Cities and information technology: Five features and five working hypotheses

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Abstract

The alloy of new information technology and new capitalism forges a powerful chisel carving the city. What are the features of this city? It is a city, we claim, where the real and the virtual melt together, where the new capitalism is liberated from the slavery of territory, and where liquid city becomes city without inhabitants. We discuss these claims in the first part of the paper. Then, in the second we lay down five working hypotheses for a process of *renovatio urbis*, and how we practitioners, planners and architects can and should actively contribute to it. The five working hypothesis go through the rediscovery of the sense of limit, participation (if and when possible), planning for the entire city, empowerment and involvement of social energies, and by being technologically modern.

Keywords

Information technology, urban planning, capitalism, city, renovatio urbis.

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Five features

The real and the virtual are melting together

In the past, computers were used for measuring, understanding and planning the city. Today they together with the Internet are no longer external tools used to read and interpret the world. Rather, they turned into its constituent part, in some sense they became the world itself, the city itself. No secret, we pretty much echo Mike Batty's *Computable City* (Batty, 1995) here.

It is indeed impossible and useless to distinguish places and communities in the real world from those in the virtual. There is a good deal of virtual in reality and a lot of real in the virtual. Imagine a group of people mobilising via Facebook gathered by a common cause, or fundraising – say – for Ron Paul's presidential bid through blogs. Do we take them as less real than a group of bikers gathering on a crossroad? And what if the bikers organised their critical-mass tour via Facebook? And what about the protests in Egypt, first kindled via Twitter? Internet has become a constituent part of mobilisations in the real world, and it sometimes is the paramount device to make them real, in the sense of making them become a common shared knowledge of facts. In this specific sense, many riots in China are doomed to remain unreal – unknown to the outside world.

Of course, face-to-face interactions convey a completely different set of attitudes and feelings than do forums, chats or videoconferences. And of course, forms and media of interaction matter, in general. But they matter less in our case. How people interact, the means of communication they use, if they enter in physical contact or not, if they do or do not define themselves as part of a community, all this is not as relevant as it is to detect if their actions and interactions spawn new information and new knowledge, if they give course to actions and transformations.

The scrambling creative disorder of these experiences explains why the so called processes of institutional participation promoted by governments usually do not work. Participation is a bottom-up process breeding its own rules. Groups formed in the

virtual world are generally extremely open. They are usually assembled for a particular problem (for example to exchange information on a rare disease), but often end up going beyond their initial and declared aim. By cultivating and expanding connections between people, they become a critical stepping stone in the process of mobilisation and organising – hence, they enhance the development of what some scholars call 'social capital'. But their strength is – at one and the same time – their weakness. Lack of structure, organisation and a low degree of institutionalisation often cause these groups to dissolve as swiftly as they were created. Such tendency is perhaps one of the most unpredicted aspects of the microelectronic revolution, which, as a matter of fact, was inspired by ideals of cooperation.[1]

Bright and dark sides of virtual communities

Virtual communities affect the real world in many ways – they create knowledge and products (software or games for instance), services, political and social movements (Benkler, 2006). They produce economic growth – contributing directly or indirectly to the GDP (Auletta, 2009) And they are a good example of how human activities in the economic or social domain – despite the *Great Transformation* (Polanyi, 1944) – are not exclusively driven by market norms, but also by other reciprocal activities (Aime and Cossetta, 2010) such as sharing, exchange of gifts or redistribution (Villiams, 2002) of resources.

Our electronic prostheses give us a dazzling sense of empowerment that comes with the greater capability to communicate, participate and have our say. Yet there is another side of the coin – there always is. A dark side, perhaps too emphasised in the media. True, there are Internet communities not accessible to the rest of the world, but there mustn't inevitably be something wrong with it. Such communities exist also in the real world –fan or game players clubs for instance – often with weak ties between their members.

More unpredictable are political and social consequences of the drifting break up of a common mass popular cultural and

political arena. American political satirist and comedian Stephen Colbert wittily invented the word 'truthiness' (of which there is a Dog Latin variant: 'veritasiness') to designate a 'truth' that is known intuitively from the gut because it 'feels right', no matter the evidences, facts or logic. Not long ago a small set of media outlets had much greater power in shaping the mass culture: few major national television channels and a handful of newspapers. With all the chances for cultural homologation, of course, these were nonetheless a shared political space where different points of view would encounter. The proliferation of alternative media, blogs and social networks is progressively eroding that situation. What may seem a welcomed breakup of monopolies and opening up of a greater pluralism and a more direct participation of the public in the debate, is also, undeniably, encouraging new forms of cultural and political tribalism: hanging out and crowding the same media outlets and groups with the like-minded while cutting off all the possibilities of encounter and dialogue with others may lead to original forms of radicalisation. The power of truthiness, rather than a debate. Even if, to be fair, it is not clear to what extent we should blame the new communication possibilities for some of that, and how much of it instead has to do with the deliberate advancements of specific economic and political agendas. After all, Rupert Murdoch and Silvio Berlusconi are on the whole mainly dealing in quite conventional, old-school media.

The liquid city

The contemporary city is – in many senses – more virtual than it was in the past, a sort of a 'box of speeds, in which the flows (any kind of flow) are the main aspect, a sort of liquid city' (Bauman, 2000) That does not mean that it has lost its material characters – on the contrary, the city is now more concrete than ever. It is, however, clear that it has gained new intangible dimensions, increasing in number and importance. Flows of goods and people are accompanied by flows of ideas and services. These movements, in turn, imply great social, economical and spatial effects (Sassen, 1994).

The moment in time in which we live is, of course, not the first era in history in which the city is intensely crossed by flows of people, goods and information – intense flows are a common feature of mediaeval, renaissance and modern cities. However, in the past flows were always linked to space and places – places for living, producing, trading, entertaining, talking and chatting, making decisions, and administering. These were activities by different people (by age, social class, gender, place of origin etc.) who were nonetheless physically, emotionally and culturally entangled with the same places (for a period of their life or for their entire life). In contemporary cities, the material dimensions, the places, vanish as the city is seized by virtuality and liquid flows. This is a fundamental change taking place in the post-Fordist liquid city.

The liberation of the 'new capitalism' from the slavery of territory

The fourth aspect of the contemporary city – related to the vanishing of the physical dimension – is that of the 'new capitalism' which loosens and breaks its anchors in the territory. It is free, mobile, fickle, intangible, and belongs to 'the entire world' rather than to any specific place and country. Its architecture is of no relevance to the context. The old capitalistic world needed materiality, an architecture and political institutions to both represent and exercise its power and legitimacy: that was the golden epoch of the great Capital cities.

In the past, the capital employed in production and was highly immobilised in places. In the contemporary world, the capital flows freer and hardly belongs to any specific place. The capital does not require the construction of physical monuments to embody power, and is not as apt as in the past to show great interest in the space or physical places: the demigods of financial capital live at their private Olympuses, obsessed as they are with skyboxification (Sandel, 2012), and are not interested in the city as a shared locus of communality.

Mind you, it is not that building and rebuilding cities have ceased to be an essential building block of capital accumulation. That is

so as it ever was: it is telling that the 2008 economic meltdown came out of an startlingly impressive housing boom and bust, which is precisely the reason for its severity (Harvey, 2010). Rather, the relevant story here is that the capitalist class and their material base – means of production and places of living – were in the past constrained by the primitive technology of the time to be bonded to specific places and territories, sharing them with others. The information technology was a technological precondition for unshackling that constraints and shellacking those bonds. Isn't the overnight withdrawal of capital in the 1997 East Asian financial crisis a paramount epitome on the grand-scale of just how fast and effortless can breaking of those material, spatial bonds be? To be sure, the information technology was not the only cause of that episode; a whole regulatory and governance architecture had to be in place, appropriately tweaked and tilted to make it possible (Stiglitz, 2003). The sole cause, no; a technological precondition, yes.

The city without inhabitants

This brings us to the fifth feature of the contemporary 'post-Fordist' city (Amin, 1994), a 'city without inhabitants' and, hence, 'inhabitants without a city', made possible by the use of information technology in production and consumption. This dispels the form (*urbs*) as well as the content (the society, *civitas*) of the city. We are losing the city in its traditional form as its urban commons get appropriated (Harvey, 2012). The distinctively urban qualities of cities are impoverished through modern forms of enclosures and by the imposition of spatial organisations that discourage authentically public uses by the local residents in favour of profit-making and capital accumulation. Rather than citizens, in this way cities gets inhabited by consumers. The producers who used to live and thrive in cities have left for the enormous sweatshops of the immense Asia, and the simulacrum of the city becomes an engine and a temple of consumption or even a ghost city – a jam with some lump designed by a gang of archistars. By losing citizens we also lose politics and democracy.

Five working hypotheses

The five features of cities we just discussed force professionals involved in managing the transformations of cities, territories and landscapes to face new tasks. Architects and urban planners should no longer accept to design this unauthentic rubbish. Neither should they continue to cooperate in the destruction of the city-for-citizens, using the rest of the quagmire as a building material to develop 'beautiful' and 'inspiring' places. Instead, our role should be to contribute actively to the process of *renovatio urbium*.

Perhaps there some are come useful bits which, newly combined, could become our starting points for the *renovation urbis*: there are experiences – occurring in new kinds of communities, often emerging in interstitial spaces from spontaneous practice of mobilisation and solidarity – capable of achieving social cohesion and reshaping spaces through urban activism. Many experiences may well be just incidental and – as a matter of fact – they rarely strive for mutual coordination or give themselves a stable organisation necessary for reaching wider and long-term goals. They often do not develop around an explicit political project, vision or culture. This is precisely why they could benefit from experts and professionals, capable of listening and giving them support and expertise (Paba, 2002; Paba, 2003).

We need to build a structure around these incidents and fragmentary flares of *civitas*. A structure capable of offering continuity (in time and space) and rules, to enable the creation of new public spaces, buildings and housing of high quality. The *Best Available Technologies* should be applied to create spaces and dwellings for everybody, for young people, adults, the poor, the middle class. Policies are needed for the *urbs* and *civitas* that welcome different populations, not merely to grant a piece of land to each, but permitting the dialogue, the weaving, the hybridising with the universal rule of the good citizenship. These cannot by be *public* policies: such objectives cannot be achieved though the market. The construction of a new citizenship is the only viable way for forming and arriving at the new *urbs*.

It is indeed a difficult but necessary task to reshape public

policies, and the most important question is this: who are the citizens?; what does citizenship mean in the fragmented city? The absence of an answer to this question is at the basis of the so-called 'crisis of democracy' (Crouch, 2004). As a matter of fact, the conflicts have grown even stronger with the crisis of democracy. Citizens are often sensible and react rapidly. This is always a good sign also when the reaction is 'wrong'.

'Informed citizens' usually deal with single, generally strictly local issues. Often they do not perceive themselves as 'citizens', but rather 'users' or 'consumers': they rarely act to gain power or control, but rather they ask services or freedoms. They also rarely speak for other people, neither do they have a long view in terms of time and space. Hence, their voice speaks for their claims *hic et nunc*.

Then there are voiceless citizens who in general do not find someone else to lend them voice. This might be a greater challenge, but still is not the greatest issue. In fact, we have powerful and low-cost tools at our disposal which could beneficially be put at work to facilitate the debate, decision making, implementation and simplification of bureaucratic systems.

The real challenge to citizens' right to be included in public policies is the power of the urban land rent, especially as a materialised form of financial capitalism. This is the true enemy responsible for the destruction of genuine contents and values of the urban dimension. Go and gaze at the various forms of fragmented or defective cities you can find in their purest form: there are *banlieues*, then there are old-town centres transformed into backdrops or historical theme-parks, then go and see sprawls and 'exploded city', or the planet of slums (Davis, 2006), or the *griffes*, or the displaced Olympuses (places created by archistars for modern demigods in the Hephaestus's workshop), next look at the gated communities, and at all the centres for mass consumption, and at enormous malls and outlets at the junction of highways, and at scattered landscapes of buildings developing around new hubs of low-cost airlines, and so on. All distinctive non-cities, all 'discomposed (formless), generic, segregated' (Maciocco, 2008).

All these rather dystopian 'new-cities' have been generated by the financial capitalism - the engine of the globalisation of the 21st century– in its strive to capture the maximum land rent, without any *urban* planning. This is an era in which true wealth is acquired without work and merit (Harvey, 2010). The money from financial speculation is the 'honey and nectar' of moderns demigods who live a disembodied life that flow from a place to another looking for their temples and alcoves entailing the economical and symbolic devaluation of all activities and space related to work.

This seed found fertile ground in the *polis,* and eventually generated the crisis of democracy. What will be the future of the large portions of enormous cities without *civitas* all around the world? What will be the future of the cities scattered throughout the continents? The operator in Bangalore controlling air traffic for the rest of the world, the shoe producers of Indonesia and Vietnam making all the *Nike* sneakers of the world … Where do they belong? Which city are they citizens of? And of which nation? Where is the centre of power that rules their lives and establish their wages?

Cities will continue to exist as long as there is human civilization, but in what form? Isaac Asimov's urban utopias show us two extreme alternatives; the incredibly crowded life in the *City* (the entire World) and the profound loneliness in the space colony of *Solaria* (in which the city disappears together with all human relationships: see Pedna, 2004 and Asimov, 1953, 1957). Perhaps there are also other possible outcomes.

What will be the title of town and regional planners of the virtual, telecommunication town? The kind of town Mitchell called the *City of Bits* (Mitchell, 1995), in a paper that proves to be very useful in outlining the possible futures of the profession. The role of town and regional planner – wrestling in the midst of city's local economy, the crisis of the nation-states, the globalisation, and the virtual – cannot have points of reference in the past, or in the minimalism of the 'plan-as-you-go' school, nor in the megalomania of the demiurgic, old-school comprehensive planning.

Another set of challenges have to do with the theoretical

problem of the 'limits of the system'. The limits refer both to the spatial and to the temporal dimension. And finally, always lurking is the risk of technological cretinism and the infinite *querelle* amongst doom-mongers, conformists, and do-gooders.

Let us then list five working hypotheses.

Rediscover the sense of limit

A limit does not mean that we have to resign and restrict ourselves to what already exists. The awareness of a limit does not undercut the effort to achieve, nor does it prevent us from trying to transcend of make *that* limit irrelevant in another contexts – on the contrary; creativity is enhanced by the existence of constraints. To reevaluate the much disdained Bacon[2] who once said 'the nature can be commanded only by obeying her', the governing of real processes resides is in the 'astute' ability of the 'pilot'. An awareness of the bottom limit is necessary. In the event of social and political clashes, the contenders (at times irredeemable antagonists) combine the nature of production and power relations with an outline of the regulatory constraints; this combinationdetermine and define the area where it is possible to intervene, but where the ability of the planner comes into play.

Do participation if and when necessary and possible

One of the problems with the processes of participation is the identification of the area of interest: who is entitled to participate? The local community? What should be done in a far-off, sparsely populated places? Take for instance the uninhabited island of Asinara in Sardinia. The nearest mainland community and municipality – Stintino – is not administratively responsible of the island, although some descendants of the ancient inhabitants are settled there. The island is instead part of the municipality of Porto Torres, which on the other hand is only partially in charge of the island, because Asinara is also a National Park, with its own management bodies. We can also

imagine ways in which others may express interest in the Asinara island and its gulf: the local tourism system, the Regional council of Sardinia, environmental associations, perhaps the scientific community. Who should be involved in the participation? Which local communities, only the permanent part of them? And if we pack them all together, who is there to defend the interests of future generations and of the of mankind in general? It should be mentioned here that participation – in its original sense of involvement of subjects in the decision process – is not always necessary. Sometimes a good communication, a thorough information, or consensus-building processes are preferable (by the way, these are all very important activities, which only out oflaziness or mystifying intents can be defined 'participation'). In still some other cases it may be more useful to open up a negotiation. Although it is not 'participation' *stricto sensu* since it leaves the sole responsibility of decision to the government, it does involve 'actors' in the process of defining goals and actions.

Plan for the entire city

The field of activity for architects and planners must be the *entire* city. On August 25, 2005, in a scruffy condominium in a central area in Paris (near the Place d'Italie) seventeen people, of which fourteen children, lost their lives in a massive fire that swept through the seven-story building. All were regular immigrants from Africa. This is only one tragic evidence that at the core of one the most important 'global cities' there is a dramatic housing problem. Unfortunately, this is the case in every contemporary city where public policies to ensure the right to housing for all inhabitants do not exist or were abandoned. Public policies for housing once used to be the most important focus of urban planning, especially after the First Word War: Martin Wagner was leading the actions of Berlin Municipality for housing; in the red Wien of that time, the great *Hof* arose (Tafuri, 1980). Certainly, it was a system devised for the Fordist city, but at least it was part of a conscious and elaborated plan for the entire city – not only housing, but also public spaces, systems of mobility, symbols and huge green areas. And one of their main objectives

was to control the urban land rent. In these cities, the spaces for production, entertainment and political deliberation were conspicuous: they all served to establish the *genius loci*. It is only in such a comprehensive vision that the creative act of urban project and design can play its role: liberty and freedom are enhanced in the grid of rules of the public city.

Empower and involve social energies

We have already stated that the virtual and the real worlds are multidimensional. Multidimensionality can be discerned in the organisation of production, and in how people organise their lives and their social networks. It may well be accurate that 'there ain't no such thing as a free lunch', but this doesn't imply that the lunch must be paid with money; other economies exist, based on cooperation, sharing and donation (an offered lunch is not free at all). These exchanges are common on the Internet, but exist also in the 'real world'. Further informal yet relevant 'ethical' economies exist. One good example are the time banks with their time-based currency, another are the local exchange trading systems. All that glitters is not gold, of course. It may be easy for the dominating economical system to use, digest, corrupt and transform these practices assimilating them to the economy of profit. Fortunately, the desire of millions of people to think and act freely and autonomously is often stronger. Hence, alternative systems develop offering the possibility for more people to create alternative kinds of wealth, products of quality, lifestyles, ways to imagine and design the future. *Open source, free software*, *peer to peer*, *blogs* and *Wikipedia* are just few examples. How of Earth can and should cities be planned and designed without the involvement of such social energies and autonomous empowerment? They can't and shouldn't.

Don't look back in anger

Last but not least, new professional methods and technologies should be fully utilised to approach the future. In the past, some professionals used to boast for being able to distinguish between

various pencil producers merely by looking at the line drawn or at the shades of the colour. These professionals may be reluctant to master new methods or to understand their sophistry. We believe that a series of tools for analysis, evaluation, simulation, management and monitoring are useful to the planner and can make her work more effective. Questions would be answered more rapidly and choices would be more appropriate. This would be a sort of a 'helmet' of *Augmented Reality*; a set of instruments enhancing the vision and enriching it with the data, information, hypotheses, alternatives and scenarios.

No answer can come only out of technological solutions, and we must ruthlessly fight and even mercilessly deride any technological cretinism. But no rearguard nostalgia of return to the quaint good old times is possible. We want to be very clear about that: *renovatio urbium* requires us to be absolutely modern.

Notes

[1] See, for instance: Sterling (1992), Freiberger, Swaine (1984).

[2] The criticism of the positivist *vulgata* should not involve the fathers of modern science since experience tells us that the modern era is clearly much better than the era in which superstition and fanaticism reigned with no respect for the environment.

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