Designing Eden: The future of rule based city-making

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ABSTRACT: The omnipresence of the algorithmic gaze is not just easing the capacity to crawl, index, and rank everything according to rule-based praxises but also shifting the dimensions of where, when, and how citizens move or circulate through the urban commons (O'Brien, 2018). In the absence of urban thinkers or participatory planning, these new alterations take place within the invisible peripheries of algorithms. This paper examines the change, and the spatial currencies reconditioned by the interplay of city-making and city-indexing as infrastructure, urban spaces, and built settings become indistinctively itemized. It recognizes that this is an ongoing process that continues to flatten, catalog, and index the physical characteristics of space which produces a virtual inventory of urban proportions subjecting city officials to accelerate the re-privatization, deregulation, and re-colonization of vast territories.

It is within these transactions that we see a re-territorializing of the city's context and the uneven usage of spatial distribution underway. In the case of the American city, the range of impact caused by these emerging transactions is seemingly local, but we claim that the dynamics of city-indexing reverberate across different scales extending from local to regional, and national proportions.

To depict our work, we choose a comparative method that aims to associate the impact of rule-base praxis with changes at the urban and regional scale. To start, we correlate the re-scaling of territories at a suburban sector in Silicon Valley with the re-development plans for downtown Las Vegas. We then linked those actions to the 2017-2018 bids enacted by Amazon and the likely effect it may yield from the northeastern region of the USA (a zone first identified by Jean Gottmann as a co-dependent megalopolis in 1961 and later coined as BOSWASH by Herman Khan in 1967) to the Midwest.

KEYWORDS: City-Making, City-Indexing, Eden and Spatial Commodities.

INTRODUCTION

The codification of the city fabric, once only attributed to planners and cartographers, is transitioning to machine learning processes that affect the spatial organizations of urban commons. Known as a quantifiable system based on the tracking of users, and the itemization of built context it is grounded on abstract logic that makes no distinctions between urban thinkers, participatory planners, and programmers yet it knows how to privilege pre-determine interest that can test the perseverance of pre-designed environments. In furthering this idea, we asked, what are the matrixes that anticipate the contextual interpolations defining the urban settings in the 21st century where pre-determined inputs trigger unexpected outcomes? The question first prompted from noting that cities struggle to exalt their uniqueness or to rank among “The top ten cities for healthy living,” “The best cities to work in,” and “The twenty superstar cities in North America;” lead us to note that the problem originates around human’s desire to quantify, codify and classify facts, objects, and symbols indistinctively. And this kind of recording has failed to develop significant parameters for how to validate a city's existence impartially and according to environmental constraints. This inability to focus on the quality of life gives rise for machine programmers to increasingly use quantification methods to recondition our built context. Thus, in less than a decade the strengths of algorithmic inputs and the fragility of urban planners begin to exhibit "new-old" kinds of deviations that continue to impact city legislation and citizenship (Shu, 2019).

Throughout this paper, we look at how this shift obliterates city-making, an act that in turn prioritizes city-indexing. And while both of these praxises are designed to support selected interest, each one has distinctly different economical, political, and technological goals. Yes, both methods deal with urban context, but city-making is a palpable undertaking related to the modes of production that over the centuries focused on building urban settings. Conversely, city-indexing is an emerging system, a quantifiable process that immediately itemizes the built environment allowing stakeholders to pick and choose from the availability of its physical inventory. The difference between these two approaches is clear and paramount to heighten the economic inequalities that are currently at play and threatening to eliminate the potentials for realizing environments capable of sustaining urban diversity. Thus, we sought to examine the cause and effect of this switch, per enactments that are now impacting the urban fabric of the USA. Within this analysis, we are also claiming that city-indexing is forwarding a new range of territorialization that aims to re-arrange public access under conflicting ideologies from data-driven logics. It leads us to critically grasp the velocity of these changes from the lens of three performances that effectively display how city-indexing hones the potential to reshape an entire urban fabric from a local area, a county, or over a large geographical zone.

Our findings capture the current economical, political and technological instruments applied to commodify physical spaces and concludes that these practices are ineffective to address and sustain the future arrangements of the urban commons. Yet, turning to the practical aspects of data awareness and social equity, a rule base praxis is a valuable tool that can become instrumental in supporting participatory planning. Where city-making and city-indexing jointly aid in understanding how to improve life as a catalyst for manifold co-existence.

1.0 CITY-MAKING:

To define city-making, one has to remember that ten thousand years ago cities did not exist. The invention of the city as told by historians started when homo sapiens learned to trust and form alliances, avoid intrusions, and evade extinctions. For millennia, this process empowered collective actions that generated improvements in habits and socio-cultural interactions (Tattersall, 2012). In time, prosperity and longevity yield the Age of Enlightenment as advanced systems of communication and scientific discoveries spearhead new types of civic engagement (Darnton 2018), and this, in turn, ignited fresh ideas for shared governance and new kinds of prosperities with which to re-invent the city. Thus city-making is a praxis that spurs urban evolution over centuries. It is the mass production of building and planning that eventually generates novel approaches to continue the urbanization of the world (Dejean 2014). Over time, these actions have generated global cities, innovation bubbles, and disenfranchised zones (Sassen 2014). But, fast forward to the 21st century, city-making is under siege, an unimagined crystallization of technocratic ideologies seeks to obliterate the long-held pursue to define the perfect place, the city of god, the Eden-like paradise (Stephenson, 1997). Thus, the buildup of human's spatial ingenuity struggles to forward city-making as a planning device. In most cases, the 20th-century city that seemed to transform through the successes, failures, and struggles of citizens, stakeholders, and legislators; the one that often redefined urbanity through collective dependencies or in mirroring a type of Manhattanism is lost, rendering city-making less effective to innovate and to remain:

> " a theater of progress __ its future can be extrapolated forever; since the exterminating principles never cease to act, it follows that what is refinement one moment will be barbarism the next. Therefore, the performance can never end or even progress in the conventional sense of dramatic plotting; it can only be the cyclic restatement of a single theme; creation and destruction irrevocably interlock, endlessly reenacted."
>
> (Koolhaas 1978,12)

But this is an ambiguous definition in the formation and manner by which the city grows; it is also a reflection of the utilitarian properties bestowed to city-making rather than a prologue to the potentials this approach offers to support the continuous development of cities.

2.0 CITY-INDEXING

While the vast majority of American cities are comparatively young, most conceived within the last 250 years, they grew and prospered as centers of mining and manufacturing, producing and distributing material goods. These types of cities lacked the historical trajectory and "ancient role in providing the services of government, higher education and the administration of justice." (Gottmann 1975). This preamble herald in the third quarter of the twentieth century denoted that the threat to cities was not its shrinkage in size but its shrinkage in "relative importance" due to lack of productivity. Declines in rank are of crucial significance to understand the future of everything, and for most cities, it can be its downfall. And ranking is precisely the kind of sentencing that Gottmann unveiled through his book Megalopolis: The Urbanized Northeastern Seaboard of the United States. As a geographer, it is Gottmann who first indexed and ranked cities as he cataloged the footprint of Boston, New York, Philadelphia, Baltimore, and Washington DC among smaller socio-political and economic interdependent places like Richmond or Norfolk. His territorial understanding was the first visualization to grasp the re-scaling power of urban growth and to demonstrate that the success of cities lies in its geographical, cultural, political, infrastructural and economical networks (Castells 1991).

Now in the first quarter of the twenty-first century, ubiquitous algorithms provide a way to mine all sorts of things and subjects. Under blurred regulations, the ultimate resource to rank urban commons in the 21st-century is not geography; it is data mining. It can find, recognize, and correlate data to study, analyze and optimize the pulse of change. Knowing how to govern and manage data-control to achieve data-governance promises more reliable predictions in a broad range of areas. As the accuracy, completeness, and strategic timeliness of data starts to affect our living environments, it becomes essential to ask the following questions: How do Technocrats possess the ability to accrue data and simulate desire scenarios? How do they index the information and catalog content? How do they rank public resources, commodities, and services at will? According to Microsoft researcher Yu Zheng, these questions are answered through one's understanding of urban computing.

> "connects urban sensing, data management, data analytics, and service providing into a recurrent process for an unobtrusive and continuous improvement of people's lives, city operation systems, and the environment. Urban computing is an interdisciplinary field where computer sciences meet conventional city-related fields, like transportation, civil engineering, environment, economy, ecology, and sociology in the context of urban spaces." (Zheng 2011)

Here, the means to index, rank and identify places offer opportunities to itemize urban content. And while these identifiers prioritize the nurturing capabilities of readymade places, they are also instantaneously obliterating the potential praxises to detail the future revival of shrinking settlements. The conundrum matters, because it is now permissible to empower companies into bypassing the growing pains entangled in city-making and to invade data absorbed places instantly. City-indexing is, therefore, the ability to look at an entire city as a "readymade" parcel to be mined for relevance or amended according to the needs of stakeholders. Technocrats know city-indexing best and are now using conventional instruments like deregulation, privatization, and the re-colonization of private properties to re-appropriate existing urban space.

The magnitude of city-indexing is both a virtual and physical re-scaling of the city. Thus, the impact of these indexing processes tends to reshuffle civic buildings, reformat access to sidewalks, eliminate urban commons, and delete cultural grounds. The act reverberates beyond the gentrification of a neighborhood or a social class (Florida 2002) and moves towards the colonization of an entire city, region, and nation.

3.0 BRIEFINGS

The moment when the future of city-making becomes obsolete starts with the desire to automate and commodify the city according to the algorithmic gaze (Stewart 2018). From Gottmann's maps and writings, we can anticipate how technocrats will not only impact a city but all other codependent geographies and in effect delete the construct of city-making in place for city-indexing. This approach is not a re-script of Manhattanism where nothing lessens at

the local scale, not even the production of spatial innovation; it is a process in the absence of input from citizens, planners, legislators, and entrepreneurs. Here, the city is no longer a public performance with multiple actors collectively negotiating and progressing towards new radicalizations; instead, it is a city-indexing system that will only take into account the itemized parts of the existing city that empowers rule-base goals. In a matter of a click, Technocrats will likely own the rights to alter and access the content of multiple urban functions by setting forth a search. In other words, Technocrats can declare themselves the urban landlords of a chosen city as the following sequence of events will tell.

Through the lens of city-indexing, the ensuing narrations are enactments that seek to explain the spatial distribution and usage of spatial context driving centuries of city-making into oblivion. Absent of participatory planning, this transactional shift is unlike that of medieval times or the industrial revolution when manifestations where physically traceable. Yet, they are in similar ways, not align with the interests of local citizens but able to accelerate the re-colonization of civic commons.

3.1 Privatizing paradise: Downtown Las Vegas; from 2009 to now

“Frankly, it was a miracle!” __That is what an official from The City of Las Vegas exclaimed when he described the negotiations conjured between Clark County Las Vegas and Zappos CEO. It entailed the purchase of a community-based domain, named First Friday (Peterson, 2011); the battering of Amazon.com stocks (Buchanan2017); the reshuffling of Zappos management (Lashinsky 2016); the privatization of Las Vegas City Hall (Spillman, 2012); and sixty acres of Downtown Las Vegas (Groth 2017), to launch “the city itself as a startup initiative” with a limited cap of three hundred and fifty million-dollars fund.

Initiated in 2012, the Downtown Project was the first effort of its kind aimed at revamping a city decade. The goal was to turn Downtown Las Vegas into an urban campus for smart and interesting people that would ignite a series of commercial startups as a simulated live SimCity game. All of the existing buildings within a sixty-acre-sandbox (a virtual space in which new or untested software can be run securely), the streets, and sidewalks around it became Tony Hsieh’s (Zappo's CEO) conduit for venture capitalism (Cremades 2016). From 2012-2014 Hsieh’s team rapidly learned how to improve and tweak its errors, like an AI [artificial intelligence] bot using if-then conditions to calibrate data and rank businesses according to the frequencies and activities of its users. Instead of housing, public parks, schools, and public services, the Downtown Project first alter the streetscape. The team saw value from a user’s collisionable hour as quoted by from Tony Hsieh's explanation:

> “is an hour you spend in a downtown social space: having a cappuccino at its perpetually vinyl record-sound tracked coffee shop, for instance, or eating at one of its “restaurant concepts”, tinkering with a project in its “co-working spaces”, drinking in one of its ever-more-numerous bars, taking your pet to its members-only dog park, or playing oversized chess out behind Gold Spike. Do this for an hour a day, and you’ll have put in 365 collisionable hours after a year, all of which would count towards the Downtown Project’s stated goal of producing 100,000 such hours per acre, per year.” (Marshall 2014)

Taken from a city's management perspective, Tony Hsieh’s is the most valuable player of a sixty-acre sandbox on Fremont Street. His data-driven gaming approach for governing Downtown Las Vegas is unmatched, and to understand his game, one needs to know the crawling mechanics of database arbitrage where the simultaneous indexing and ranking of public property alters the concept of traditional urban context. To start, delete and re-start, The Downtown Project in Las Vegas ranks the area per event. Through real estate commodification and collisionable numbers, Tony is activating city content from the basis of “very serendipitous sequence of encounters.” Take for instance; “Life is Beautiful,” one of the multiple annual activities his Downtown Project team executes; it is a “music-art-cultural” festival that starts every September as a time-lapse motion event where hour by hour public domains like sidewalks and streets are closed off to the general public in order to service a private function. It culminates with a seventy-two-hour sequence of adventures in the middle of October that deafens a large footprint of the downtown core. Consider by officials as a genuinely unique sequence of successful gaming motions and from the perspective of a single gamer’s strategy, this year’s Life is Beautiful sold out in less than two hours and brought about one hundred and

eighty thousand visitors for 13 hours per day. Do the math! [13hrs] X [3 days] X [180,000 visitors] and then note that the total of all guest collesionable hours yielded +/- seven million hours of serendipitous encounters in three days.

“What a brilliant startup!” __officials say:).

3.2. Regulate deregulate rollercoaster 2010

At Cupertino, a suburban area of Silicon Valley, the land has been colonized, subdivided, regulated and deregulated often and this went on from the middle of the seventeenth century until two thousand and five when Apple Inc. started to re-bundle the parcels for the creation of their second headquarters Apple C2. In less than a decade, one hundred of these acres purchased from Hewlett-Packard, an additional fifty acres acquired from undisclosed sellers, and ten acres purchased from various residents of the Summer Hill complex, plus the streets and sidewalks encompassed the new sandbox. And no one seems truly surprised with the purchasing process; everyone is aware of Apple Inc.’s disinterest in green goals. Too many documents already evidence their deafness to the surrounding communities and their own employees' needs (Galloway 2017). However, these purchases point to how a company indexed existing territory, deregulates land usage and disregards the spatial outcomes impacting the area from the perspective of zoning, scale, public access, and lack of human interaction (Sorkin2011).

Acclaimed Architect Norman Foster and Apple’s CEO, Steve Jobs, once declared that Apple C2 would be the greenest place in the world, in part, because they allocated land to house nine thousand trees from three hundred and nine different species on their proposed park. A simple compare and contrast of site and scale deliver an analysis of the site; it also visualizes the environmental and social impact of C2’s park which only services thirteen thousand Apple Inc. employees. After completion, it will be seven times bigger than Chicago’s Millennium Park, which welcomes four million visitors per year and one-tenth the size of New York City’s Central Park, whose legendary capacity host forty + million visitors annually. Considering that C2's sandbox is almost equal in size to Tony Hsieh’s Downtown Las Vegas startup the city-indexing format is actively enabling corporations to open and close public commons of local citizens at whim. And the significance or differences in the territorialization of space from the lens of city-making processes to city-indexing praxis is evident by the rate with which public domain shrinks. (Fig.1).

Here, it is worth remembering Gottmann's vision and the potential of shrinkage in "relative importance" as humans, not land or built context enter oblivion.

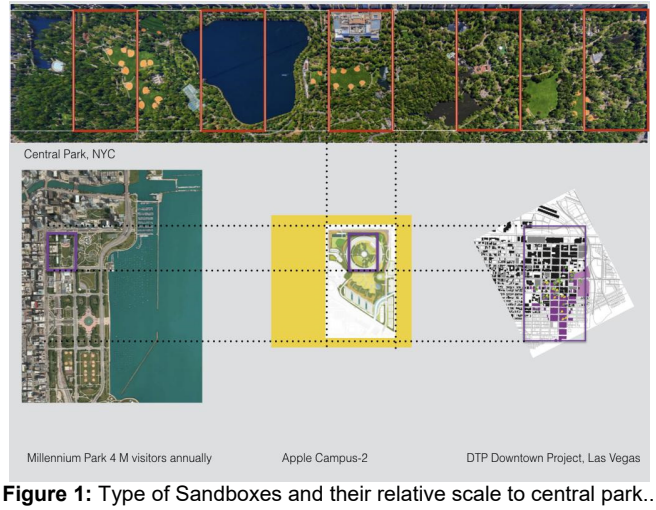

Figure 1: Type of Sandboxes and their relative scale to central park.. Source: (Yeshayahu 2016)

3.3 Re-colonizing BOSWASH -2018

The city of the east coast, whether it is Boston, Philadelphia, New York or Washington DC has a develop Urban Form (Warner Jr., 2013). And from Warner's portrait, these cities have endured three hundred years of re-colonization expanding into the socio-cultural and socio-political examples which many historians believed are the best-ingrained examples of the American City. They are the vivid foundations that forwarded city-making processes throughout America's history; this has changed, and while today's crawling processes always rank these cities atop, it is their grouping, as Gottmann points out, that becomes significant. It is, therefore not surprising that on November 2018 Jeff Bezos un-intently demonstrated just that. His open call for all cities to make independent bids and bundled their urban characteristics, political endeavors, and commons into one package to lure Amazon into implanting their second headquarters (HQ2) into their urban midst, resulted in two hundred and thirty-seven responses from the USA and one from Canada. Sixty-three American cities, out of the three hundred most populous cities abstained; this was a remarkable outcome for the first auction of urban-context in the world and for Bezos to own a massive amount of the nation's extensive data (Peterson 2018). Twenty cities made the final cut and two will now be recolonized.

Social media has relentlessly reported on the twenty finalists, the two final choices, and the risks or potential outcomes as signaled through Google's search engine that yields 2.21 M sites in 0.41 seconds when one types related issues for HQ2. Yet, little attention has been given to the long-standing history of the entire region hosting New York City and Washington DC. In this regard, it is critical to understand the geographies of these two cities and the impact of their interdependent infrastructural system for the nation. One clear implication underway, from the perspective of selling and buying urban context, is that the effect is not simply affecting the physicality of New York's infrastructure, its five boroughs and the tristate area of the east coast but also the historical co-dependencies of the BOS-WAS region that by default ricochet throughout the Midwest zone. The change, if effected, is likely to highlight the weakening of interdependencies with the rest of the nation (Saunders 2017). The political and managerial impact of urban context will now take on new meaning for the USA as New York City and Washington D.C., who seemingly rejoice with their independent success, will be required to connect the dots of their urban zone or look to ignore their managerial legacy. In this visualization, we are left with a series of questions: Can the other eighteen finalists also have reason to hope that venture capitalist will soon recolonize them? What will the other two hundred and eight disconnected cities do? Or better yet, what will all other cities in the USA do as their network dissolves and shrinks in "relative importance"? A possible answer will be that Landlord-Bezos like Hsieh, or Gates will care to account for how their corporate actions impact the future of our nation or assume a responsible role in developing healthier, equitable living outcomes rather than rapid undertakings spit out by ill conceive rule-base inputs.

CONCLUSION: CITIES OF OBLIVION MS-OH RIVER

Cities are living proofs that aid us in discovering comprehensive outlooks about the history of human's innovations. Choosing to interrupt the habitual ways we navigate through city-making and the behavior of our collective undertaking requires meditative design praxis, specific knowledge about the urban narratives through time, and the know-how-to identify weaknesses before they are experienced in real time. Tony Hsieh, has already place-planners and urban-thinkers in his Downtown Project team and has begun to express many regrets for his initial outlook (Guzman 2016). So in understanding that not all cities are facsimiles of the other and that the developed east and west coast are not islands within a nation, will likely deter technocrats from acting alone or exempted from learning about the socio-economic interdependencies and geographies impacting the shrinking zones of the Midwest.

Many believe that a nation left to ruins would not serve Technocrats to strengthen their re-colonization goals and like Gottman in the past, our new tools and outlooks ought to aid us in reflecting beyond the city's presence and to help in understanding how to engage with the impacting Anthropocene behavior as herald by Vladimir Vernadsky in 1936 (Yeshayahu 2008). Within this reasoning, rule-based logic can account for different types of densities in

fundamental ways and differ from imagining how to mimic superstar cities. To sustain life, cities can look to engage technocrats in capitalizing on city-indexing away from "business as usual" standards and to engage in rebooting, restarting or error-correcting past failures. Thus, as technocratic scenarios continue to advance their pursuit of city-indexing practices, the nation needs to develop a stance on city-making praxises for its population and future environmental interests (Zaera-Polo 2017). Within this reasoning, rule-based logic can account for different types of densities in fundamental ways and differ from imagining how to mimic superstar cities; it can help adapt the urban form and to re-embrace city-indexing; it can identify its un-deterministic variables and seek to thrive from rule-based systems that engage in scientific-based experiments.

The resilience of city-making still holds a presence in the USA. In fact, while most Technocrats look for settlements in the megalopolis region between Washington DC and New York City the entire area ought to be on the alert as we believe the intent is to engulf instantaneous access to multiple major international airports, interstate highways, waterfront ports, public transports, tier-one educational systems, outstanding cultural outlets, and more. Imagine Bezos knowingly applying city-indexing to the content of what Jean Gottmann uncovered in 1961 and then consider his recolonizing advantage in placing HQ2 between Washington DC and New York City as government leaders offer incentives that devalue the sweat equity of hundreds of years of innovation developed by the production of city-making. Can an entire megalopolis turn into a rule-base sandbox? Undoubtedly, yes. And the Midwest must pay attention to the phenomena and seek to diversify its character and services per Justin Fox's analysis about the GDP and population index across the heartland of America (Fox 2018). So in a heuristic model, the feasible alternative for rule-based praxises will be to tool the reinvention of urbanity creatively, slowing down, mixing ideas, algorithmic intelligence; and learning to undo, reboot, error-correct while re-instituting city-making praxises. From such initiatives, one possible outcome is to in fact index the city's content; not to be atop a search engine's rankings or to ignore local citizens but to identify a road map that progressively and objectively assesses and benchmarks a way toward the development of improving Eden-like paradises.

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