and expressive infrastructure of media architecture. A discussion that considers the rights involved in their construction and use, as well as their roles as political intermediaries is necessary as media architecture becomes more ubiquitous and connected in and through smart city infrastructure. Expressive architectural surfaces on buildings that are central to communities, cities, and regions should be considered within a politics of representation and use they engender and should expand the ability for citizens to act at various scales, fostering what Foth, Hudson-Smith, et al. (2016) call "civic capital." It is with this in mind that I embarked on a research-creation (Chapman & Sawchuk, 2012) project aimed at creating a permanent, iconic media channel via a media façade (a programmable and expressive lighting system incorporated directly into the cladding of a building) as a form of critical spatial practice. In this section, I will present, evaluate, and critique my work thus far on this project as a form of critical spatial practice in media architecture.

The Ryerson Image Centre and Ryerson School of Image Arts building lies at the heart of Ryerson University's campus in the centre of downtown Toronto, Canada. In May of 2009, the building underwent extensive renovations which included the installation of a media façade consisting of 1,400 LED light modules mounted on custom brackets behind 727 3' × 8' translucent glass panels (Theodore, e-mail interview, August 18, 2014). By the time of its completion in the fall of 2012, the once unremarkable exterior of the building, itself a former brewery, had become a translucent, glass cube during the day and a glowing, animated multicoloured beacon at night. For the first few years of its existence the building ran primarily on what one might describe as "screen-saver" mode, that is, it primarily displayed school colours (blue and yellow) and ran preprogramed shows for holidays like Christmas, Easter, and Canada Day. As a student at the school, I sensed an acute lack of citizen and student involvement with this iconic symbol of the school and the community. Given that there was no formal mechanism for interfacing with the lights, directly or indirectly, the community was left to simply marvel at the sight of the glowing building and wonder how it all worked, or, most likely, ignore it. After investigating further and consulting with various stakeholders at the school, I was able to propose and establish a protocol that would allow members of the Ryerson community to request changes to the colour of the Ryerson Image Centre and Ryerson School of Image Arts building to highlight important events and causes of their choosing (RyeLights, 2018; Figure 2).

Since the fall of 2016, lighting requests submitted via a website have been evaluated by a panel of staff and student representatives based on the following criteria: timeliness (how is the proposed date of the lighting proposal relevant?), tie-in to community events (does the lighting proposal compliment an on-campus function?), and inclusivity (does the lighting proposal support the promotion of inclusivity and diversity?) (RyeLights, 2018). The focus on time and site specificity, as well as the explicit goal of inclusion, make this an example of, or at least an attempt at, creating a work of media architecture as a critical spatial practice. Examples of lighting requests have included local school-related events such as awards ceremonies and sporting events but have also included special lighting programs to support on-campus protests related to issues of national and global significance such as Tibetan Uprising Day and Trans Awareness Month. In November of 2016, RyeLights collaborated with Shades of Our Sisters (2016), an exhibit and online experience created by the families of missing and murdered Indigenous women. The project was aimed at sharing "the memory of loved ones and what the loss of their life means" to a wider public. For three nights, RyeLights glowed red in honor of Missing and Murdered Indigenous Women, Girls, Transgender, and Two Spirited People in Canada (MMIWGT2S). Light pulses on the building indicated when the hashtags #MMIW #MMIWGT2S and #MMIWG were used on Twitter.

Thus far, RyeLights has attempted, with varying degrees of success, to transform this once inaccessible and somewhat ambient and abstract building into a space of targeted social critique. With the integration of social media the building has become a hybrid interface that, albeit temporarily, has the ability to write previously marginalized voices into the fabric of the city and does so not through an unsanctioned, provisional projection, but through an official and complete transformation of a building's façade. Media architecture as permanent, iconic, community media channels creates a closer coupling with traditional concepts of monumentality which see iconic buildings as condensers of memory and ideological meanings, but also with the "new monumentality" concept which envisions structures and spaces that consistently reflect the shifting collective emotional life of groups and individuals. Taken a step further, RyeLights might be seen as an update to Giedion's "new monumentality" as it begins to explicitly address issues of inclusion and equity in its core criteria and function.

RyeLights also provides us with an opportunity to reflect on architecture as geomedia and the possibilities that smart city infrastructures can afford in order to enact a more human-centered and public urban intelligence. RyeLights can be seen as a form of architecture transformed into geomedia (McQuire, 2016) in that its relational modes and associated social media rituals turn it into something that can display place-specific data, is location-aware, and exhibits the routinization of distributed, real-time feedback. That said, as Adam Greenfield notes, smart infrastructures such as media architecture that can be used to gather, analyze, and visualize information are generally used to support corporate ends of data and wealth accumulation with little thought to how they affect equity, inclusion, and the self-determination of citizens and communities. Instead of seeking the blind obedience, efficiency, and uniformity at the heart of the fully automated "smart" city, RyeLights aims to allow many identities, goals, values, and opinions to resonate in the city, leveraging the potential of visualization to improve a community's sense of "the challenges, risks, and opportunities facing it" (Greenfield, 2013, p. 23), thus enacting and engaging a different kind of urban intelligence and contributing to civic capital.

Despite these advantages, RyeLights, and in general almost all community focused lighting systems on iconic and important buildings and monuments such as the Empire State Building and the Eiffel Tower, fall well short of supporting the autonomous self-governance that Greenfield advocates for in smart cities. Citizens are left in the dark, so to speak, with respect to how to operate and interface with these systems of representation. Similar to, and perhaps more so, than temporary activist projections such as those presented by The Illuminator, permanent iconic structures and buildings as media channels for inclusion and equity are hampered by obfuscating and inaccessible

technological systems which make direct community control difficult without specialized training and bureaucratic clearance. They remain, to a degree, black-boxed and out of reach like much of the physical and digital infrastructure of cities. While the development of open technological and bureaucratic frameworks and workshops to train individuals and groups on the specific software and hardware involved in running the lights on the building are part of future plans for RyeLights, they will require significant financial and political capital to move forward. Political and technological barriers remain particularly strong inhibitors to the development of permanent, iconic media channels as a critical spatial practice and the expansion of urban intelligence and civic capital. Nonetheless, permanent, iconic media façades hold great potential and promise as an element of a truly smarter city in that their ability to support diverse representations can reframe the smart city as fluid, open, complex, contingent, and relational, and may increase the quality of participation for citizens in the aesthetic and functional self-determination of urban space.

We Live Here: Grassroots, Do-It-Together Media Architecture

The act of lighting up the towers signals that lives are lived here, illuminating the often overlooked human dimension. (Condie & Lewis, 2017, p. 18)

When considering media architecture as critical spatial practice how someone can speak is just as if not more important that who can speak. In the case studies of temporary activist projections and permanent, iconic structures discussed above the "how" has been mainly controlled by a few gatekeepers that, while sympathetic to the overall goals of critical practice in urban media, stop short of handing over the means of cultural production to the diverse groups and individuals they seek to support and represent.

This was not the case with the #WeLiveHere2017 project in Sydney, Australia. The Waterloo Public Housing Action Group, with the help of creative producer Claire Lewis and Dr. Jenna Condie, Lecturer in Digital Research and Online Social Analysis at Western Sydney University, consulted with the residents of the Matavai and Turanga towers and together organized the financing, distribution, and installation of hundreds of multicoloured LED lights strips in the buildings' windows as a protest against the impending eviction of over 4,000 residents as part of the city's urban renewal plans (Walker & Mitchell, 2017). In total, 234 of 480 windows were lit up every night, from September 9 to October 1, 2017, each with its own distinct colour and rhythm selected by each resident (Harmon, 2017). The city had promised to eventually rehouse the residents stating on its website that "Waterloo will become one of the most connected and attractive inner-city places to live, work and visit" (NSW Government, n.d.). That said, most were skeptical about their prospects of being rehoused in their lifetimes given the 20-year time frame for the project. They were also unsure how they would fit into the new build that planned to make 70% of the units privately owned. The general feeling of disenfranchisement from the residents, that their government and fellow citizens did not see or hear them, became the impetus for their community-based, "do-it-together" (McKim, 2014) collective action which became visible to people well beyond the estates grounds and was picked up on international media (Harmon, 2017). Efforts to draw attention to this issue have continued on social media with the organizers and residents, empowered by a number of social media workshops facilitated by Lewis and Condie, working together to create "a vibrant archive of Waterloo through portraits and stories on Instagram" (#WeLiveHere2017, n.d.), as well as in the form of a documentary film (Lewis, 2018; Figure 3).

#WeLiveHere2017 represents a rare and unique example of critical spatial practice through media architecture and a truly *new* "new monumentality" that respects the intelligence and wishes of citizens, thereby challenging what counts as urban intelligence and developing civic capital. It presents a collective emotional response from the coordinated, individual efforts of

Figure 3. #WeLiveHere2017, Waterloo Public Housing Action Group, LED light strips.
Source. Photo by Nic Walker courtesy of #WeLiveHere2017.

marginalized citizens and does so through expressive lighting and coordinated social media efforts that recognizes the hybrid nature of monumentality and public space. Most important, #WeLiveHere2017 created what Caldwell and Foth (2014) call an AUI, or Architectural User Interface, which focusses less on the typical ends of the smart city, such as utility and efficiency, and more on dimensions of expression and coordinated action.

Despite the successes of #WeLiveHere2017, the Waterloo tower redevelopment project still appears to be scheduled to go ahead as planned. That said, it should be noted that the goals of the project were never to actually stop the government. The goal, instead, was to engage in "playful protest" (Singhal & Greiner, 2008) in the hopes of generating long-term and more sustainable commitments to the cause of affordable housing and compassion for the already poor and marginalized groups that were unevenly bearing the brunt of the effects of urban "renewal" (Condie & Lewis, 2017). #WeLiveHere2017 was meant to be, as Matavai resident Catherine Skipper says, "a robust visual statement of socio-political commitment to housing the vulnerable" (as cited in Condie & Lewis, 2017, p. 18), not unlike the very physical presence of the towers themselves. While the lasting material and social impact of this coordinated action for the residents and others like them in Sydney and beyond remains to be seen, #WeLiveHere2017 has transformed the Waterloo estate into a space of social critique and an iconic representation of cohesion, community, and care that did not previously exist in the eyes of local government and citizens, and even the residents themselves. In this case, community was built in the process of attempting to visualize the community through media architecture. As Indigenous activist and member of the Waterloo Public Housing Action Group (WPHAG) Jenny Munro notes, "It's the only visible evidence that we are resisting" (Lewis, 2018). A low-cost, community-based, temporary, grassroots creative action has helped people claim space and, hopefully, catalyzed gradual, long-term change, both for the way marginalized people are treated in the rapidly developing smart city, but also how they are given opportunities for meaningful and powerful self-expression through media centred upon architecture.

Conclusion: A Way Forward for a Critical Spatial Practice of Media Architecture

It is possible for media architecture to function as a critical spatial practice in smart cities and thus represent a *new* "new monumentality" that fosters equity and inclusion through temporary

activist interventions such as The Illuminator's OWS Bat Symbol, permanent, iconic media façades as channels for community engagement such as the RyeLights program, and grassroots, do-it-together tactical actions such as the #WeLiveHere2017 project. These works demonstrate the potential for media architecture to transform places into spaces of social critique and bind affect and cognition to space. To various degrees, they turn buildings into geomedia (McQuire, 2016), thus making them more like everything else in our digital/physical environments: hubs for place-specific data, well-suited to real-time feedback, and location and context aware. To various degrees, they use these qualities to translate the ever-shifting emotional and political experiences of citizens into relational, and emotional displays through light, architecture, and digital networks, and thus perform a necessary function of shifting the perceptions and structures of what constitutes urban intelligence.

It is worth remembering that the examples presented here exposes some deficiencies and areas for improvement in media architecture as a tool for self-determination and self-expression in the "hybrid monster" (Kluitenberg, 2016, p. 76) of the geomedia (McQuire, 2016) inflected, increasingly privatized public sphere. First, temporary activist interventions lack the weight that comes with the condensed, officially sanctioned power of the iconic and monumental and instead use temporary measures to critique the inequalities symbolized by that power. Second, permanent, iconic media channels such as RyeLights combine institutional support by way of the monumental with a program of inclusive, community-focused representation. However, like The Illuminator's work, even these permanent channels lack inclusion in the development and understanding of technical tools and practices that govern their use. Finally, while #WeLiveHere2017 puts the means of critical and expanded media architectural representation and production in the hands of marginalized populations, it remains to be seen what kinds of long-term impacts these actions will have. In this sense, more tangible interventions and longitudinal studies are required to assess the efficacy of such actions as well as to determine how people want to see media architecture deployed and used in the first place. What barriers to participation exist in the various activities and actions associated with media architecture and what skills for empowered smart citizens may be tied to their use?

A number of recommendations can be made to map out a path forward for critical spatial practice using media architecture in the smart city based on the findings of this article. It appears that direct involvement of members of marginalized communities in the planning, production, and design of media architecture is a key element in moving beyond impactful messages on buildings and engaging real change among excluded groups, encouraging and galvanizing sustained action and raising the political profile of their struggles. Furthermore, skills development should be considered as a means to pursue the long-term goals of equity and inclusion, and the expansion of civic capital. Truly smart cities and smarter citizens can be supported by media architecture as a critical spatial practice when their goals are the reduction of prejudice and structural inequalities through the support of the self-representation and self-determination of marginalized and underrepresented groups. The examples in this article show that despite the pervasiveness of the drive for technological rationality and corporate control, urban infrastructure, both virtual and physical, create places of "complexity and incompleteness" (Sassen, 2015) that can and should be exploited and exacerbated by practitioners of a critical spatial practice of monumentality through media architecture. More work must be done, both in research and practice, to continue to develop theories and methods of critical spatial practice in activist projection, permanent media façades, and tactical action that open these hybrid structures of power, knowledge, and representation to underserved populations.

Declaration of Conflicting Interests

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Online Resources

See online journal of cities and culture (http://www.mediapolisjournal.com/).
See art, media, and technology blog (https://www.creativeapplications.net/).
See global organization of media architecture (https://www.mediaarchitecture.org/).
See new media and digital culture blog (https://mastersofmedia.hum.uva.nl/).
See open access journal on media theory (http://mediatheoryjournal.org/).
See online journal of architecture, landscape, and urbanism (https://placesjournal.org/).

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