It’s a Smart World? An Architectural Reading of
‘Toronto Tomorrow’ through Hannah Arendt’s
Notion of the World

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Abstract
This paper analyzes the relation between technology and the urban environment within the so called ‘smart-city’ approach, particularly through an architectural analysis of Sidewalk Labs’ proposal for Toronto’s waterfront. Although the project is cancelled, it still is offers a valuable case study. This paper focusses on the spatial and material dimension of the proposal, in particular with a view on the character of public spaces. The understanding of the spatial and political aspects of public space are informed by Hannah Arendt’s conceptual framework of the relationship between the ‘world’ on the one hand and the plurality of the human community on the other. This analysis then offers a view upon the urban and everyday spatial environment not only as the context of the lives of residents and visitors, but moreover as an in-between that at once bring them together and separates them.

Introduction: A Project that Will Not Move Forward
‘As of May 7, 2020, the Sidewalk Toronto project is no longer moving forward.’¹ This announcement opens the webpage of the Toronto Tomorrow project. The message can be closed, after which the visitor is given access to the plans Sidewalk Labs has developed for Toronto’s former industrial harbor area. These initiative to these plans were presented in October 2017. Since the ambition to turn the area in an exemplary example of what is called today a ‘smart city’, and his involvement in the selection of Sidewalk Labs as developer of the area, prime minister Justin Trudeau even frequented the presentation. The neighborhood would become a ‘test-bed’ for new technologies, Trudeau expected. The presentation was

¹ https://www.sidewalktoronto.ca (accessed April 7, 2021)
followed by four massive and well-designed books and the mentioned website in 2019, presenting the plan under the title: ‘Toronto Tomorrow, A New Approach to Inclusive Growth’. The books presented the plan: timber mid-rise and high-rise buildings, great urban spaces, a touch of nature, industrial heritage, along with certain technological innovations. However, already in 2019 the ambitions of the plans were scaled down to a smaller parcel of land, while the emerge of the COVID 19 pandemic early 2020 turned out to be the final blow: Sidewalk Labs cancelled the project. And thus, the website presenting the project opens with this mentioned warning: ‘The information on this website is only current up to that date.’

In his response to the announcement of the cancellation of the project, the mayor of Toronto John Tory did not really seem concerned. Other developers certainly will take over from Sidewalk Labs, he stated. The real estate market in Toronto indeed is ‘flaming-hot’, as analysts state: a brief drop in the housing prices was monitored in the first months of the COVID 19 outbreak, but today the prices are back on the level of early 2020, pre-COVID. So it is indeed likely that other developers will be lining up to develop plans in this area.

However, Sidewalk Labs is not an average developer. It is a subsidiary of Alphabet Inc, the company behind Google (and ‘other Bets’, as they call it on their website). It is this relationship with Google that Trudeau valued, but also give rise to fierce responses, critiques, concern. Every step of Sidewalk Toronto, the company Sidewalk Labs founded to bring the developments in Toronto to fruition, was followed with suspicion. This relationship with Google, however, is not mentioned on the website of the Sidewalk Labs today: it simply presents itself as a tech company, working on ‘urban products’: a computational program that helps developers and designers to ‘create better cities, faster and with less risk, environments’, an easy-to-install kit which will help landlords and tenants to

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2 https://www.sidewalktoronto.ca (accessed April 7, 2021)
3 https://abc.xyz (accessed April 10, 2021)
reduce energy consumption, and a soon to be presented a smart parking system that will help
drivers (or driverless cars) to easily find a parking spot. But a reference to the Toronto project
cannot be found, nor any reference to similar development projects.4

Sidewalk Labs of course is not the only company pursuing the ‘smart city’, and
Toronto not the only location where a ‘smart’ city is planned to be built. Smart technologies
are already omnipresent in everyday life, implemented in new building projects as well as
applicated to existing cities too. Barcelona, for instance, is presented as ‘world capital of the
unstoppable smart city movement’.5 Despite the inherent contradictions and open questions
regarding smart technologies, urban planners, politicians, infrastructure planners, security
specialists, and so on, indeed seem to agree that the smart city development is unstoppable,
and that it will make urban environments more safe, affordable, sustainable, healthy, vibrant,
comfortable, and efficient. These goals in itself are not skyrocketing nor surprising. The
improvement of living circumstances of residents have been always a central aspect of urban
development and reconstruction plans. It is of course the power of the tech-companies, like
Google, and the character of the technology implemented, that urges the question if there also
is a backside to that aim. The main concern here, obviously, is the aspect of privacy: what if a
single company provides the network, apps, services, and also is able to track and trace every
move of tenants, residents, renters, commerce, traffic, visitors, both in public spaces as well
as in private spaces?

In this paper I will not focus on this concern, but will stress some of the other
promises of the smart city: the promise of responsiveness of the public spaces to the demand
of its users. The aim of this responsiveness lies in the previously mentioned goals: to make
spaces comfortable, safe, sustainable, vibrant, efficient. These goals are often presented in a

4 https://www.sidewalklabs.com (accessed April 7, 2021)
5 Antoni Vives, Smart City Barcelona, The Catalan Quest to Improve Future Urban Living (Brighton/Portland/Toronto 2018, Sussex
Academic Press), 10
very technocratic way, without paying attention to the inherent political values. In this paper, I will examine the smart city from an architectural perspective. I am convinced that it is precisely an architectural view, in which physical space and policy intentions, the ability to read plans and analyze visions of the future come together, that contributes to a better understanding of the political aspects of such proposals. My understanding of architecture is informed by the writings of Hannah Arendt, and specifically her use of the notion ‘world’, in which political, spatial and physical aspects come together. These three aspects are essential characteristics of architecture too, as I will explain the first part of this paper. Architecture, to me, is ‘world-construction’: if well developed, it contributes to a shared world and increases the possibility to appear to one another. Clearly, the opposite is true too: architecture also can destroy this world-in-common, and disturb the possibility to appear to one another. In the second part, I then will take up the Toronto Tomorrow proposal, which, even though it is cancelled, still is a valuable case study of the ideas and ideals beyond smart cities. I will analyze the presented drawings and their accompanying texts, wondering how this urban neighborhood would function, and how advanced digital technologies will impact the possibilities to appear to one another in the proposed (public) spaces.

**Architecture: Space, Plurality, Reality**

Let me first outline how I understand the architectural perspective and its relevance with respect to current discussions about society, community, cities, and politics. Most people will define architecture as ‘the design of buildings’. Architecture is rendered as a craft: architects design buildings. By extension, interior architects design the interiors of these buildings.

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6 Sometimes the profession of architecture is even seen in a very limited way: as if architecture is ultimately only about the aesthetic dimension of building. Large developers let engineers design the most efficient buildings, and the architect can then draw a beautiful facade around it. As if architecture is just the icing on the cake.
Landscape architects then design gardens around these buildings, the parks in the city, while urban planners design neighborhoods, cities and urban extensions. Civil engineers, finally, design the artefacts of infrastructure: express ways, canals, viaducts, airports, sewage systems. Each of these fields has its own knowledge domain. Nevertheless, there are also many similarities: it is about designing and constructing physical objects, shaping space, fabricating homes for people on this earth and making activities, enterprises, collaborations, movements, possible. Therefore I would not want to separate these fields of knowledge, but rather see them as extensions of each other. When I talk about architecture, I am talking about all these fields of knowledge and different scales of intervention. Together, we might argue, these different professions are concerned about the creation of a home for the human being and a space for the human community, and all the infrastructure beyond.

Architecture, in this broad sense, is a discipline that transforms the earth in a world, or better said, in a world-in-common. Architecture, in other words, is to be seen as ‘world-construction’, as I already stated in the introduction.

Arendt scholars certainly have recognized this distinction between ‘earth’ and ‘world’, since it stems from her 1958 book The Human Condition. ‘Earth’ stands for the natural circumstances of the globe, depicted by the cycle of nature. Even though the globe is the natural habitat, human beings cannot survive but by intervention in the earth through the construction of artefacts (houses, furniture, infrastructure) and by establishing institutions (for the human community). By doing so, they establish the ‘world’, which is at once a ‘world-of-things’ as well as a ‘world-in-common’. This distinction, to me, offers a proper framework through which we can understand the political dimension of the architectural profession. As the Canadian architect and theorist George Baird already noted in the introduction to his 1995 book The Space of Appearance, Arendt uniquely intertwines her

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7 Reinhold Martin, The Urban Apparatus. Mediapolitics and the City (Minneapolis/London 2016, The University of Minnesota Press), 25
8 Hannah Arendt, The Human Condition (Chicago 1998 [1958], The University of Chicago Press), 2, 7-8
political reflections with references to ‘reification’, ‘production’, ‘worldliness’, the ‘human artifice’, and ‘the things of the world’. ‘None of Arendt’s philosophical predecessors’, he writes, ‘nor any of her contemporaries has matched the depth of her passionate engagement with “the things of the world.” It is this engagement, in my view, that makes her particular twentieth-century phenomenology so distinctive, so personally attractive, and so especially pertinent to architecture.’

For Arendt, ‘artefacts’ are not just (use)objects, but they are ‘things’, politically relevant: they establish the artificial ‘world’ which enables human life on earth as well as the life of the community. There is a particular reason for Arendt to stress the importance of the commonness of the world-of-things. According to her, the world is dominated by differences: ‘nobody is ever the same as anyone else who ever lived, lives, or will live.’

Because of this plurality, politics is a necessity. In her essay ‘Introduction into Politics’, she defines ‘politics’ as ‘the coexistence and association of different men.’

Politics, in other words, is not about similarity, but about plurality, differences, particular perspectives and conflicting views. ‘If men were endlessly reproducible repetitions of the same model, whose nature or essence was the same for all and as predictable as the nature or essence of any other thing’, she writes, ‘action would be an unnecessary luxury’.

In this quote, Arendt uses the term ‘action’, the activity that is bound to the realm of politics. Action, according to her, always needs to be joined by speech. Action and speech require a public space, an audience, since action would make no sense if it is not seen by others, and speech too would be of no use if no one heard it. Now, for Arendt this moment wherein action is seen and speech is heard is the moment of appearance to one another, the moment when differences become apparent: no one acts the same, no one speaks the same. For Arendt, public space therefore is a ‘space of appearance’, a space where one can appear amongst.

10 Arendt, The Human Condition, 8
12 Arendt, The Human Condition, 8
others, can shape coexistence and form associations, but more importantly, also reveal differences.\(^\text{13}\) Therefore, the condition of public space is plurality.\(^\text{14}\) It is important at this point to underline that for Arendt not the peaceful coexistence and the necessary consensus that enables human association is the key of this public space, but the appearance itself.\(^\text{15}\) For Arendt appearance is an essential characteristic of ‘being human’:

‘In ancient feeling the privative trait of privacy, indicated in the word itself, was all important; it mean literally a state of being deprived of something, and even of the highest and most human of man’s capacities. A man who lives only a private life … was not fully human.’\(^\text{16}\)

We can only understand this notion if we see that ‘not appearing’ not only means that one has no possibility to act or speak, but also that it means ‘not being seen and not being heard’. Remaining unseen and unheard, which is becoming an increasing problem in Western societies, is not the only problem Arendt raises. Not appearing also means missing out on experiencing reality. Appearing means that one appears in the world from a particular position. No singular position is similar to someone else’s position, Arendt argues. Reality unfolds through the mutual perspectives from different positions. It is through ‘the presence of others who see what we see and hear what we hear,’ that we can be assured ‘of the reality

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\(^{13}\) Arendt, *The Human Condition*, 199

\(^{14}\) Arendt, *The Human Condition*, 220

\(^{15}\) This, to me, is the essential difference with regard to the notion of the public sphere as coined by the German philosopher Jürgen Habermas. Arendt stresses differences (and conflict) as the condition of public space. Her concept is agonistic (as well as associative, as Seyla Benhabib argues). Habermas’s public sphere is described as a discursive model. In this model not conflict is central, but the idea that through a rational conversation and exchange of ideas, consensus can be reached. Even though these reflections of course are mainly describing the character of a sort of meta-space, which is at the heart of the democratic system, one also can argue that it makes a difference if we understand concrete urban spaces along the lines of Habermas, emphasizing a certain cosines and togetherness, or with Arendt as spaces of conflict and differences. cf. Seyla Benhabib, ‘Models of Public Space: Hannah Arendt, the Liberal Tradition, and Jürgen Habermas’, in: Craig Calhoun (ed.), *Habermas and the Public Sphere* (Cambridge MA. 1992, MIT Press), 87

\(^{16}\) Arendt, *The Human Condition*, 38
of the world and ourselves.’ In Arendt’s view the experience of reality and the plurality of inhabitants of the world thus are intertwined.

‘For though the common world is the common meeting ground of all, those who are present have different locations in it, and the location of one can no more coincide with the location of another than the location of two objects. Being seen and being heard derives their significance from the fact that everybody sees and hears from a different position. … Only where things can be seen by many in a variety of aspects without changing their identity, so that those who are gathered around them know they see sameness in utter diversity, can worldly reality truly and reliably appear.’

This concern about ‘reality’ is not simply a philosophical quest, but it affirms also one’s own position within a world-in-common. Important from an architectural perspective is obviously the idea that the world can be understood through the juxtaposition of numerous perspectives. But moreover, it is important to see how Arendt intertwines the human experience of appearance with this assurance of ‘reality’. This is not another metaphorical spatial term, but a phenomenological perspective, wherein she intertwines the human experience of appearance with the assurance of ‘reality’ of the world. These experiences are concrete and tangible: all five bodily senses are involved in this process, as Arendt wrote two decades later in her unfinished book The Life of the Mind.

‘In a world of appearances … reality is guaranteed by this three-fold commonness: the five senses utterly different from each other, have the same object in common; members of the same species have the same context in common that endows every

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17 Arendt, The Human Condition, 50
18 Arendt, The Human Condition, 57
single object with its particular meaning; and all other sense-endowed beings, though
perceiving this object from utterly different perspectives, agree on its identity.'

Note that appearance itself is not a static fact but a movement: a moment of transition from
the private realm into the public eye. It is through this movement that the senses are
addressed, that others and otherness, as well as the world-in-common is perceived.

Architecture: The In-Betweenness of the World

Back to Arendt’s reading of the world-of-things as a world-in-common. For Arendt, the term
world obviously is not limited to physical things, but also includes the political institutions
and public initiatives that enable politics. However, human artefacts clearly are important to
Arendt, and it is this view that makes her writings, as I already noted, so useful as a frame in
which to understand the political aspects of architecture. Human artefacts offer an in-between
to the inhabitants of the world, Arendt states. She clarifies this statement in The Human
Condition with a reference to a table: ‘To live in the world,’ she writes, ‘means essentially
that a world of things is between those who have it in common, as a table is located between
those who sit around it; the world, like every in-between, relates and separates men at the
same time.’ The metaphor of the table shows how different aspects of ‘the world-of-things’
(material, economic, social, and cultural) are interconnected. Even though she does not
elaborate on this example, as an architect it makes me think. A table allows the meetings to
emerge and happen. The table moreover has an impact on these meetings: the shape and
materiality of the table, its orientation in space, the seating around it, the table setting, as well
as that which is, both figuratively and literally, brought to the table, all influence the

20 Arendt, The Human Condition, 54
gathering around it. The table and its arrangement not only provide a setting for a meeting, but also influence the atmosphere and expectations of it. And finally, there is the aspect of time: the table arranges several meetings in time, and thus the table connects these different meetings in time. In other words: the table as material artefact offers an in-between spatially as well as temporally. Arendt particularly is focused on the aspect of time and permanence. When thinking of this dimension in relation to the table, one can imagine that aspects of permanence and history, heritage and memory, remembrances and narratives are part and parcel of the human artifice too.

While thinking about architecture along these lines, we can define at least four ways in which architecture is related to the realm of politics.

1. Architecture, through a material organization of the world, does bring people together as well as separate them. There is good reason to mention both aspects of the in-between. Architects draw boundaries between one space an another, and by doing so, make distinctions. Through these distinctions, as well as by transgressing these distinctions, these material organizations enable human life as well as community life. Where boundaries are and how spaces are designed is not neutral, nor where the connections between spaces are made, and where these relationships are disturbed. Architecture makes possible (or impossible). This, obviously, in particular is the role of public buildings. A library, for example, which is centrally located in a city and well accessible for the inhabitants (both mobile and less mobile), which offers not only a system to loan and return books, but also plenty of room to sit, read the newspaper, surf the web, and study, might become a truly public building, a building that has a central function in the life of
the community. Such a library is a ‘public thing’, which provides, in the words of Bonnie Honig, ‘the infrastructure of democratic life’.\textsuperscript{21}

2. This is not just about spaces that bring people together, but beyond the literal organization of human life and community life, Arendt also stresses how the artefacts, made by human hands, in turn, condition the human being (and the human community). ‘The impact of the world’s reality upon human existence is felt and received as a conditioning force.’\textsuperscript{22} The way we organize the world (architecturally) thus also influences the way we understand the world (as world-in-common) and how we will approach the world, be engaged in it. Here, of course, we also touch upon the loop in Arendt’s investigation of the ‘world’ in respect to the human activities. The world is not just the stage of political life (the world as pre-political), but political life, vice versa, is drawn by Arendt also as ‘being engaged in the world’, driven by \textit{amor mundi}.\textsuperscript{23}

3. The third political dimension of architecture is its very form, its appearance in the world, and its durability.\textsuperscript{24} It is through the very shape of objects, and in particular of buildings, and the human faculty to recognize forms, that a shared world emerges. Buildings, moreover, have the capacity to express ‘narratives’, to be a ‘foothold’ for memories and remembrances, to become part of the cultural heritage or even be a monument. These aspect shape, unite (or divide) a political community in time.\textsuperscript{25}

4. There is an important fourth point to be made about the contribution of an architectural perspective to the understanding of political, social, societal,

\textsuperscript{22} Arendt, \textit{The Human Condition}, 9.
\textsuperscript{23} Arendt, \textit{The Human Condition}, 195, 257, 288.
economical, and technological developments. Since the activity of design is certainly the core of the field, architecture is not just understanding the world in spatial terms through its buildings, constructions, infrastructure, and public spaces, but the view is fuelled by the intention to intervene, to improve the situation, and to develop alternative possibilities. Architecture is a profession that has a rich history, and thus looks back on how spaces, buildings, neighbourhoods, cities, and landscapes have been developed, but it also aims to understand what we can learn from these histories in order to move forward and improve situations. This moreover counts for practicing architects: they regularly fulfil the needs of their clients, but always ask how a the intervention they design might contribute to the improvement of a larger patch of the city. What else is design than to imagine how ‘things might as well be different from what they actually are’? Architecture, in other words, depends upon the same human faculty as political action: imagination. It employs the freedom ‘to change the world and to start something new in it.’

26 The challenge for the field of architecture is not to lose sight on the world-in-common, and understand the agency of architecture along the lines of ‘care for the world’, as at once ‘something new’ as well as maintenance and transformation of the world-in-common.27 However, Since invention never is neutral, architects – and all others active in the building industries, from developers to constructors, and from politicians to investors – are challenged to go an extra mile, to present their projects to the world and invite the public to engage with their proposals.

26 ‘Change would be impossible if we could not mentally remove ourselves from where we physically are located and imagine that things might as well be different from what they actually are.’ Hannah Arendt, ‘Lying in Politics’, in: Hannah Arendt, Crisis of the Republic (San Diego/New York/London 1972, Harcourt Brace & Company), 5
The specific contribution of the field architecture to the analysis of contemporary worldly problems is related to this last point. Architecture, as it is engaged in concrete spaces as well as to imagined spaces, embodies the spatial and material dimension of the world, while it is able to engage with spaces (of the past and the future) through the toolbox of texts, models, drawings, and mappings. Architectural reflection obviously starts with the analysis the concrete spaces and concrete objects of landscapes, cities, and buildings and their histories. But secondly, it also can analyze the drawings and models of developers and architects, the masterplans of urban planners, the technical construction drawings of engineers, understand the narratives that are constructed in order design as well as to ‘sell’ the proposals to particular audiences.

This also is the approach that informs the sections that follow: I will focus on the proposal of Sidewalk Labs for the Toronto waterfront, for which I will make use of the published drawings and texts. I specifically will question whether this proposal will cater in-betweenness: does the buildings and the spaces at once bring the inhabitants together, as well as keeping them apart? Can the public spaces be understood as ‘space of appearance’? Which narratives are dominant in this neighborhood, and how has this shaped the building proposals, public spaces, and infrastructures? What is the story that would have ‘conditioned its inhabitants’, if the proposal had been built?

**Smart Cities**

Today, the term ‘smart’ is used in many ways, but regularly it directs to the advanced digital technologies which are used to provide ‘cognitive awareness’ to objects. By connecting to the ‘Internet of Things’, by the use of (big) data and the application of machine learning systems and artificial intelligence, objects acquire a certain ‘agency’. They will increasingly respond
to and interact with human activities. Smart objects are all around us these days: from smartphone to smart thermostats, and from smart light bulbs to driverless cars. Also for cities, there are obvious advantages of these new technologies. Firefighters and taxi drivers more easily find their way in the city. Traffic can be easily redirected in case of an accident or traffic jam. Waste can be collected in time, as the bins give a signal that they’re full. Energy can be saved, if street lighting can respond to the amount of traffic. Crowds can be controlled by CCTV camara’s and other sensors, and with the help of these techniques, it is possible to intervene more quickly when things get too busy, when dangerous situations arise, or in the event of disturbances. Smart cities thus can be defined as ‘cities’ that respond to and interact with everything that somehow impact the functioning of the city: the activities of its residents, the flow of visitors, traffic, and waste, weather conditions, and so on. Anthony Townsend, an American urban planner and writer of the book Smart Cities, describes the smart city as 'places where information technology is combined with infrastructure, architecture, everyday objects, and even our bodies to address social, economic, and environmental problems.' Or, in the definition of Anthony Vives, who is in charge of the application of smart technologies within the existing urban territory of Barcelona: ‘smart cities are cities that are prepared to adequately respond to the quotidian problems faced by the people that live in them, providing the best possible services, the greatest number of opportunities and the best urban solutions possible through the use of advanced technology.’ From both definitions we can conclude that the aim of the application of digital technologies is the better functioning of the city as well as the improvement of urban life of its residents. In the case of existing cities, like in the example of Barcelona, the application of such technologies will be able to rearrange the flows of, for instance, traffic.

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28 Anthony M. Townsend, Smart City, Big Data, Civic Hackers, and the Quest for a New Utopia (New York 2013, Norton & Company, 2013), 15
29 Vides, Smart Barcelona, 10
materials, water, waste, will help with the necessary energy transition, and so on. In the case of new developments, the whole design can be developed according to ‘big data’ and the possibilities of the new technologies to create more safety on the streets, healthier environments, more comfortable living and more efficient mobility.

The intention to improve urban environments, as well as the use of data, nevertheless is not new nor surprising.\(^\text{30}\) It certainly can be described as the essence of the profession of each city builder, architect and urban planner. Proposals to extend or redevelop the city always have been accompanied with ideas about ‘better living circumstances’, the ‘improvement of urban life’, or the ‘protection of public and private properties’. Particularly from the 19th century onwards, changing ideas about private, public and collective life, have impacted urban developments. Moreover, in the 19th century, with the growth of sciences and newly developed survey techniques, the extensive collection and use of data emerged. This, obviously, provided more knowledge of the urban environment, crowd management, and the necessity of fresh air, fresh water and fresh food with regard to issues of health in the city.\(^\text{31}\) Such knowledge, often made visible and tangible by the use of the tool of mappings, had a major impact on the organization of the urban environment, particularly in the ambitions of the modern movement in architecture, which aim was to open up the old, densely populated cities and provide its inhabitants light, air and space. Such ideas and ideals were coupled with and propelled by developments in technology. The invention of the steel frame and the elevator made skyscrapers possible. The escalator impacted the development of the shopping mall. Cars offered residents the possibility to live in the suburbs (or even to become a


\(^{31}\) An example is the 1854 cholera outbreak in London. With his maps wherein he traced the outbreak of the epidemic, John Snow could show that the epidemic did not spread through infected air, but due to contaminated water and food. Cf. Kael Greco, ‘Seeing the City through Data / Seeing Data through the City’, in: Dietmar Offenhuber and Carlo Ratti, Decoding the City. Urbanism in the Age of Big Data (Basel 2014, Birkhauser), 126, 127
(commuter). One thus well can question what the novel is in the development of the smart city, as it clearly is not the intention to develop better functioning cities, more comfortable living circumstances, affordable housing, a more efficient use of resources, and so on. It even is not the strive for a more safe and frictionless urban territory, even though it is this ideal that needs to be challenged. The novel obviously is the expectation to reach this aim through a responsiveness of the physical structures. It is clear that for the smart city, it is not enough to just look to the nice images of buildings and public spaces, but also to the hidden infrastructure of digital networks, which will impact the urban environment increasingly.

Toronto Tomorrow

The development of smart cities evokes a widely shared concern about the issue of ‘privacy’. What if a few private commercial companies (and maybe also some central public bodies) own the networks and acquire the big data that can be harvested from the data of the use of social networks, apps, and the Internet of Things? It enables them to penetrate deeply into the public and private lives of residents and other users. I will not rehearse that discussion at this point, as it already got much attention – particularly in the case of Toronto Tomorrow. I also will not go into the history of the development of this proposal. It has been a rather slippery and un-transparent process, as is already explored by others. Beyond these important issues, I will concentrate on the proposal itself, as I am interested in how Sidewalk Toronto presented this new neighborhood to the public with the help of images, texts, and

I will concentrate on the part of Quayside, as this part of the plans has been developed to the most concrete proposal. What can we infer from the images and texts that are shown to the public? Clearly, for the smart city proposals, it is not enough to simply analyze the images. There is an invisible layer hidden in the plan, a digital network that, according to expectations, will influence the concrete urban spaces. So images need to be understood in line with these expectations. What can we imagine of the promises become reality?

Quayside is squeezed in-between the railroad tracks and expressway and the former harbor of Toronto. A first view on the formal presentation of the project shows a ‘state of the art’ proposal: contemporary ideas on urban development, sustainability and inclusiveness have been implemented in the plans in an exemplary manner. Looking at the parcellation of land, it is clear that the size of the building blocks is based on the surrounding areas. The street pattern, too, connect neatly to the surrounding infrastructures. These streets are not just give room to cars and other traffic flows, but are presented as ‘people-first-streets’, which means that the sidewalks are broad, room for the car is limited and speed is reduced. Some streets are even pedestrians only. The main road, that cuts through the plan area gives room to a series of infrastructures in separate zones: car traffic, public transport (bus lines, a light rail system that the municipality of Toronto is developing), bikes and pedestrians. Lots of trees guide the traffic, and separate the pedestrians from the road structure. In the middle of the plan area, along the central road, the buildings have a medium-height, while towards the Gardiner Expressway and the railway tracks, the buildings become taller. In this way, the tall buildings form a barrier for the noise pollution caused by this infrastructure. The buildings

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are mostly apartment buildings, with on the ground floor room for other functions. These buildings are designed by, amongst others, the London architectural office of Thomas Heatherwick, famous for his design of the Vessel, the viewing platform in the new Hudson Bay neighborhood in New York City, and the Norwegian architectural office Snøhetta, which also is a well-known office around the globe. All buildings will be constructed in wood, and will have large and eye-catching balconies. Constructing high-rise buildings in wood is the newest development in eco-friendly building. Timber is not only a renewable source, it also is possible to recycle the construction easily, in case the neighborhood needs to change in time. Besides this argument of sustainability, the choice for building in wood also is explicitly supported with an argument about the local timber industries, as it will help to sustain these industries and will offer a large amount of local jobs. The ground floors of these buildings are imagined as flexible: functions can change easily – from extra parking lots to giving room to street food vendors, from a community hub to a commercial shop. Large doors can open the façade, meaning to extend the public spaces into the buildings. It is clear that the functions in the plinth of the buildings are supposed to contribute to the liveliness and vitality of the street life. A little harbor is actually the heart of the district. Together with a square in the extension of the harbor, it forms the central public space. The bridges over the water give this area some dynamism, as does the layout of the surrounding spaces, with jetties, ramps, stairs, an amphitheater, lawns, and especially lots of greenery. The mentioned square can be covered by a kind of umbrella-like construction. In good weather, the square can be open, while in bad weather the roof can be closed. Numerous terraces are drawn here, while other images show that the square will offer room to a market, can be used for a festival, or occupied by an exhibition.

The persuading images with which the plans are presented are accompanied by droning texts, entirely in line with contemporary notions of the urban environment: an
emphasis on sustainability, public space, affordability, inclusivity, peoples first, and an emphasis on the social infrastructure. The ‘smart’ parts that were put on the foreground, however, did not seem ground breaking: the previously mentioned parking system that Sidewalk Labs is developing would have been implemented, helping visitors to find a free parking spot, or, if needed, blocking the parking space to give room to pedestrians, in case the public space is overcrowded. The mentioned umbrella-like structure is put on the foreground, not only as a structure that can cover the square, but also, in smaller versions, can be used above terraces. Besides these, Sidewalk Labs emphasizes the use of advanced technologies in order to distribute and control energy, waste, and stormwater in and amongst the different buildings. Of course, the buildings and apartments also would be connected to ‘fast, affordable’ digital infrastructure. The data collection, as is underlined by Sidewalk Labs, would be freely accessible by future residents, to help them improve their lives, as well as used (by Sidewalk Labs) along the lines of responsible standards. It would help the company to offer ‘minimal digital services’ to the residents.37

This network, of course, is the real asset for Sidewalk Labs, not only because of their ‘minimal services’ they promised to provide, but since it would have been the long-term business model of Sidewalk Labs for the area. The company would not only be able to sell the data collected to ‘third parties’ (as critics are concerned), but also to offer room for ‘third parties’ to develop apps specifically for this network and this neighborhood. Supermarkets and coffee corners on the ground floor of the buildings can easily deliver their goods to the front door of the inhabitants ‘just-in-time’ by making use of the network. But this not only counts for commercial ventures, it also would for the ‘public services’, like the collection of waste and public transport. Everything would be tracked and managed through the network of Sidewalk Labs. Ellen Goodman and Julia Powles, who studied the Toronto proposal from

a legal perspective, rightly stress the fact that ‘urban governance’ in Sidewalk Labs’s approach is ‘reconceptualized as facilitating the collection and transmission of data to applications and services’, which promises a certain ‘automated’ responsiveness.38 The real change here, they argue, is that everything in this neighborhood is understood along the lines of services delivered by apps: it is a change from Polis to Bazaar, and from a political community to a community based on transactions.39 The residents are consumers, rather than citizens.40

Public Space, Responsiveness, and the Possibilities of Appearance

Clearly, Sidewalk Labs has done its best to offer a well-thought of urban plan, wherein public space is a central element. The public spaces, after all, are presented as spaces attractive to use: one can wander along the pedestrian promenade, while the amphitheater offers seating with a view on the harbor. The broad sidewalks along the main road invite not only for a quick and functional crossing, but also to stay a bit longer and see what happens around. The square aims attract inhabitants with its continuous program of market, exhibitions, and markets. Many café’s, terraces, and coffee shops offer places to sit for a while, work ‘outside’, and meet friends and relatives (even on rainy and cold days, as mentioned, with the help of heating systems and the umbrella-like structures). The pedestrian spaces are nicely paved with exclusive natural stone and wood, while lots of trees offer shadow on hot summer days. In the images, the spaces are occupied by a variety of users: old and young, families and singles, with a different skin color. This, of course, is not only in line with the famous plurality of the inhabitants of this city, but also emphasizes the ‘inclusivity’ of the

38 Goodman and Powles, ‘Urbanism under Google’, 479
39 Goodman and Powles, ‘Urbanism under Google’, 479
40 Cf T.F. Tierney, ‘Toronto’s Smart City’, 9
neighborhood. It is clear that for Sidewalk Labs, this term has a top priority, as it also is included in the title of the project. No one is against an inclusive neighborhood, of course, but by emphasizing this term, Sidewalk Labs is running ahead of the criticism. Despite that, and despite the affordable housing that is included in the plan, and despite the ‘diversity’ in the images presented, it still looks a lot like other plans in North American cities, including those urban renewal projects where the process of gentrification is fueled by expensive renovations and new exclusive shops.

The designers of Toronto Tomorrow clearly have reworked the already long standing lessons of the Danish urban designer Jan Gehl, who, in his seminal book *Life Between Buildings*, argues that well designed spaces invite visitors to spend more time outside, which possibly leads to ‘social activities’, that is, brief contacts with others present in the same space. These brief contacts, he argues, is ‘the seed for more comprehensive forms of social activity’.41 One gets to know the neighbors in the lobby of the building, other families grouped around the sandpit, the owner the coffee corner (who starts to know your preferences), and so on. According to Gehl, such contacts will help us to establish a ‘confident relationship with the world’: we start to know how other live, work, think, behave, dress.42 He actually opposes this process to the mediated eye on the world (at that moment, obvious dominated by the television): the superficial image of the world one gains via the media, but in reality detached from this very world. His book therefore is a clear plea for quality in public space, to persuade residents and visitors to actually use these spaces and meet one another. As stated, the centrality of public spaces in the Toronto plan, as well as their qualitative design, seem to express exactly this point of Jan Gehl: the persuasion of

41 Jan Gehl, *Life Between Buildings: Using Public Space* (Copenhagen 2006 [1971], The Danish Architectural Press), 15; Gehl divides between necessary activities, optional activities, and social activities in public space. Good design of public spaces should persuade the users to not only go outside, or only stay outside as long as the necessary activity would require. According to Gehl, if the time of presence is extended, by also doing optional activities (being a spectator of a certain scene, for instance), the possibility of social activities increases. These social activities, he defines as ‘depending on the presence of others in public spaces’. (13) ‘Very freely interpreted,’ he summarizes, ‘a social activity takes place every time two people are together in the same space. To see and hear each other, to meet, is in itself a form of contact, a social activity.’ (15)
42 Gehl, *Life Between Buildings*, 23
users to stay, to meet strangers, and to get to know the world. This image is not far away from Arendt’s emphasis on appearance, as it includes the promise that by appearing to one another, reality will unfold. Nevertheless, one can question if appearance is possible in responsive places, where the aim is not appearance and difference, but efficiency, convenience, and safety. It is exactly this what destroys the ambiguity of public space, this possibility to appear in public space from different positions, and through plural forms of engagement, in favor of a consumerist perspective, as Goodman and Powles rightly stressed. Also Arendt was concerned about this changing perspective, as she expressed in *The Human Condition.*

She obviously could not imagine how this image indeed has become even more true in our contemporary society, and in particularly how this perspective affects all aspects of life. But this consumerist perspective also dictates the images of Toronto Tomorrow. The nicely drawn perspectives of the squares, streets, parks, the images of the infill of ground floor spaces and the images of soon-to-be-sold apartments, are full of happy people, enjoying the sun or the sunset, enjoying the good life on a terrace with a cappuccino or white wine, doing some shopping, watching a concert. A variety of functions, physically located on the ground floors of buildings, along the harbor, or even on the water, cater this public life. The public spaces offer multiple nice experiences and opportunities. They seem very attractive. However, the main selling point clearly is ‘leisure’. The public space of the square, for instance, is carefully designed to a single aim: to entertain, to boost consumption.

The real challenge, however, is the hidden layer in the plan, the digital network, which is beyond the physical urban structure, and this promise of responsiveness. This is not really seen in the regular images, but is urged through accompanying diagrams, wherein abstract lines suggest the ‘social networks’, the connection between mobile devices, sensors in street lightning and furniture, WIFI in shops, and so on. It also is described in the adjoining

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43 Arendt, *The Human Condition*, 6, 131
texts full of promises: (public) life intertwined with virtual life. It is this image unique to smart approaches to the city, that steers the design and use of public spaces extensively: the attempt to fulfil demands instantly, to safeguard the spaces, the persuasion of visitors to return frequently. The use of public space (and private space) is tracked with sensors, controlled with camera’s, eased with apps. It is an all-encompassing attempt to make the space responsive to increasing demand. The promise: the space will change if you like. Or better said: if you like it or not, the space will change according to popular demand. The ‘umbrella’ like roofscape once again is a tiny example of this intention: when sensors detect rain or cold, the roof structure is able to close *automatically*. So is the mentioned parking structure: the layout of the street would be able to change, according to popular demand of cars or pedestrians. The square can ‘change’ according to activities organized, from market to festival to exhibition. How exactly this works, and what can be physically changed, is not entirely clear. However, if one looks carefully to the design of the network of streets, pedestrian promenade, and other public spaces, it is clear that all different functions have their designated place in space (and time, as there is the promise of responsiveness and change). It is still the case that, if we look to the main street specifically: the car has its lanes, like the pedestrians their sidewalks, the light rail has its safeguarded tracks, the cyclists their bicycle path, the shops their zone to advertise their goods, and the café’s their terraces. Sidewalk Labs, however, presents these zones as flexible: in moments of less traffic, the streetscape can be divided differently, offering more space for pedestrians or terraces (probably by making use of led-lights which are integrated in the pavement, and which can direct cars to the right lane). In rush hours, it can change to the opposite: giving room to the car, and less to parking or pedestrians. Or at times when the trucks come to supply the shops, special zones can be established for that purpose. This responsiveness sounds terrific, as the street can be used according to demands of its users. First forms of such responsiveness are
the traffic lights that are used regularly: they react to the flow of traffic or are programmed to, for instance, always give way to cyclists. It thus is not first the responsiveness that is the challenge here, but the division of the space in demarcated zones. This follows the line of modernist urban planning and default traffic engineering, dividing the public spaces along the lines of the speed of users. Such an approach obviously reduces moments of dangerous conflict between users. The attempt to increase safety in public space therefore seems reasonable and is accepted widely, but it also restricts the use to particular zones, and the possibilities to appropriate the spaces differently. It indeed is a reduction of friction, as promised, but it also is a diametrical movement in the opposite direction to that advocated by Arendt for public space.

How can we value the promise of responsiveness along the lines of the reduction of friction? Roger Berkowitz, in his reading of Arendt’s *The Human Condition*, refers to smart technologies as a form of the ‘earth alienation’. The increasing control over the world through advanced technologies gives humans the opportunity ‘to make the whole world that we want’. Moreover, we can make it the way we want, again and again, according to our wishes, our wants, our goals. The question here obviously is who is in control: who does decide how the world will change, according to which demand? Would this be simply the majority, or will it be the company that owns the technology? Will there be room to be different, to act differently? How will we understand a world that is immediate responsive to our wishes? Will we understand the world, Berkowitz questions, as ‘abstract, universal, and objectless’? Will we not understand the human activities as activities any longer, but as processes, the world not as a stage for action, but as a comfortable extension of the body.

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45 Goodman and Powles, ‘Urbanism under Google’, 486
46 Berkowitz, ‘The Human Condition Today’, 20
47 Arendt, *The Human Condition*, 323
This brings us to Arendt’s concern about world-alienation too. Public life in the smart city, wherein the public space will cater demands, does not require engagement, initiative, action, it does not allow differences and thus reduces the possibility of appearance. It simply requires thought-less presence and the necessity to be entertained. The image of a functional divided public space which is responsive to demand, as well as a space that is dominated by leisure obviously is at odds with the ambiguity, plurality and freedom that Arendt draws as crucial to ‘the space of appearance’ and the experience of reality of the world. This public space offers an experience, but exactly that: a single experience. Maybe tomorrow another one, as the space can change overnight. But it is an single experience shared with all others present. All experiences, perspectives, views, movements therefore are scripted, tracked and influenced. Control restricts the freedom to enter, and being encapsulated in a script reduces the possibility of appearance from one’s own position, a limitation of the possibility to act and speak, to inter-act with others, to do things differently, to disturb the ideal picture. In leisure space, engagement is limited to the passive, consumerist attitude. Things are reduced to a single perspective, one way to approach them, or one way these things start to respond to the activities of human beings. Even though this might create ‘shared’ experiences (like a festival, exhibition, market), these experiences are not plural, but repetitive. They only can be understood from a single point of view. Vice versa, this approach understands the residents and other users not a plural citizens, but through their necessities. It does not expect engagement (despite the possibility to organize easily collective activities via neighborhood apps), but demand, it does not allow action, but requires ‘good’ behavior. The reduction of public life to scripts, commercial services, and similarities, leads to the loss of ‘reality’. This creates a singular perspective, a superficial community, rather than a common world wherein one can appear from a particular position.

48 Arendt, The Human Condition, Chapter 6
Public life in the smart city, despite its sensational and sometimes even adventurous promise, in the end, might be characterized as being imprisoned in a commercial outlook upon the world.

**Conclusion: More Friction Please**

There are at least three perspectives we might learn from this exercise. First, the smart city, and in particular the aim to create responsive environments, can be understood as the expression of modern political and worldly apathy. Action, and its unpredictability, as Arendt understands the political activity, cannot have a place in such environments. Secondly, despite the claim to offer and ‘inclusive’ environment, these responsive public spaces limit the possibilities of appearance, use, action, disturbances. Therewith, it reduces the possibilities to be engaged in the environment, to do things differently, to initiate new initiatives. It might have strong contradictory effects and be experiences as rather exclusive.49 Finally, these public spaces might attract lots of people, at least the images are attractive. There’s enough to do, to see, to experience. One will come back to see the exhibition, or do the shopping when the market occupies the space. Even on rainy days, the square looks attractive. However, if appearance is limited, these public spaces do not function as an in-between. If these spaces can’t give room to diversity, the two main points of Arendt’s example of the table are missing: the capacity to gather people, as well as to separate them. It is particularly this latter aspect that is missing. Human beings, in this responsive space, are approached as similar, as ‘one’, rather than in their diversity. The world, which regularly provides the in-between, which not only gathers the users but also offers distinction. has lost its capacity to allow ambiguity, plurality.

A sharp response to the promise of a frictionless future was formulated by the Dutch architect Rem Koolhaas. In a 2014 lecture organized by the then vice-president of the European Commission Neelie Kroes he argued that, even if these improvements are presented as ‘apolitical’, we should understand the political nature of it. ‘A new trinity is at work,’ he stated, ‘traditional European values of liberty, equality, and fraternity have been replaced in the 21st century by comfort, security, and sustainability. They are now the dominant values of our culture, a revolution that has barely been registered.’ For Koolhaas these new values are at odds with his image of urbanity. The city, as he has argued in his seminal reading of New York, is about congestion, obstruction, conflict, contrast, chaos, surprise, endless possibilities. However, it is precisely this chaos that is in conflict with the inherent structures of digital networks and the ethos of programmers. After all, ‘to programmers, systems that run smoothly, efficiently, and bug-free is the goal,’ while cities, according to the smart city scholar T.F. Tierney, ‘attain much of their character through dysfunction; their randomness inspires improvisation.’ The technological aspect of smart cities obviously is a challenge, but what first and foremost needs to be rethought is the ideal of a safe, healthy, comfortable, and efficient public space. I tend to agree with the political theorist and sociologist Maarten Hajer and Arnold Reijndorp, who in their investigation in public space, urged for ambiguity, differences, the possibility for liminality, marginality, and mobility. More friction please.

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52 Tierney, ‘Smart City Toronto’, 13
53 Maarten Hajer and Arnold Reijndorp, In Search of New Public Domain (Rotterdam 2001, NAi Publishers), 130
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