Urban Ramblings

Divagações urbanas

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Abstract

Cities will transform and morph into something completely different for the next generation. Just as the car replaced the horse, the car will shortly be replaced, because of fossil fuel, and with, it the road system that exists in towns and cities everywhere. The high street is also under stress as more and more of us use on-line shopping, meaning that they are littered with second-hand shops and coffee take-away. However, cities are popular and will continue to grow, especially as more and more people are displaced due to climate change and weather disasters. The following is a rambling through these thoughts about what might just happen.

Resumo

As cidades se transformarão e se transformaram em algo completamente diferente para a próxima geração. Assim como o carro substituiu o cavalo, o carro será substituído em breve, devido ao combustível fóssil e, com ele, o sistema viário que existe nas cidades em todos os lugares. A rua principal também está sob pressão, pois cada vez mais pessoas usam compras on-line, o que significa que elas estão repletas de lojas de segunda mão e café para viagem. No entanto, as cidades são populares e continuarão a crescer, especialmente à medida que mais e mais pessoas são deslocadas devido às mudanças climáticas e aos desastres meteorológicos. O que se segue é uma divagação através desses pensamentos sobre o que pode acontecer.

Palabras clave:
Ciudades,
Cambio climático,
Resiliencia.

Resumen

Las ciudades se transformarán y transformarán en algo completamente diferente para la próxima generación. Así como el automóvil reemplazó al caballo, el automóvil pronto será reemplazado, debido al combustible fósil, y con él, el sistema de carreteras que existe en los pueblos y ciudades de todo el mundo. La calle principal también está bajo presión a medida que más y más de nosotros usamos las compras en línea, lo que significa que están llenas de tiendas de segunda mano y café para llevar. Sin embargo, las ciudades son populares y seguirán creciendo, especialmente a medida que más y más personas sean desplazadas debido al cambio climático y los desastres meteorológicos. Lo siguiente es una divagación a través de estos pensamientos sobre lo que podría suceder.

Urban Resilience

Urban resilience is a strange phenomenon, and I was challenged at a workshop, with the argument: Why are we fixing the fallout, and not tackling the problem? …and it is indeed a very strong argument to resist, the tenet being that without addressing the cause, it leads to a bottomless pit where we will all perish. Nevertheless, the problem will not go away, the Dutch, who live below the waterline, but who manage the problem with dikes, and slave masters who monitor and adjust water levels, as and when necessary, acting like Gods, most prominently promote it.

Resilience is the ability to cope in a crisis with the capacity to recover quickly. Urban resilience therefore is the ability of cities to withstand the harrowing weather disasters befalling us in rapid succession. Whether it is heat waves, hurricanes, flooding or rising sea levels, and devastating results are occurring and needs addressing.

Copenhagen has seen many projects realized where there is a dual function to the building, meaning an underground carpark can become a rainwater retention reservoir in times of flash flooding. Previously, a flashflood overwhelmed the sewage system, causing the manhole covers to be blown, which caused raw sewage to be floating around. This caused an Ironman race to be cancelled the next day when the swimmers all got e-coli bacteria poisoning after diving into the sea.

Figure 1. St Annæ Plads, the lowered central boulevard doubles up as a rain collector in flash flooding.

So, a good example of dual usage is St. Annæ Plads, in Copenhagen, where a former street parking area became an attractive green tree-lined boulevard, where the central part is lowered with regard to the pavement levels so that in times of rain the water is channeled to the central area and away from the houses. Should the weather escalate the end of the boulevard is furnished with a three-storey underground car park, so that the excess rain can be contained in the sunken cavern, until other arrangements can be made to drain it off.
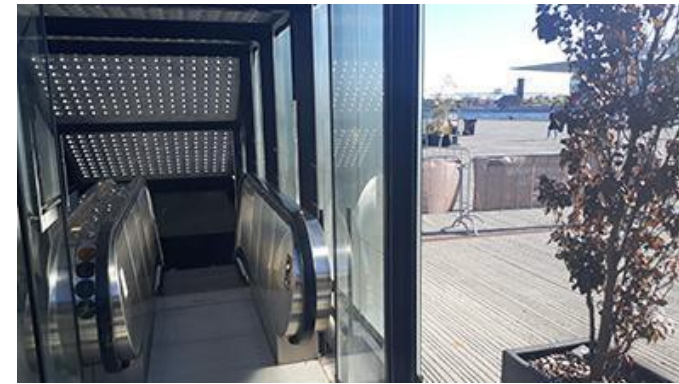
Figure 2. Ophelia Plads, a three-storey underground parking garage, which doubles into a torrential rain reservoir.

Figure 3 Copenhill (Amager Bakke) by BIG Architects. A Waste-to-Energy Plant with roof top artificial ski slope.

Copenhill (Amager Bakke) is another good example by BIG Architects, where a 41,000 m2 Waste-to-Energy Plant doubles as an artificial ski slope, which for a relatively flat country is suitably appealing (Denmark has no ski slopes whatsoever). The roof acts like a mountain with green forestation, a hiking trail, climbing walls, with a viewing plateau and café at the top. There are ski lifts and various types of slopes, with jumps and training facilities, just like the real thing.

Urban Development

Looking at a city, such as Como in northern Italy, the 30-minute rule applies, as it is the time a person is happy to commute from home to work in the morning. With the advent of the automobile, this 30-minutes commute expanded the scope of home and work locality, and this expanded cities and urban areas. The intimacy of the old medieval city reflects on the eye-object contact that is necessary to establish communication.

Compared with how this translates or scales-up means that to catch the attention of the subject on a highway means resorting to in-your-face statements, best captured by Robert Venturi, Denis Scott Brown and Steven Izenour (1972) in Learning from Las Vegas. It addresses the cognitive communication between drivers and their passengers with their locus genii, best described as a monument or a decorated shed. In essence, Venturi claimed that in order to attract attention the objective became bigger, because the attention span becomes shorter due to the faster passing locations. This meant that large poles with a single letter or a petrol dealer logo, pin the next burger stop or pit-stop along a motorway, or that larger than life billboards entice you off the motorway to an otherwise missed opportunity, whether it is an outlet or a mall, a picturesque beauty-spot, or a heritage property.

Horses in New York

Back in 1898, there was a conference in New York, where delegates from across the globe met for an urban conference. The issue of the day was horse manure in an urban context. It was unsanitary, a nuisance and a problem as urban developments expanded at great pace. Two decades later the automobile vanquished this planning nightmare and was hailed as an environmental savior. (MORRIS, 2007)

In a question by Stephen Fry (2020, online) to QI panel on BBC Fry asks:

> How did the horses of New York City kill 20,000 people, in the year 1900?

The ensuing dialogue was the following:

> [In] London and other places, taxis and buses were all pulled by horses. And there were, in London alone, 50,000 horses just in the public transport system. And each one of those produces an enormous amount of poo (manure). New York City (alone produced) - 2.5 million pounds (1.1m kg) of it, every day. It was becoming an epidemic problem.
>
> Not only was there that problem, they (the horses) were also dying. About 41 a day (NY), on average, died while working in the streets and they preferred to leave them to putrefy, because they were easier to carve up and destroy…
>
> …It's about seven times more dangerous to have horses in the city than the car, just statistically speaking. (FRY, 2020, online)

Before the advent of automobiles, the equine (horse) trade had a plethora of support industries supplying and serving the splendid beast. Saddlery was a bespoke industry supplying handcrafted saddles to all and sundry, covering both gentry and everyone who needed a horse. There were bridlers and blacksmiths, all in service, and ultimately hitching posts for stagecoaches to reload horsepower and replenish travel-weary passengers.

All changed with the advent of the all-conquering automobile, the leather workers moved on to factory assemblies, producing leather seating and trims. Blacksmiths diversified into metal works. Hitching posts became petrol stations and roadside eateries. The ultimate insult, Bugatti reduced the symbol of the horseshoe influence, into its logo of its radiator grill.

Autonomous Mobility

Today and we are increasingly seeing companies such as Uber and Lyft providing a service where it is possible to drive without having to own a car (SWISHER, 2019). In addition, cars and electrical scooters litter city-landscapes where through an app. access can be gained and once the journey is complete, the vehicle can be abandoned again. Sooner than you think, car ownership will disappear as these methods become cheaper and more accessible. Kara Swisher (2019), writing for the New York Times says:

> Owning a car will soon be like owning a horse – a quaint hobby, an interesting rarity, or a cool thing to take out for a spin on the weekend… But the concept of actually purchasing, maintaining, insuring and garaging an automobile in the next few decades…

The fact that she confines the horse to history, as a quaint thing for weekends, dressage, racing, and a trip to the country, consigns the once great beast of war to the rubbish heap. In the First Word War horses cascaded over the battlefields, only to be mown down by the ubiquitous machine gun. In the Second World War, the French cavalry were useless. The horse's time was up. She sees this as being the same for petrol heads, the weekend only, removed from the day-to-day chaos of life.

She writes that car ownership is actually declining and points out how quickly we have adopted map-apps over physical maps, snail mail to e-mail and watching on-demand to prime time TV. The same happened with landlines and mobile phones. There is even a nod to declining retail shopping being replaced by online shopping and the quick delivery pioneered by Amazon. This too has a huge bearing on the high street and shopping malls and by consequence how our cities will survive, as we know them.

Car-sharing services is also a small step towards a carbon-free life and with removing 80% of stationary cars off the streets brings street-life back to center stage. The street will prevail but with a new lifestyle. More radical will be the movement away from four wheels to airborne drones. Already the technology is in place to avoid crashes with auto braking systems installed on front window screens. Human error is removed to a degree. Driverless units are also making inroads into how we travel.

Cities will rise to accommodate the influx of city dwellers. A new infrastructure will also be required to control and govern the apparent chaos that might ensue from our perspective today. How will these flying taxis avoid each other and how will it all be marshalled.

If this semiotics fail to their purpose, then the object itself must be put on steroids, becoming either a caricature of itself or a demarked monument to why it is there. This can best be seen in the SITE warehouses of the seventies, which were Post-Modern jokes, for want of a better word. The first time seeing a building being deconstructed by the entrance being a brick corner moving out when it is open and

being pushed in to close the store is funny and smart the first time and maybe the second time, but the tenth time the effect is wearing off.

The ever-expanding road networks that encompass most cities today, is the product of meeting the expected needs of automobile traffic growth. Nevertheless, significantly within this period pedestrianized city centers and historic quarters have become oases, marking out a difference within this sector, both legitimizing it and condemning it in equal measure.

> The car is not the enemy… (it) is the inefficiency of car ownership, where the resource sits idle for hours on end, hogs precious space and more often than not, moves only one person at a time. (HEIKKILÄ, 2014, online)

Moreover, auto manufacturers are becoming aware that car ownership is and will decrease, with the next generation preparing to not only not own their own house, but maybe also their own wheels. Within their orbit, the manufacturers wish to increase the average usage of a car from its current 5%, to a still pathetic 7%. (ROSSANT; BAKER, 2019)

By owning a car, the owner acknowledges that it loses value before the ignition key is turned in the showroom, and throughout its life will need feeding, parking; sit in static queues or be idle for up to 80% of its life outside on the driveway or in expensive city parking houses. Many are challenging such a predicament where we see App´s that allow cars, which are available in many urban areas to be used and dropped as, and when needed. Therefore, the ownership is removed but the service is available. Electric scooters (where tolerated) and urban bicycles play into this scenario and are popular by both young urban revelers and tourists.

In the medium term, as this becomes more mainstream the number of vehicles on the road will decrease. This could be as little as 20%, and if it were to happen, would change the urban landscapes and the very purpose of the street. Streets would become facilities again rather than be territorially in the realm of the vehicle. They could host activities, provide spillover spaces, and bring more green vegetation into our cities.

In the longer term, drones, meaning that rubber on asphalt will disappear, providing a big reduction in carbon emissions, might/will replace cars. This brings Luc Besson's epic file The Fifth Element into perspective.

Servicing

Anything as a Service (XaaS) is something that is licensed on a subscription basis, providing an on-demand cloud service. It is something being presented to the user as a service. This "X" can be interchanged for many differing letters, each identifying a unique IT domain. These include "A"; API's, "B"; Big Data, "K"; Knowledge, "M"; Mobility, and "P"; Platform, to name just a few. Essentially, they are all cloud services used as and when needed. Some see them as expensive, as it is a repeating subscription, whereas buying software was a capital one-off cost, but when critical mass is reached, it enters a new world of being a true indispensable service, or so, should we hope.

Most importantly, the service is not owned, it is not bought off-the-shelf software or finished a custom-made bespoke item that is history before it is even first deployed. The benefit to the user is that it is always up-to-date, used only when needed and always available no matter where the user is (a benefit of cloud computing).

Furthermore, they can cache numerous differing sources, to give a complete fuller picture, not dependent on a single source or stream, and this is where their majesty appears especially in mobility. Currently a person might have a monthly commuter ticket for the train, buy one-off tickets for the bus, pay for taxis when used, rent a city bicycle or an electronic scouter, all separately. Imaging an App allowing all these things from on single central source on a smartphone.

Image credits amassing points to hire a Maserati, or a drone-taxi to the airport, or even air travel to other jurisdictions, where it was usable in New York or Boston (England), and a truly new paradigm emerges. Imagine the Push/Pull possibilities and the concept explodes. Differing pay-plans would allow differing scopes to suit the users' requirements.

Mixed Reality

Retail fashion and cosmetics are going through a minor revolution these days with magic mirrors. This is a form of augmented reality, where the person before the mirror can see their mirror image augmented to promote a product. Typically, a person picking up a lipstick magically sees the precise hue of color reflected on their lips. Changing from crimson red to frigid pink happens before their very eyes, just by touching the trial tubes. Picking a silk blouse from the cloths rail magically transposes the blouse on to the person in their size, one click away from a purchase.

Taking a child into a Lego store is no-less also undergoing a seismic change. Children have no problem taking packages off the shelf, holding them under the camera/sensor above the monitor, only to see the contents of the box magically built before their very eyes in a mixed reality experience. Parents look on aghast, while the kids get it straight away.

Both these virtual realities are slowly making their way into our homes and about time too. Already products can be transposed into settings, such as an armchair placed in a room while the various colors and features can be evaluated before buying. IKEA too is moving its assembly manuals to an augmented reality app, which locates the flat pack in the room and step-by-step shows how to assemble the chest of drawers or whatever, in place, paying particular attention to difficult or not obvious details. (MORBY, 2018)

Also in Construction, smart hard-hats (those with a visor), on to which project information can be displayed (via a dashboard) or augmented virtual modelling can be placed into their position in real time are now available. (LOREK, 2018) On a lessor level, hand-held devices can perform the same tasks and either by using QR codes or barcodes can retrieve relevant information to relevant tasks at the source of the problem. (BSI-GROUP, 2017) "Spot", the robotic dog, happily goes around a building site recording the scope of work at designated times. This means the progress of the site can be gauged and managed, reporting that we are on schedule or behind.

Laing O'Rourke (2020) when commencing the Leadenhall Building, London, commissioned a model of the building. They used multi-dimensional BIM technology devising an innovative construction approach. Therefore, they were able to achieve early design co-ordination, needed to meet such a challenging program It was also a difficult site, in the middle of the city, with restricted street access. Being 224m high and with 83% of the work happening off-site, the logistics of site establishment and co-ordination became program critical. The team used BIM to perfect just-in-time assembly.

Foundation Louis Vuitton is a new museum by Frank Gehry in the Bois de Boulogne in Paris, commenced in 2006 and completed in Oct 2014 for $143 million. In its procurement, three models were deployed: a design model to develop the design, a

contractor (real-time) model fleshing out details and a high-fidelity model, blending the two formers, while providing life-cycle information for the owner in the building in-use (lifetime) phase. In the same article, Andrew Witt (in BUFFA; EASTMAN, 2014, online) of Gehry Technologies went on to state:

> One of the objectives of the project was to create a 3D process that was for everyone to be involved. People that came on board to work on it, knew in advance that 3D was a major component for the whole process, and for those that did not have a 3D capability, Gehry Technologies had the role to consult in either training them and also to support this overall cultural change. Gehry Technologies not only provided technical support, but also helped build up a relationship of trust among the teams.

The structure can be divided into two parts; 11 exhibition galleries, encapsulated by 'icebergs' rising up into the firmament, which were then crowned by 12 billowing glass sails, forming a transparent cloud above the solid objects, which are elegantly held in place by a masculine glulam pivotal structure, so that the whole ensemble reflects on the surrounding parkland, demarking the site and forming a gateway to the environs.

Coen van Oostrom (2016), a realtor in the Netherlands, wanted to develop the world's best sustainable building, according to the BREEAM rating method. BREEAM measures sustainable value in a series of categories, ranging from energy, health and wellbeing, innovation, land use, materials, management, pollution, transport, waste and water. Previously he claims, there was a building in London, which reached a 96% rating. (BREEAM, 2019)

His client, a well-known firm, Deloitte and the building "The Edge", is situated in Amsterdam. It has over 32,000 sensors measuring occupancy, lighting, temperature and air quality, and is connected to your smartphone via an app, so that it can see who is where and when. This means that they could reduce 4,000 workspaces to 2,000, based on your schedule, ranging from sitting-desk, standing-desk, work-booth, meeting-room, balcony-seat or concentration-room. It also knows your preference for light and temperature, and it tweaks the environment accordingly. (RANDALL, 2015).

Conclusion

Cities are changing, have always transitioned and will continue to develop, of that there is no doubt. What is in question is just how much and to what degree? Location is probably the only constant, but with rising sea levels, issues of car ownership and climatic influences, cities will definitely need to adjust to the status quo. Cities' relevance and authority also go through phases with Rome being replaced by London, being replaced by New York, giving a feeling of this. Cities are also expanding, whether through emigration, natural resources or necessity, and this is a catalyst for why we want to live there or gravitate towards them. The streets are about to be reclaimed, and the swaths of asphalt could be ending. Streets and public squares can become green oases and offer places to recoil from the hammerhead of city life.

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