Reflections On The Right To The City

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The notion of the right to the city comes from the French Marcel François Lefebvre but, if I wanted a one sentence quote, I would prefer David Harvey's, which states that the 'right to the city is the right to remake, to transform the city and be transformed in it by ourselves'. In return of that how do we make the city and how does the city remake us? In my opening keynote I want to talk about some of the responses to the pandemic but also about some of the threats that loom on the horizon in the post-pandemic city. Doing so will hopefully set the stage for conversations about possible interventions, and where do we choose our points of leverage in which to remake the city.

I was in New York just last week for the first time since the pandemic. I emigrated to Montreal in 2019 after living in New York for 20 years, where I stayed in Times Square. That place was one of the familiar images from across the globe, particularly in March 2020, where saw shutdowns and stay-at-home orders. There was an entire discourse whether cities were over as we knew it. Even though being an American, at the moment staying in Canada, my data sets and points of reference come from there and of course this was one of the challenges of the pandemic: we were all isolated. We anticipated dense migration from cities will accelerate, and the people will we all flee to the countryside and use zoom. It is in fact fascinating that we had the tools on the ground and were able to pick up and leverage from here, but, of course, this whole discourse of doom and gloom that cities would be over has failed; COVID didn't kill cities. This is one of the interesting conversations we've had in North America. I have talked to Richard Florida regarding the rise of the creative class; he surmised that Americans hate cit-

ies and every time there's a crisis, they'll start blaming the city.

However, we have seen the return of cities, and this creates its own problems for the other side of the pandemic. The inequalities that existed in superstar cities around the globe that were capturing most of the growth have only widened. But we also saw a glimpse of hope in terms of how we could remake the world as well, and this is a paper that was published in Nature last spring and showed that during those first few months of lockdown global carbon emissions declined by 17% almost literally overnight. This, of course, was at the cost of 40% of the GDP which I thought was really interesting.

So even if you shut down nearly half of a global economy you still barely make a dent in the global carbon emissions. Even if we decide to not leave our homes for long periods of time the carbon processes are still in place. This really underscores how much work is to be done if we are to achieve decarbonization. It has also showed where the points of intervention actually lie, and where we can make the biggest difference. The vice director mentioned aviation; of course, aviation is consistently vilified as one of the main sources of carbon emissions. It's true, jet fuel is very hard to replace, and the world has been going in the exact opposite direction prior to the pandemic. This is a stab that I can never ever get over because simply the transition from sedans and light cars to SUVs and light trucks, which, I believe, it constitutes 70% of global auto sales, were the second largest source of carbon emissions over the preceding decade, more than aviation and more than heavy industry. So these are the kinds of trends that we need to try to arrest, which, again, have not ceased during the pandemic. Global auto sales are up

across the board as people become afraid of public transportation and shift to personal vehicles. How can we change these behaviors? I'm going to discuss about a series of wide-ranging topics, but I want to begin, as the director pointed out, with the notion of a 20-minute or 30-minutes city. Paris it's a 15-minutes city, there's a 20-minutes one, there's a 30-minutes one in Bogota, there's the five-minutes city in the Kingdom of Saudi Arabia, and there's the one-minute city in Sweden which we'll talk about. When Milton Friedman was talking about the financial crisis of the 1970s, one of those ideas that was lying there on the ground waiting to be put into use was the notion of the 15-minute city devised by Carlos Sereno at the Sorbonne in Paris. This was the idea of how to remake Paris's centre; how, in a city of neighborhoods, to reorient everyday life to a 15-minute walk or bicycle ride from from the center to the periphery. The 15-20-minutes or even the 30-minutes one is quite interesting because, if you study transportation, you might be aware of Marchetti's constant, which this is a *de facto* human law. Cesare Marchetti, an Italian physicist, noted in 1994 that if you trace the data and look at the urban expansion of cities, the time that humans invariably spend traveling on a day-to-day basis from the center of their lives to the periphery is 30 minutes or so, and the evolution from Athens's agora to modern Berlin was one of his examples that evince the evolution of the city's toward a condition of mobility made possible by the combustion engine vehicles. Under the condition of a growing periphery, what made Cerino's idea so radical in its own way was basically to collapse that radius down to 15 minutes and start from there.

Of course, there are problems with this concept as well, one of them being the fact that most cities are not like central Paris, which even central Parisians are not big fans of. There's also a concern of where should the investment go, because I think some of the discussions around the 15-minute city have been adopted in Milan, Madrid and elsewhere. One of the biggest adopters is Bogota, but it is being adopted as a way to disinvest in public transportation. Lopez Hernandez in Bogota has talked about how she wants to transition to 50 trips in her city by the end of the decade and has invented a very elaborate scheme there to basically reconfigure the streets to accompany this transition. One thing that gets less discussion in that case, however, is the fact that in Bogota, the trans millennial - the famous bus rapid transit network - is in a state of disrepair, and the city never really set out to build a metro in time. Therefore, the infrastructure that would carry people across the city and at the same time allow them to live in neighborhoods is something that is under danger. One of my fears, as cities embrace austerity budgets due to the pandemic hits and their tax revenues, is that we might see the 15-minute as a stop gap or measure, as a sort of band-aid or a bandage on the wound, and we should not allow that to happen. We also need to think about how we want to repurpose urban realm, in a sustainable and equal manner. When I was in New York, the city is full of parklets and pop-ups; you may have seen examples from around the world of how the streets have been repurposed. Well, in New York, it is the fancy restaurants like Balthazar that are extended into the streets effectively, by borrowing or stealing from public space to extend their commercial activities. It is wonderful having breakfast there on a lovely summer morning, but how do we repurpose that space for others? How do we guarantee a right to the city for all and not simply for brunchers?

One of the most ambitious examples of how this is being done and one that offers a great set of guidelines, is what's happening in Sweden. Dan Hill, who's the head of INOVA, has embarked on an ambitious program to systematically think about how to create a one-minute city, the one-minute referring to the patch of asphalt or street immediately outside your home. He turned to Brian Eno, the legendary composer electronic music pioneer and author of oblique strategies, to think about principles about what do we want from our post-pandemic cities. In Stockholm and Gothenburg, and ideally everywhere in Sweden, they're inventing new types of infrastructure and programmable kits that they can plug-in the city, such as the wooden street furniture. What I think is particularly important about what Dan and his team are doing is that they are trying to create a complete kit of parts, or as he describes it: an operating system that borrows from computing in order to rethink what public space can be. They have an entire framework here for thinking about not just ad hoc interventions but about how to design an entire open-source framework by borrowing from software of wooden components that can be deployed, redeployed, re-tasked, and removed around as needed to address local needs where participants can choose and participate in the deployment of what's going outside their homes.

It is a very interesting attempt to try to marry federal top-down guidelines and programs with bottom-up individual uses to create a new dynamic language through which the streets get repurposed. They are fabricating and deploying benches and bicycle parking in the streets, creating new forms of urban infrastructure that will enable fifteen or five or one-minute city to happen, and I think we've barely begun to scratch the surface on this. If, in fact, we are going to intervene in the streets and start to think how to repurpose more public space for these interventions, we're going to need new types of public post pandemic infrastructure. Such infrastructure might look like markets deployed to neighborhoods or health care facilities. Do we bring the city closer to people do we to bring people into the urban cores and build more housing? One of the problems with the 15-minute city, as I mentioned earlier, is that if you are a person who lives in the periphery of the city and completely cut off from any services except from the car, then this is a completely unworkable vision. We need to think about how to deploy more infrastructure that reaches the people or bring the people to the infrastructure. Another side of this argument is to think about going back again to globalization and air and the global tourism industry which is the hallmark of cities like Paris. Ultimately the city was repurposed for global itinerant travelers like me. The business improvement district tasked my friend Felipe Umbreda with rethinking a design of the entire boulevard ahead of the 2024 summer Olympics during the pan-

demic. I was part of Felipe's team to think about the mobility solutions. I urged them to close the entire street to all automobile traffic so that we should repurpose it completely as a pedestrianized boulevard with infrastructure. Lately they found that a little too bold, but you can sort of see some of the visions that Felipe has now been tasked with to deploy. About 400 million euros is the budget to drastically increase the tree cover, extend the boulevard out, add more uses along the sidewalks there, and drastically reduce traffic. This will lead to rethinking what vehicle typologies will be allowed on the street. What is really interesting in this endeavor is that it was not prompted by a need to create public space during Covid. It was prompted by the fact that Parisians hate the Champs-Elyses, they hate it, because the people there are not from Paris, not from the neighborhoods. Like Times Square in New York, this was a street that had been completely repurposed for globalization, and for global travelers who are no longer coming now. So how can you repurpose it for the needs of actual residents, at least temporarily, or even for the long term?

It will be interesting to think about whatever shape tourism takes in the near future, and how to create cities that belong more to their residents than tourists. It is important to remember that those of us who are privileged to do remote work - at least in the United States - are of course the wealthiest and most educated. It is very much an elitist privilege to be allowed to work from one's home, and one of the things I worry about particularly, based on the research by Benjamin Page and others in the United States, is that elites shape public policy with regards to what the wealthiest and most privileged members of society want. Therefore, the narrative that we should disperse to the countryside, and we should give up on offices, will be adopted only for a sliver of a wealthy elite, as we're starting to see more and more functions absorbed into the home. There is a bit of an in-house joke, my wife being the former editor-in-chief of *House Beautiful*, America's oldest home magazine: *House Beautiful* used the pandemic early on to write about howAmerican homes in particular had been so stylized and so idealized about that they were actually fit for the pandemic, and that we had to absorb all of the functions of the city into our homes if we were lucky enough. In reality, all our activities - our work, shopping, commerce, and child care, among others, showed the deficiency of housing as it exists in the United States and elsewhere, and how the existing single-family homes were not really fit for purpose.

It alarms me to see, both in a US context and elsewhere, how absorbing the functions of the city into homes is might push the people further away from the city. In the floor plans of America's largest home builders there are more and more home offices absorbed into our homes. How these configurations will happen in our post-pandemic times will define us going forward, and they will also depend on the current political polarization, especially that in the United States. If you are a liberal or center leftist, you believe in dense walkable cities and if you are a center rightist, particularly if you are part of the pro-trump majority, you've been led to demonize the city and you

want to have the biggest possible home far away from the city, which leads in turn to a 60-minute city rather than a 15-minute one. So what is at stake today more than ever, is precisely the city and the right to the city as this political polarization widens. Rather than having traffic peak at the beginning and end of the day, people are now driving throughout the day and this endangers public transportation as well, in the United States and elsewhere. We need to think about new funding models for public transportation, if we're going to create a right to the city for all and not just for the elites who own their own cars and homes. We need to think very quickly about how can we redeploy these public transportation models for a 15-minute city so that people can move effectively through it. in the meantime the tech companies are deploying their own models of 15-minute city. We're seeing how Amazon and some very large players in Europe and elsewhere are responding to the opportunities presented by the pandemic for them. Matt Newberg, who publishes a great newsletter called Hungry, he went undercover as a driver for amazon in the Summer of 2020, as amazon was launching its new grocery delivery business called Amazon fresh. There he spent two days driving undercover for all the customers who were being served from an unopened grocery store, a dark store as they call it. He realized that in two days of making dozens of deliveries he never traveled more than a mile from his home. While we were all focused on building beautiful 15-minute cities, Amazon was building a 15-minute city of its own acquiring real estate building, new stores and luxury apartment buildings and creating new micro fulfillment centers in the middle of cities, so that it could deliver goods to you. Amazon was effectively creating his own data set to allow itself to understand where the demand lies. Its competitors here in Europe are all building their own versions of 15-minute cities as they attempt to monopolize delivery in 15 minutes or less thus changing the shopping patterns. US data shows, that the entire generation 25 years of e-commerce has devoured more and more of the street-level retail that once existed, such as bookstores and newsstands. Prior to the pandemic there were still personal services for young people going to restaurants, pet salons, nail salons, and all the activities that the pandemic briefly made impossible and forced us to change our behavior. Actual street fronts disappear as if - to quote from Marx - retail is melting into air. As I was walking in New York along the 14th street - one of the major thoroughfares – the storefronts that previously held retail had now become dark stores and ghost kitchens. One no longer shops on the high street, but instead orders everything from them on demand. It is this idea of trying to capture all behavior and passing it algorithmically 'under' their app's interface, that is, of trying to capture more and more of the urban fabric, that starts to alarm me.

Two possibilities present themselves: one is the dark store, basically stripped down to the raw shelves with inside; the other one is Israeli's elaborate warehousing systems fited into storefronts. Companies like Doordash from the west coast are now acquiring their own infrastructure removing these dark stores and ghost kitchens away from the urban fabric. The high street

is dematerializing out of our site and re-materializing elsewhere; this is one of the major trends today. Anthony Townsend, the author of the book *Ghost Road* imagines urban scenarios under automation, one of them imagining housing built atop these delivery centers. Homes will be effectively built above warehouses because people will find this convenient; in a way it's like a hybrid of a shopping mall and Le Corbusier's 'Radiant City'. Here, instead of towers in a park, you have towers built above a warehouse or the mall, and ultimately, this is all about bringing services to people. We're seeing private players try to do just that by using a combination of data and flexible infrastructure in the US. Reef technology has acquired 4 500 parking lots across the States, and it's also got almost two billion dollars in Softbank money via the kingdom of Saudi Arabia. One of their pieces of infrastructure is effectively labeled as a shipping container or other sort of device, but it really is a disassembled building. That is how their design is being approached; like many tech companies, they are attempting to basically arbitrate regulation to create their profits. They have disassembled the building into a minimum viable structure which allows them to get around building codes and then deploy them to parking lots. In doing so, they can use data of where people are going, and where their services are and rapidly deploy these forms of infrastructure. The city effectively appears and disappears as needed rather than according to the classic law of real estate location. They are going where people are or where they have been by deploying increasingly minimal forms of infrastructure - this is what we should think about when thinking about the post-pandemic city.

This idea of massive convenience serving people at the edges is a wonderful service that should be thought in conjunction with the imperative of the and how it can be automated. Of course, automation drastically adopted during the pandemic seems to favor social distance. Seven years ago, I was at the Google Plex, hosting a conference there about the sort of futures of autonomy. At the time, Astro-teller was Google's - or still is - in charge of their most advanced programs including the self-driving cars. I thought that we might need self-driving buildings as well as self-driving cars, and it was like a lightning bolt went off inside me because I realized that when we think about a self-driving car it's like talking about a horseless carriage. Its autonomy and automation consist of a set of technological capabilities like lidar radar which is now in your phone and can be deployed into other things including potentially self-driving buildings. China is the fastest adopter of all this automation. I had interviewed the CEO of Needlex, and this is their sort of self-driving unit, a self-driving car spraying antiseptic delivering meals for KFC during the pandemic. China seems to take this extension to its logical core using data sets to basically deploy its vehicles to where it thinks traffic is going and where people are. This creates all sorts of possibilities for algorithmic redlining, for basically leaving large populations outside of the right to the city, by only selling this to wealthier neighborhoods or areas where it sees potential profit. The automation of micro mobility as well, such as that of self-driving scooters, also works, if you have a smartphone and thus are part of that service. But one should think about what happens when these things run wild in the urban environment. With regards to right to the city a lot of these services are not actually autonomous, but they're being teleoperated by operators from the global south in Mexico in Colombia, in China or the Philippines. One of the things that automation does to the cities is literally filling them with ghosts. Alex Rivera who just won a MacArthur genius grant made a seminal film called 'Sleep Dealer' in 2008, where he imagined a world not unlike the one that we've just lived through. A world of permanently hardened barriers of global borders with internet and telepresence where even the lowliest day laborer can sell his/her labor to the global north through the tele operation of robots. They're permanently barred from opportunities in the global north countries like the US while being trapped in Mexico but are able to sell their labor, and this strikes me as some of the nightmare scenarios where technology is used to disintermediate humans from the cities all together and freeze them out from our environments. Some cities have started to fight back against this by thinking how to regulate these ghosts moving through our cities. Los Angeles department of transportation - as far as I know - was the first city to write its own software standards. It created the mobility data specification to keep track of scooters which are forced to indicate where they are, whether they're available, how charged are they, how fast are they going, but it also allows the city to send instructions to tell them where they can and cannot go and sort of regulate the city through the use of a code. The code is the new concrete says Selena Reynolds who runs LADOT, and this will be interesting because cities are going to have to start thinking about this and adopt this to deal with the technological forces at play. This makes us, in turn, to think about what value is the public realm or how it might be used. A good friend of mine has a startup called CLEARROAD, where they're using onboard GPS installed on cars to basically tell them wherever they may go in the world.

How do we enforce this, instead, in a congested zone like central London? How do we basically tax cars in real time depending on where they travel to generate the kind of funds that we need to remake the public realm? How can we also use it to basically striate the public realm? We might imagine that cyclists and pedestrians move for free, and private vehicles might be charged the most, while autonomous shared shuttles for would pay in between. We're going to have incredible technological flexibility as well to think about how we divvy up these resources capability for the world. Regarding work, we filled the cores of our cities with buildings that are mostly empty even in the best of times. I always remember that, according to Frank Duffy, the classic office pioneer, the office buildings were only ever 40% full at any given moment even at the peak of the workday; people are always going in and out running errands and doing things. The technologist Benedict Evans notes that every technology achieves its platonic ideal at the moment of its obsolescence. I have in my bag the beautiful Macbook, carved out of perfect aluminum whose appearance has not changed in

almost nearly a decade because we've all transitioned to phones and other kinds of computing. So, I look at this and I think that the world's most perfect office building might open nearly at the moment of its own obsolescence. I am not a big fan of remote work as it exists because I think we are mistaking it as an alternative to the office and the soft control of offices and workplaces. It's not an alternative to agency; what we really want is control of our own lives, the ability to do work by choosing and making choices for us and organizations. Once organizations realize they no longer need their offices, they're going to realize they no longer need their employees as well,. Then we are going to see them turn to platforms like Upwork and others to basically create gig work for knowledge and delivery workers and all human labor that makes these technology platforms possible. That's what they're going to do to the wealthier, more educated class, just as they did to basically working day laborers. Of course, they're going to use automation and artificial intelligence to help automate this process.

My friend Devin Fiddler at the Institute for the Future nearly a decade ago was labeled as an artificially intelligent executive. What he really did was automate tasks using dozens of batteries of human labor to do his work under the API (Application Programming Interface) and present it as having done the work itself. We're starting to see companies already building automated platforms that will allow us all to basically push all of us out, to do work in our homes. We overstate the benefits of remote work, and we underestimate the efficacy and efficiency of face-to-face work, of having human connections in human networks. One of the tasks well before the pandemic was how do we not send the office into our homes, but how do we bring work out into the street. How do we create new platforms for work and sociability and conviviality that go beyond simply that? And this goes back to my work: *serendipity*. This is something I was particularly focused on a few years ago and it is all about why cities exist at all and how do we actually increase the vitality of cities. So, what is a city and how does the city function?

Patrick Geddes talked about cities as organisms. Luis Bettencourt who wrote a series of seminal papers with Jeff West about cities and how they grow, compared cities to stars. Bettencourt got his doctoral dissertation on the big bang and high-energy particle physics and argued that what cities do best is bringing together and compressing social networks of people in space and time. In doing so, they create a sort of fusion, and the output of that fusion is not heat or light like a star would do but all of the positive externalities we have: theGDP per capita, the new ideas, tthe innovations, all these things. Before the pandemic, the best functioning cities were the ones that had high-speed public transportation networks, and housing close to the centers that could compress people very close together in space and time for face-to-face encounters. Of course, Silicon Valley would like you to think that we can replace this with video and other technologies, but again I'm not so sure about this. This is what Louis Bettencourt and Jeff West shows: that cities got better as they get bigger. They estimated that every time a city

doubled in size, it would show a 50% increase in output; this is why we have superstar cities. These huge urban agglomerations perform better than smaller cities, and they also found that, unlike the living organisms, there was really no limit on how big cities could get if they continued to function this way, as in the case of Tokyo, for example, with almost 30 million people and high-speed rail cores. Cities are also immortal: unlike human organisms that are born and die, cities could in theory continue forever, and even Damascus and cities scarred heavily by civil war have persisted for over 5 000 years.

A few years ago, I toured the City of London – a 2000 years old city and center of commerce - with Peter Reece who was the master planner for the city of London and who approved the Gherkin, the Cheese Grater, the Walkie-Talkie, and many other iconic skyscrapers there. Both then and when I spoke to Peter during the pandemic, he emphasized that those iconic skyscrapers were beside the point: what the city is all about is not the iconic skyscrapers but the interstitial spaces, the people moving through it, the parklets where people could meet and talk and the alleyways where bankers would meet and have a drink at 11 a.m. This explained to me why we had a financial crisis in 2007-2008. For him cities are places where people gossip, and gossip makes people money. Gossip is - as Paul Romer, who won the Nobel prize for economics, stated - information spillover. It's all about the tacit knowledge and how we learn from each other, how we trade ideas and tips, and how we forge new ideas together. Jane Jacobs wrote about this in the in the *The Economy of Cities,* which argues that cities are places where people have ideas, come together, form new firms, and create economic growth. When we think about the post-pandemic right to the city, is this a process that can be replicated over Zoom?

Perhaps it can be to some extent. I don't think it can fully and I think organizations have not yet embraced it. I highly disagree that there is no right to the city over Zoom. That is a completely privileged privatized space and organizations are starting to realize this. In a massive study that came out in Nature based on a survey of 61.000 Microsoft employees in the early months of the pandemic, shows that all of those weak ties and connections that people would forge in the city through gossip was completely missing. And while they found themselves working very productively through the pandemic, all that peripheral information of their social network was effectively dormant or dying. In a paper I wrote a while ago about how can we create mechanisms in the city to create a 'stronger star' I propose a team of facilitators that worked with the World Economic Forum in Davos to think about how we can facilitate tighter networks. That was the end of a three-year process of using artificial intelligence, machine learning, social network analysis, and facilitation, to bring them together. But how do we do this in a city? How can we bring people together through a combination of design and facilitation to do this?

This points to the rise of a tactical urbanism to create more bike lanes and create infrastructure that's missing. My friend Mike Lydon invented this, and there's some work in painting bike lanes in Vermont by creating lightweight public infrastruc-

ture that enables a 15-minute city. In San Francisco, in 2015, I did a project called the 'market street prototyping festival'. It was basically an effort on how we could rethink the public realm along San Francisco's largest thoroughfare and how create new kinds of infrastructure that will facilitate interaction and weak ties among people. Gale Architects, founded by Yan Gale out of Copenhagen, mapped out pedestrian traffic and Instagram posts. I'm not sure if the latter is a real scientifically provable medium, but I just love the evidence of an increase of lingering activities with as much as 700%. During the festival they created places for people to sit and interact and that's exactly what people did. This is one of the things I think about the post-pandemic city, now that people are out and hungry to be with each other again. How can we design our cities? How can we design new infrastructure that will bring them together? Like Dan Hill said, how can we observe, iterate, redesign, and deploy these new processes? This can be done both in public and private space. We've seen cities around the world adapt empty storefronts flexibly, which is essential in reviving dark stores. In Newcastle (Australia), where I went in 2015, there is this incredible program called 'Renew Newcastle', where an arts festival organizer named Marcus Westberry borrowed empty storefronts from developers and landlords to use them a art spaces or places for entrepreneurship. He created more than 200 projects in the first three years that ultimately revitalized the dead downtown of a former industrial city in Australia 75 kilometers from Sydney. He could do that because he was a very well connected person. How how can we institutionalize such connectivity? We need to see a new hosting and connecting role for organizations and people in the city. A similar attempt was made in New York's Lower East Side by my friend Eric Hose, which is about working with property owners to basically take these spaces, even if one can't sign leases, and create neighborhood programs that activate people. The Institute for X and Aarhus in Denmark is a great example of a community space maker that makes spaces where people can work with tool equipment to design their own businesses and launch their own activities.

When the pandemic happened, of course, we had to shut down all these physical activities, and we had to move our lives completely online and Zoom. Yet there are other ways of creating new forms of digital networks that can connect us. Trisha Wong, an ethnographer and digital scientist who had been doing work in Wuhan and when the pandemic started, was studying how the Chinese residents of large apartment blocks almost overnight created Weibo groups to basically coordinate their daily lives. In the United States and across the world we saw in those first few days in March 2020 the rise of mutual aid network right of neighbors coming together in hyperlocal spaces that organized purely digitally to assist their communities. Past examples of hyper local groups and mutual aid in the US were the Black Panthers in the 1960s, who organized one of the largest school breakfast campaigns or Occupy Sandy in New York after the hurricane in 2012. Rebecca Solnit, the sociologist, in her book 'A Paradise Built in Hell', has pointed out that after disasters there were these incredible, almost euphoric moments of possibility of people coming together. These are chances to forge new social relations. How do we create new hybrid physical and digital collectives that can enable third-party networks in the post-pandemic city?

With my team we're working on a project for the Venice Architecture Biennale called 'Open Collectives', where we talk about a few of the examples that I have presented thus far. One is a project being developed in the United States called 'Care House' by my collaborators Rafi Siegel and Marissa Mourinho. It's a new form of intergenerational housing where caregivers will live with the recipients of care and then become recipients of care themselves. It's effectively creating intergenerational living with low-cost housing. One move there when one is in the 50s or late middle age to care for someone older, and in time you earn a right to the housing an receive care from someone who will also live there and take care of you as well. We've also followed an example from Colombia called 'Kipu', where the marketeers create their hyper local currency and then in turn also create a physical marketplace that enables new local economies and forms of collaboration. Next week I'm meeting with one of the founders of what's called 'Discos' - distributed cooperatives – which appears in the world of crypto currencies and blockchain. There's the notion of a distributed decentralized autonomous organization: the DAO. DAO's idea consist of a software organization on the blockchain that pays out tokens forever, a sort of blind watchmaker of sorts that follows libertarian economics and repurposes it to create new forms of commons and cooperatives by rewarding each other in different currencies and monitoring. Mondragon - the famous Basque cooperatives - aim to automate some of the cooperatives there they're working with. A group in United States called 'Cooperation Jackson', which is a bottom-up community-led effort in one of the poorest cities in US, use software to extend the activities and support people in a way they're not supported currently; these are the new software solutions that we urgently need.

What borders mean and what it means to be a citizen of places is changing. During of course the pandemic Estonia launched the digital nomad visa, based on the idea that if we are going to have a world of remote workers, then they can come to Tallin and work from there. If we move past notions of citizenship, what does it mean to live in a place and be a stakeholder there, even temporarily, or how might we start to see various places compete for global talent and for particularly privileged workers to move there. While Miami and Dubai get all the press, Helsinki is one of those high functioning cities that have a strong right to the city and have been able to advertise themselves as such. As an American, I love the fact that Helsinki is a city where everything simply works and enables the city to compete for talent in a world, where instead of racing for the lowest amount of taxes one competes on the strength of public schools and infrastructure. The cities that succeed in building this new public infrastructure will be able to leverage people accordingly.

Now to the dark portion of the talk. The science fiction author Bruce Sterling has a one-sentence prediction for the future: "old people in cities frightened of the sky." This captures the three 21st century megatrends, which are urbanization, demographic aging, and climate change. How might the infrastructure that we have built or failed to build affect us when it comes to the right to the city? In February, a massive ice storm polar vortex came down over Texas, froze much of the energy infrastructure of the state, and massive blackouts rolling across of it. It caused a massive spike in power prices, up to thousands of dollars (for those able to pay such bills), while the empty office buildings in downtown Houston were brightly lit during blackouts. But the poor neighborhoods, particularly the black population were lying-in darkness. This is what the future of climate emergencies currently looks like right now, in a global scale: unequal and uneven.

Parag Khanna has a book coming out called *Move* – for which we worked a bit together – that shows a correlation between issues concerning demography, global population, and climate change. We're going to have new forms of isolated and individualistic migrations. It's interesting to pinder how we're experiencing climate change not as a collective event but as something that scrolls through our social media feeds as something terrible, that is going to happen to us sooner or later, and that the only option is to run toward rather than away from them. In the United States, for example, the zones most exposed to are the flood zones where most people have moved and built bigger homes. Everything we could have done wrong in the United States and Global North we have already done, and we are going to see the state step in a very heavy-handed way and markets step in a heavy-handed way. While the Trump administration was planning to condemn mass neighborhoods along the coast and start to relocate people whether they liked it or not, the flood insurance in Florida was about to raise the home insurance against hurricanes or rising sea levels with approximately one thousand percent. In Florida, and as well in California, insurance companies have struggled to drop coverage all together, so both the government and the markets are now pushing back very hard on people living in these areas.

We need to start thinking about what are the climate zones, where we can build, and how do we build more of them. Ironically, it is the coastal temperate zones of the bay area in Los Angeles where housing has not been built that need to be urgently built, not the wildfire zones of the central valley. We need to think quickly about how this will work before we have another global financial crisis. My friend Jesse Keen at Tulane University was part of a task force at the Commodities Future Trading Commission in the US that deals with the global systemic risk of financing, from climate and to real estate. However, design can also play a role in mitigating potential climate or financial disasters. A project I worked on with my friend Rafi Siegel a few years ago was about imagining the coastlines of New York and New Jersey in 2067 in a world of sea level rise, and how we can create zones that might flood. We might build quasi-amphibious homes for people who want to stay near the coast and

reinforce some infrastructure like JFK Airport, but also think about new amphibious parks and new forms of housing that could survive these floods. We can use design to think about where to build new neighborhoods and new cities and reinforce the ones we have. While designing futuristically, we also used design to convince people that this was not just a speculative future but one that has already happened or is currently happening, one that inevitably makes us think about what the future residents of these cities will be like, and what are their hopes and their dreams. We scripted entire stories and wrote out and mapped entire videos.

The emerging threats to cities and the right to the city cannot be created through Zoom. Right now, we're seeing the tech companies trying to create their own world, their own cities in the rise of the metaverse. Facebook has unveiled a technology using virtual reality where all work in their perfect world and move into a virtual reality environment overlaid on top of what you already have. It may seem like hell zooming for 8 hours and then strapping a massive headset on top of that to shift to Facebook's proprietary space, but this is also happening in terms of augmented reality. Apple is working on its own Facebook and has a pair of sunglasses with video cameras mounted in it. Creating proprietary overlaps is arguably the next direction of the internet. I talk about these conditions with real estate groups: what happens when someone does this to your building or does this to your street; what happens when we have multiple competing technology companies striving to overlay information on top of the city in which they can erase things. In China there is a building with LED lights where there's information everywhere - at least everyone can see this, but this information is temporary as well; this is, again, the lidar. If you have the iPhone 12, there is a proprietary app where you can basically record temporarily. A musician did this so that he could play with himself in real time. Using recording lidar we're going to be able to map information on people temporally, on top of the real world. But the best example of what this might look like is Keichi Matsuda's conceptual film 'Hyper Reality', where he imagines a day in the life of Medellin, Colombia. We could have overlays on the street so you don't step into it when traffic is coming through; you can also have giant cats talking to you back there as well, but, again, this is the final dystopia. What happens if we live in a world that is full of dangers and full of things that we can't see. You probably remember Pokemon Go from five years ago. Some professors at Purdue University, in Indiana, mapped out all of the traffic incidents and fatalities that happened in their county and then extrapolated across the entire United States byto discover that Pokemon Go killed 250 people who wandered into traffic or hit by drivers. We're about to create a very unsafe world as well. I'm working to get a project started with the Los Angeles DOT (Department of Transportation) to think about how might cities regulate the metaverse; how do we ensure that if we are going to create these overlays there is a shared public realm on top of it, and how cities can enforce it. If they do not do this, then the ultimate risk is an someone that uses machine learning erasing things from the

streetscape. In this case they wanted to see what a street looked like without parked cars, but we can also imagine that virtual reality and augmented reality could also erase things from the cityscape. The right to the city, to even see the city, could be ultimately denied to us in many ways. This is the next wave of what we're going to have to continually fight to retain this right to the city and retain our access to it on the far side of the pandemic and what follows. So with that, we have plenty of time for discussion.