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Photo essay



Expo 67 on repeat

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In *Ghosts of My Life* (2014), the late cultural critic Mark Fisher elaborated on the critical theorist Franco 'Bifo' Berardi's notion of an era characterised by a 'slow cancellation of the future' where the future is understood as the psychological perception of the future (Berardi, 2011). Fisher set up a thought experiment: if a popular music album was magically transported ten years back in time, how would people react when they heard it on the radio? His argument is that up until 1995, people would be shocked if confronted with music from ten years in the future. However, a person in 1995 confronted with music from 2005 would probably shrug and think it was just another new album. He noted:

Invited to think of the futuristic [music], we will still come up with something like the music of Kraftwerk, even though this is now as antique as Glenn Miller's big band jazz was when the German group began experimenting with synthesizers in the early 1970s.

(Fisher, 2014)

Borrowing this thought experiment, we could ask: if the visualisations of smart cities were transported back to the 1960s – what would people think?

The following visual essay concerns itself exclusively with the visual representation of the smart city and how this compares to a specific event in history: Expo 67 in Montréal.

At first glance, such an approach may seem both arbitrary and superficial, so before getting started I will explain the reasons behind it. It may seem arbitrary since we are picking one moment in history and constructing a comparison with the present: why this point? The late 1960s was, as the architectural theorist Douglas Murphy sums it up, a period of rapid societal transformation, when the radicals and progressives found themselves in charge, and when 'changes in the very patterns of life were possible', even inevitable, and the future was up for grabs (Murphy, 2016, p. 1). It was a pivotal moment of tension between state narratives of national progress and social struggles for civil rights and against colonialism and consumerism. Arguably, Expo 67 could even be considered Modernism's dying breath, right before postmodernism, before the oil crises, before the 1968 student uprisings. We are now, perhaps, standing at the other end of what we could call a postmodern impasse, but now it is the postmodern condition that is called into question by the exuberant advocates of smart city futures. Comparing the two moments is relevant for trying to determine what kind of futurism the smart city is through the kind of life it promises.

My approach may seem superficial, as looks can be deceiving – but they can also be revealing. I would argue that this is especially the case when they are a support act for a technological solution, as they show how technology is intended to function in the lifeworld of the city's inhabitants. The smart city remains an elusive concept; almost every paper on the subject starts out with a tentative definition, which is not necessarily the same from one moment to the next. The point of identifying the visual aspects of the smart city is to try to understand what kind of city all the exuberant discourse on the smart city aims to build. Smart city proposals are regularly accompanied by a rhetoric with echoes of the futurism of the Expos, and, if one looks closer, by remarkably similar physical structures. To – literally – illustrate this point, I have selected three different

structures prevalent in smart city imagery that seem to directly echo Expo 67: the geodesic dome, expandable architecture & monorail.

The Geodesic Dome



Originally invented in Jena in the early 1920s, the geodesic dome came into widespread use after WWII, when it was popularised (and patented) by Richard Buckminster Fuller. As a symbol for a new society, it was never straightforward. The geodesic dome was an integral part of the DEW – Distant Early Warning – system in the Arctic, where radar stations protected by lightweight geodesic domes served as part of the US Army’s nuclear stand-off with the Soviet Union, and consequently became associated with the military-industrial complex [Image 1].

At the same time, its spheric form reminded a generation that had encountered the Earth as a sphere for the first time (a photograph first published on the cover of *The Whole Earth Catalog* in 1968) of our planet. Fuller developed this into his concept of Spaceship Earth: we are all stuck on the same spaceship hurling through space in a precarious existence. The geodesic dome itself consisted of many individually weak links that came together into a strong structure by distributing loads onto the many links. In this capacity, the geodesic dome inspired a generation of countercultural activists in the 1960s, who wanted to leave the wastefulness of consumer society behind, and who set out to build dome communities, most famously in Drop City, Colorado [Image 2].

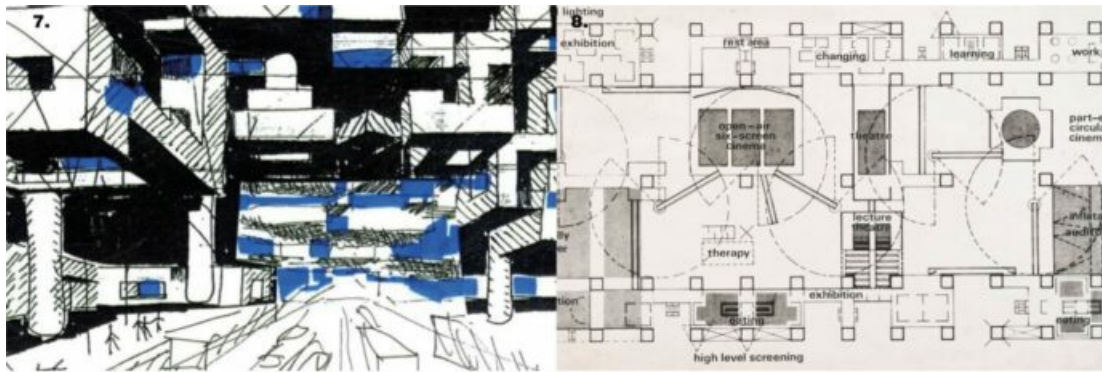


The dome at Expo 67 [image 3] was part of the US pavilion 'Creative America', further emphasising the structure's association with the superpower and its arguably imperial ambitions around the world. The dome at the Expo was, in other words, very much a potent exponent of state power and technological superiority. Fuller's original proposal contained a smaller dome, The World Game, a twin of the earth showing shipping channels and natural resources that could be 'played' to achieve greater resource efficiency (Murphy, 2016, p. 29). The model would have responded to the players' proposed changes in ways that surely are familiar to those currently developing digital twins to cities.

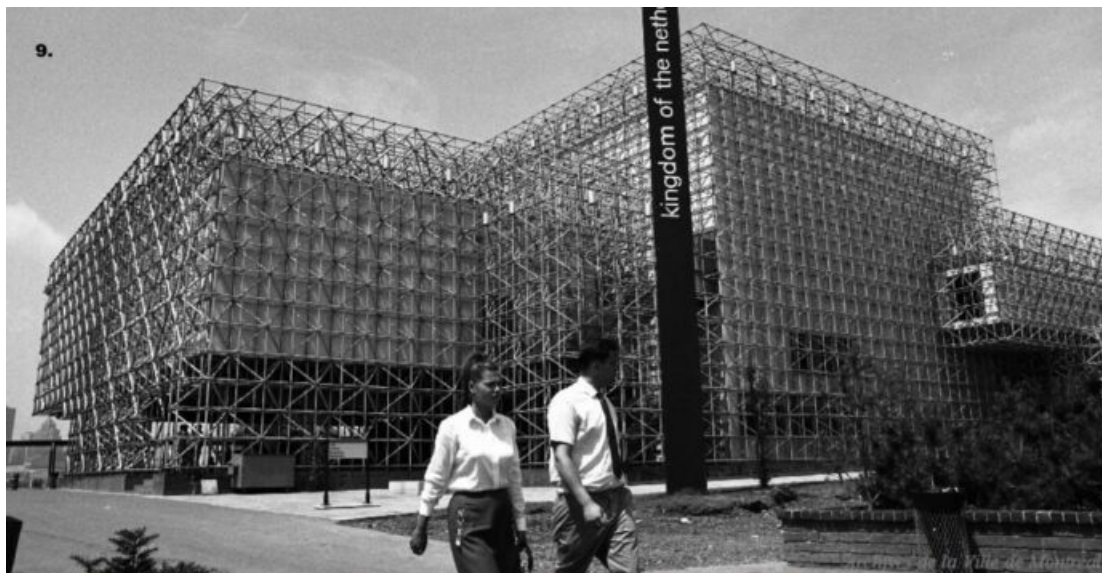


The geodesic dome appears to have lost none of its power to wow and inspire [Image 4, 5, 6]. The structure is surprisingly common in visualisations and as a symbolic structure signalling the (near) arrival of the smart city, not least in the Dome of Visions [Image 5]. In the Dome of Visions, the structure becomes an arena for discussion and for showcasing various images of the future, but the most futuristic structure is presumably the dome itself. In a design fiction on the smart future of Stockholm, the geodesic dome is imagined as a technological community hub where people come together over (as opposed to through) technology [Image 4]. In another instance [Image 6], the dome becomes the symbolic and functional object uniting nature and technology in a giant greenhouse. The geodesic dome is no longer associated with state power or counterculture. Rather, its association appears to be with a neutral yet enticing space for interaction and innovation. The structure has changed somewhat: the steel links have become glulam, but its message is still connected with the bright future. Sometimes, it is a symbolic structure in visualisations; in other instances it is a utilitarian structure exuding futurity discreetly in the background. Either way, it seems as if the geodesic dome remains the primary symbolic structure of the brighter tomorrow.

Expandable architecture



Industrial production was made increasingly efficient during WWII, and the idea to bring modular production into architecture entered architectural discourse in different ways. Eero Saarinen's campuses for General Motors, IBM, etc. were all part of a modular logic; the curtain wall on skyscrapers was equally modular, and in California, the Eameses developed their Case Study House as an industrial product rather than architecture in the traditional sense. In the 1960s, the modular logic of serial production encountered the structuralism of linguistics as developed by Saussure and others, and architecture developed its own version of structuralism. No longer finite, architecture became viewed as a system of parts that interacted and could evolve over time instead of being perceived more traditionally as a 'work' or in the modern sense of a 'machine'. Consequently, the architect would focus on the logic of the system rather than the shape of the built structure. The space frame was perhaps the most common exponent of this. Among the more famous examples are Yona Friedman's 'Ville Spatiale', where inhabitants could move around their capsules in the three-dimensional structure suspended above the old Paris [Image 7], and Cedric Price, Joan Littlewood and Gordon Pask's unrealized 'Fun Palace', a building that would change according to the desires of its users with giant cranes that would move the modules into new configurations on a daily basis [Image 8].

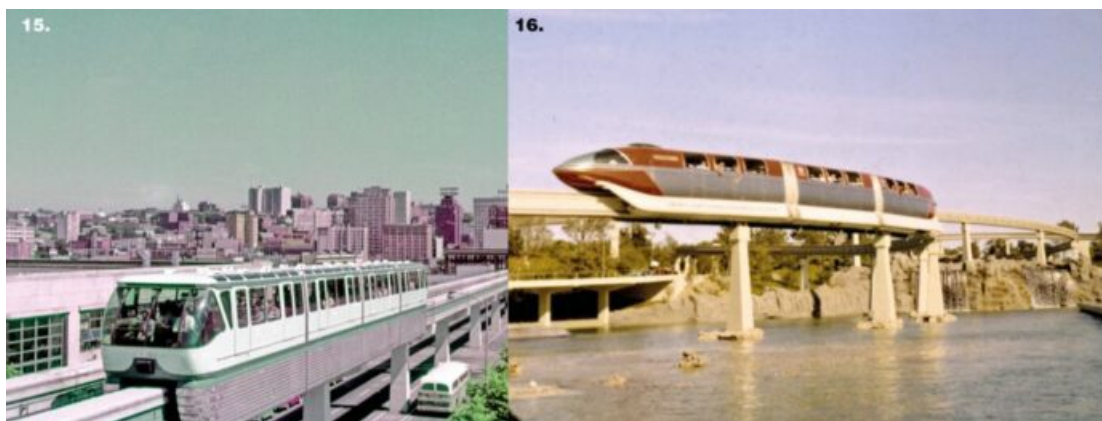


At Expo 67, several structures appeared to follow the logic of systems and architectural structuralism. The most famous one is doubtless Moshw Safdie's Habitat 67, a government-funded project that promised the future of housing, where each unit would have a similar amount of outdoor and indoor space (Weder, 2008). The Habitat seemed able to grow organically over time according to the will of its residents. Following a similar logic, the Dutch pavilion, designed by Wout Eijkelenboom, had a shell of aluminium tubing that equally signalled the expandable logic of the space frame.



Perhaps unsurprisingly, the smart city is portrayed with its own share of adaptable architecture, architecture designed to be perpetually unfinished in a sort of beta-mode. The promise is roughly the same: freedom (to adapt the material world to one's needs and desires) and affordability (through modular serial production). In the now cancelled project headed by Alphabet, Sidewalk Toronto, many visualisations depict transformation, either by cranes or people simply adapting their environment to their desires [Images 11, 12 & 13]. The structures shown in elaborate architectural renders have beams and posts jutting out, hinting at future additions. As in the case of the dome, there is a material alteration: the metal or concrete framework of the Expo's spaceframe is now constructed in laminated timber. In other visualisations, existing buildings are extended and updated through additions either placed on top or hanging outside the individual flats' balconies in a seemingly *ad hoc* fashion [Image 14].

Monorail



Nothing exudes futurity like a monorail. Numerous world fairs were equipped with

elevated trains to move visitors around: in the 1960s, the Seattle (1962) [Image 15] and the New York (1964) world fairs were two examples, and a few years earlier Disneyland had inaugurated its own monorail [Image 16]. There is something luxurious about the monorail; the elevated perspective makes it an attraction itself, it is not just a means of transportation, but a ride. Various expos since have continued to build monorails in different forms.



The Expo 67's version was called Minirail (it was not technically a monorail since it had two tracks) and had two lines, yellow and blue. Through this, the visitors of the Expo would pass by or through pavilions of different nations [Image 17].



In the smart city, the monorail has become the public transportation system of choice among proponents wishing to materialise the frictionless city of flows. In addition to being a ride, it is now a symbol of the perfect perpetual motion, fetishised by being raised above the ground for everybody to see. The monorails of the smart city may be individualised [Image 18], or part of the public transport system [Images 19, 20], but they are placed conspicuously prominently in the urban environment. To an extent, one may argue that it is no longer about those riding it, but more about showing the city's never-ceasing movement. The monorail becomes a little like a horizontal version of the glass elevators of postmodern hotels, which provide a spectacle for the observer and become 'emblems of movement proper', to borrow a turn of phrase from Fredric Jameson's seminal analysis of the Westin Bonaventure lobby and its glass elevators (Jameson, 1992).

Concluding remarks

The adage 'plus ça change, plus c'est la même chose' seems apt – while the world has changed politically, technologically, ecologically, socially and on every other level, the vision of the happy future remains surprisingly static. The 'slow cancellation of the future' that Berardi talks about seems to have claimed futurity itself as its first victim, and the geodesic domes, the expandable architecture and the monorails are futuristic in the same way that Kraftwerk's music remains our definition of futuristic music.

We can find different concepts for this seemingly ubiquitous condition: *the future of nostalgia* – explored by Svetlana Boym – where nostalgia becomes a romance with one's own fantasy of how the future used to be (Boym, 2001), or *retrotopia* – discussed by Zygmunt Bauman – as a post-post-utopian desire for freedom and stability (Bauman, 2017). In these cases, the visions make a knot of past and future in ways that contradict the

straight time-line of Enlightenment.

Yet, in the case of the smart city, a nostalgia for a bright future is not tied to the past *per se* – the architecture of the exhibitions was never realised on a broader scale – but only to the *futurity* of the past. It is the very desire for a vision that is expressed through nostalgic means rather than a vision proper. In this sense, the smart city's repetition of Expo 67 is not a direct repetition of the 'futurism' expressed, but something else.

This futurism becomes something of a *pastiche*, understood as 'a "blank parody", without satiric impulse, of the styles of the past' (Anderson, 1998, p. 61), just as Kraftwerk would be a pastiche of futures past if their songs were produced today. In that sense, the smart city visualisation is not so much futurism but a representation of futurism, a 'blank parody' of futurisms from 'the museum of the future', a thoroughly postmodern futurism, beyond the metanarrative of progress we make images of previous expressions of progress.

References

- Anderson, P. (1998) *The origins of postmodernity*. London: Verso.
- Bauman, Z. (2017) *Retrotopia*. Malden, MA: Polity.
- Berardi, F.B. (2011) *After the future*. Edited by Gary. Genosko and N. Thoburn. Edinburgh ; AK Press.
- Boym, S. (2001) *The future of nostalgia*. New York: Basic Books.
- Fisher, M. (2014) *Ghosts of my life : writings on depression, hauntology and lost futures* Winchester, UK: Zero Books.
- Jameson, F. (1992) *Postmodernism, or, The cultural logic of late capitalism* Durham: Duke Univ. Press.
- Murphy, D. (2016) *Last futures: nature, technology and the end of architecture* New York: Verso.
- Weder, A. (2008) 'For Everyone a Garden | The Walrus'. Available at: <https://thewalrus.ca/for-everyone-a-garden/> (Accessed: 27 September 2021).

Images

Image 1: DEW radar station. Point Lay Base, Alaska, 1982. Photographer: Tech. Serg. Donald L. Wetterman. Courtesy of National Archives

Image 2: Cover of Steve Baer's Dome Cookbook, 1969. Courtesy of Wikipedia.

Image 3: Expo 67 Montréal (cropped). US Pavilion in the background with Buckminster Fuller's Geodesic dome. Gordon Beck & McGee, 1967. Courtesy of Archives de la Ville de Montréal.

Image 4: "Techgård", partial illustration from the brochure "Welcome to the Smartest City in the World", 2016. Courtesy of Stockholms stad

Image 5: "The Dome of Visions", KTH Stockholm 2015. Photograph by I99pema. Courtesy of Wikipedia.

Image 6: Plantagon green house, illustration probably by Sweco. Copyright unknown. 2012.

Image 7: Image from Yona Friedman's project "Ville Spatiale", *Study for Huangpu River Centre, Shanghai*. Courtesy Fonds de Dotation Denise et Yona Friedman

Image 8: Cedric Price, 'Fun Palace: Typical plan' 1964. The circles in the plan indicated the reach of the cranes moving parts around within the 'palace' reconfiguring its structure. Courtesy of: Cedric Price fonds, Canadian Centre for Architecture, Montréal. © CCA

Image 9: Pavilion of the Netherlands (Cropped). Photograph by Yvon Bellemare. – 1968. – Archives de la Ville de Montréal. VM94-EX136-167. (CC BY-NC-ND 2.5 CA)

Image 10: Habitat 67 (Cropped). Photograph by Gilbert Ouellet. – 1967 – Archives de la Ville de Montréal. P123_1P007 (CC BY-NC-ND 2.5 CA)

Image 11: Sidewalk Toronto. Visualisation from 2017 (Cropped). Courtesy of Sidewalk Labs

Image 12: Sidewalk Toronto. Visualisation from 2020 (Cropped). Courtesy of Sidewalk Labs

Image 13: Sidewalk Toronto. Visualisation from 2020 (Cropped). Courtesy of Sidewalk Labs

Image 14: Image from the design fiction project “Welcome to the Smartest City in the World”, 2016. (Cropped) Courtesy of Stockholms Stad

Image 15: Century 21 / Seattle World’s Fair. Alweg Monorail Train. 1962, Morley Studios. Courtesy of Seattle Municipal Archives

Image 16: Disneyland monorail, opened in 1959 (Cropped). Courtesy of Orange County Archives

Image 17: The minirail at Expo 67, photo by Bill Engdahl, 1967. Courtesy of Library of Congress

Image 18: Skycab from the Swedish company with the same name (Cropped). Image courtesy of Skycab.se

Image 19: Cover image from the report “Plusstaden” (Cropped). 2020. Courtesy of Sofie Stenberg AB / Statens offentliga utredningar

Image 20: Cover image from *Magasinet S* (Cropped) (published by the Swedish Standards Institute). © Jakob Dahlström, 2017.

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