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Urban Interventions & The Architecture Of System

Should the colouring of maps not be left to military strategists instead of urban planners? And should urban policy not be made by everyone subject to it? A concentration of power with political, economic and cultural elites deprives a large group of citizens from a voice in decision-making, and this in turn alienates this group from decisions, making them less inclined to abide by set rules. Inspired by technology, psychology and by almost 100 urban interventions in less well-to-do neighbourhoods in a dozen European countries, the platform City Mine(d) is developing ideas to tinker with the mechanics that consult or exclude citizens in the process of shaping cities, developing neighbourhoods and building new structures. [this talk will be a current state of affairs].

Cities are dynamic entities. The urban population of few decades ago is completely different from those who live there now; cities are, or work towards becoming, hubs in global networks of labour, capital and people; and the changes in goods and services cities input and output follow the volatilities of the world economy. So cities are dynamic entities. This is what is called a known known, and yet its prominence in both academic analysis and urban policy making are often limited to say the least. It might be because the consequences of this truism are so enormous that they tend to become the ignored backdrop of every picture imagining the city—or the proverbial elephant in the room—, or because it is taken so much for granted that re-articulating it is considered unnecessary. And yet.

Urban practices dealing with planning, governing or using the city provide little evidence of incorporating this conjecture into their work. On the contrary. Those thinking about how cities should be, how citizens should and should not behave, and how best to make use of the fullness of the urban experience, are inclined to think in terms of snapshots, fixed moments in time when things will be better, more just, or more interesting. And this is only all too human. Although attempted many times, thinking in terms of movement or flux is enormously difficult, and surpasses the skills of one expert, or even one field of expertise. Still if urban planners and designers are true about wanting to prepare cities for the challenges of the future, and no longer conjure up solutions to the problems of the past, they will have to start thinking in terms of dynamics.

Already in 1956, Jay W. Forrester at MIT developed the cross-disciplinary field of System Dynamics. It finds its origin in business studies, but has proven its usefulness in engineering, in Ecology, where it lay at the foundation of the epoch-making 'Limits to growth' and, notably in urban planning, at the request of Boston Mayor John Collins in the 1960s. In each City Mine(d) 17 mei 2013 – text based on TedxFlanders City 2.0 presentation <https://www.vai.be/nieuws/te-dx-salon-city-2-0> - presented at Zilele Architecturii 2013 – Cluj Napoka <https://land8.com/zilele-arhitecturii-2013-report/>

case, Forrester's key argument is that "we live in an on-going circular environment. Each action is based on current conditions, such actions affect future conditions, and changed conditions become the basis for later action. There is no beginning or end to the process. Feedback loops interconnect people. Each person reacts to the echo of his past actions, as well as to the past actions of others. System dynamics shows how things change through time."

As part of his work on cities, Forrester, emphasized a difference between policies and decisions. "Policies are the rules that determine the making of decisions. If one knows the policy governing a point in a system, one then knows what decision will result from any combination of information inputs. Unlike decisions, policies are timeless and enduring. If a policy is sufficiently comprehensive, it can continue to apply over an extended interval of time. [One should] train people in decision-making rather than in policy design.(...) some feedback loops in a model are broken and people are inserted to replace a policy that would otherwise have existed in the model. People then use their own intuitive mental policies to make decisions as a simulation moves through time." The idea of feedback loops, was already much older than Forrester's work. In the in the 1930s and 1940s, researchers at the Bell Telephone Laboratories and MIT, most notably Norbert Weiner, were working on the problem of how to hit an enemy plane in full movement. It took them until after 1945, but their mathematical solution to the problem gave rise to a discipline we now know as cybernetics, the study of the behaviour of systems.

All this to say that when it comes to imagining the future city, we should not express ourselves in plans or regulations, but rather in systems, that can guide decisions. From Forrester we can understand that it would not be very practical to involve everybody in the making of every decisions; but those decisions could be based upon systems of policies that do involve all those subject to it.

This brings me to a second part, the architecture of systems. In order to deal with the dynamic character of the city, those systems should not be made in a collaborative manner, but they should also be made FOR collaboration. In other words, they should be open systems, not sealed-tight black boxes that produce an output for every input. In this sense urban policy has a lot to learn from the development of the internet. The evolution is aptly described by Tim O'Reilly in his article "the architecture of Participation" in which he explores the idea of systems designed for user contribution, and in which he also coined the term Web 2.0, which afterwards took on a life of its own. What O'Reilly's argument then and now comes down to, is that producers increasingly see the benefit of having users alter the system. When O'Reilly wrote the article in 2004, the shift that took place was from an internet of website that could be consulted like a shop window, to an internet made to enable visitors to upload their own content, think MySpace, Youtube and then emerging Facebook. More recently O'Reilly pointed out how even the architecture of hardware is going in the same direction. Where the Iphone was a semi-open platform where users could upload their own apps, Google's City Mine(d) 17 mei 2013 – text based on TedxFlanders City 2.0 presentation <https://www.vai.be/nieuws/te-dx-salon-city-2-0> - presented at Zilele Architecturii 2013 – Cluj Napoka <https://land8.com/zilele-arhitecturii-2013-report/>

made its entire operating system Android Open Source for the user to tinker with.

This might give rise to the question: why involve the public in the creation of websites, the building of apps or the writing of code for an operating system. The answer lies in what is sometimes called Linus' Law, after Linux developer Linus Thorvald. Linus Law was actually described by Eric Raymond, another pioneer of the open source movement, and in its shortest version comes down to "given enough eyeballs, all bugs are shallow". It means that if many people look at a problem, there is most likely to be one to see the cause of the problem and another to find the solution. Outside the world of computer code, the law was best illustration in a chess game with the modest title "Garry Kasparov versus the world" in which the chess master took on 35,000 lesser gods who via computer could deliberate and agree on their moves. Afterwards Kasparov called this game one of the most exciting he ever played. And this because at one point the game reaches a position that is so rare that it hardly ever appeared on a chess board. Among the participants there happened to be a girl who not long before, as a form of mental exercise, had put this position on the board and had investigated the consequences. She knew what it led to, convinced the others of what would happen next, and gave Kasparov a run for his money. Another example is the disappearance of Jim Gray. Gray was an engineer who played a crucial role in the development of numerous electronic applications we still use every day, from bank card terminals to online encoding. His stature is best illustrated by the fact that Microsoft wanted him to work for their new research lab in Washington, and that when Gray declined on the basis of not wanting to leave California, Microsoft decided to move the lab to California. In 2007, Gray left in his boat the Tenacious and headed out in the San Francisco bay. Gray was never heard of again, and a massive Coast Guard search yielded no result. But Gray was an icon to a whole generation of engineers, and they were determined to use their skills to locate the Tenacious and hopefully Gray. With the coast guard and meteorologists, they managed to trace the possible routes the Tenacious could have followed. From the Canadian army the group obtained satellite images of the area under investigation. The task was daunting: the area was the size of France, and the object they were looking for not bigger than 2 cars. The satellite images were chopped up in smaller bits, and each contributor could download a tile and mark potential sightings. After a few weeks, they found three possible and one very probable location for the Tenacious. Again an example of how the concerted effort can lead to something the business community now likes to refer to as "the wisdom of the crowd".