

WOULD URBAN CULTURAL HERITAGE BE SMART? CULTURE AS A LAND FACTOR AND ITALIAN CITIES' SMARTNESS

Mario Neve

Department of Cultural Heritage of the University of Bologna, Bologna [IT]

mario.neve@unibo.it

Abstract

The issue of cultural heritage and the topical subject of “smart cities” don’t seem to be a perfect match when it comes to the prevailing definitions of the nature of cities’ *smartness*. The strong accent and focus on information production and management — then ICT centrality — in basically any mainstream definition of smart cities overemphasises the *computing* version of intelligence, a version which represents an enduring research study field of cognitive science: the idea that human cognition is basically dependent on logic and *calculation*, then it can be studied and simulated by computing machines.

The essay adopts a different notion of smartness: one which associates brains, bodies, and things, according to the “extended-distributed mind” and “material engagement” approaches. In such a perspective, urban cultural heritage reveals itself as the core of *cities’ intelligence*: as the living interplay of bodies, minds, and urban built environment all interacting in giving birth to what is usually called “intangible cultural heritage”.

To develop such an approach, focusing on the current trend of regeneration projects in Mediterranean cities, the essays at first debunks the idea of urban cultural heritage as an (almost exclusively) economic asset, which mistakes city’s smartness (or “creativity”) for the conscious dependency on monopoly rent market laws and tourism flows and fluctuations.

Secondly, the essay presents an example of complexity of urban cultural heritage, namely the Italian one, outlining the cultural, geographical, and historical contexts from which it comes, in order to exemplify why considering to make a city ‘smart’ (or enhance its supposed smartness) in concentrating projects and resources primarily on ICT technologies is meaningless: because the relations put in place by urban cultural heritage are webs of connectivity to be studied taking into account their wholeness.

Finally, on the ground of the underlying assumption that cities are the oldest known form and model of *artificial intelligence* (within the framework of the “extended-distributed mind” and “material engagement” theories), the essay points out the urgent necessity of interdisciplinary research projects being able to look at the interrelations among *all* cities’ parts (including peripheries, decaying zones, suburbs), to bring out the potential smartness any city has.

Starting from urban cultural heritage as the very core of cities’ *mind*, meant as a coevolving assemblage of built environment (*urbs*, the city of stones) and people (*civitas*, the city of human beings), research can play a major role in hampering the speculative exploitation of urban milieus.

Keywords: cultural heritage, place/space, cities’ smartness, artificial intelligence, geography, extended-distributed mind, material engagement theory.

Preliminaries¹

How should we convey cultural heritage? And, above all, should we? Taking into account Hannah Arendt's metaphor, we should. To prevent the occurrence of next generations forced to be “heirs with no testament”:

The testament, telling the heir what will rightfully be his, wills past possessions for a future. Without testament or, to resolve the metaphor, without tradition which selects and names, which hands down and preserves, which indicates where the treasures are and what their worth is there seems to be no willed continuity in time and hence, humanly speaking, neither past nor future, only sempiternal change of the world and the biological cycle of living creatures in it (Arendt 1961, 5).

Following Arendt's metaphor, a testament is the manifestation of a will, a choice. Still, in the case of what UNESCO considers “tangible” cultural heritage is in a way unavoidable that transmission occurs in any case, with or without testament, because basically, when it comes, e.g., to landscapes, choosing of *not* taking a stance means to *have taken* a stance anyway. A stance with many, mostly unwelcome, consequences, as it happens when we are reminded of the vital role played by human factor even once we are confronted with natural hazards.

In an age obsessed with communication - which means the ever growing and extending dimensions of horizontal connections through space - we have not to forget, not to overlook the other pan of the balance: the vertical transmission through time (Debray 2004); which means, in turn, taking care of the ways through which knowledge is generated and shared. Actually, the issue concerning the conciliation, the balancing of communication and transmission (above all, as to the question of attention in education: Crawford 2015) has undoubtedly little appeal today.

Specifically focusing on urban cultural heritage, it can be said that, indeed, places are full of time. They show, if we pay attention to them, their different “time layers” - to use Reinhart Koselleck's metaphor (Koselleck 2002) - that let them making sense for us, as a concretisation of people, activities, relations, matter, ideas, words, images, and so on.

The physical places we live in every day make sense for us because we feel them through an inextricable stuff made of sensations, thoughts, memories (unconscious mostly).

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For such a reason, places can be interpreted as an important component of the collective, social memory of a group or community.

The limited places of our everyday life - the streets of our town, workplaces, home, squares and monuments, and so on - are *naturalised* by cultural habits, routines, meanings acquired by education or social relations.

Historically, in this perspective, modern age marked the beginning of a new experience of places. As transport and communication systems gradually evolved, the relationship between places and knowledge changed.

This means that for a long time social situations and places were considered closely connected, and that imagination often was the one and only way to escape, as it were, the constraints of places' boundaries.

The relationship between physical place and social situation still seems so natural that we continue to confuse physical places with the behaviors that go on in them (...) Before electronic media (...) places defined most social information-systems. A given place-situation was spatially and temporally removed from other place-situations. It took time to travel from situation to situation, and distance was a measure of social insulation and isolation (...) Communication and travel were once synonymous. Our country's communication channels were once roads, waterways, and railroads. Communication speed was limited to the speed of human travel (...) A place defined a distinct situation because its boundaries limited perception and interaction (Meyrowitz 1985, 116).

Urban environment is a mix of different pasts, some of them are official pasts, acknowledged by authorities as part of the history of places (and often characterised by some landmark), some of them are personal, biographical pasts, the personal stories everyone writes and tells by living his or her life (Stiegler 2011).

Places, then, are *living* places thanks to all relations people build to cope with such web of different pasts, in order to feel themselves at home and understand correctly and share the codes and habits which make what it can be defined roughly as the *culture* of the place. Put differently and in a more accurate way, culture for a long time was a *land factor* (Brose 2004). In a sense, it can be affirmed that cultures link themselves to places quite naturally, because of their basic function in the evolution of human groups.

Culture is what stands between us and the environment, so creating our world, with all its hierarchies, priorities, values. We constantly try to reduce the informational indeterminacy to orient ourselves, producing milieus in which cultures play the role biology plays in the environment, assuring a relative stability of conducts.

In such a view, the focus is on dynamic relations and the role of the *technical milieu* in translating (not simply conveying) feelings, memories, expectations, into actions and beliefs.

Urban space synthesises insofar as it builds a space of *common sensitivity*, a space of feeling together. It is the *materiality*, the reified ideas, and cultural traits (Stone, Lurquin and Cavalli Sforza 2007) that make possible the sharing of experiences. Things (namely, the built environment) materialise the relationships among individuals and constitute a social memory. As still vividly summarised by Hannah Arendt:

To live together in the world means essentially that a world of things is between those who have it in common, as a table is located between those who sit around it; the world, like every *in-between*, relates and separates men at the same time (Arendt 1958, 39).

Let us take the example of *traditional knowledge*, which is still part of peoples' daily practices in many countries, though often concealed or marginalised by the processes of modernisation: the oases of the Sahara, the reservoir systems of Yemen, the Iranian *qanat*, the irrigation systems in China, up to the Ligurian terraces and ravines of Puglia and Basilicata in Italy.

What radically distinguishes the landscapes we see today from that of, say, Lorenzetti's cycle of frescoes of *Good Government* in Siena, is the *gap between places and information*. Traditional knowledge, which has produced landscapes like the one portrayed by Lorenzetti, belongs to periods that maintained the overlap between *knowledge* and *practices*, ensuring consistency between the produced *territory* and its *territoriality* as a system of relations. Under these conditions, territoriality was still, in part at least, strongly marked by relations that gave great importance to such places as sources of identity. There was consistency between territory and territoriality because there was consistency between the actions of a society and the culture it referred to (Raffestin 1986: 183).

This is what made culture, or, if you prefer, tradition, a *land factor*: being the real filter, the true boundary between different areas.

But it is the declining role of the land factor of culture which is our main concern here. The fact that the bond between places and cultures has been put in crisis at first by the extension of transportation systems during 19th century, and almost cut later by the electronic media of the 20th and 21st centuries, foreshadowing a situation of cultures circulating globally with no links with their generating contexts.

It is the phenomenon that Elmar Holenstein describes as the “giving out of the mediation in intercontinental connections” and “de-regionalisation of cultural differences” (Holenstein 2004). Due to the pervasive and growing presence of ICT (especially mobile) technologies, today you can have access to cultural differences virtually from any place. The encounter with other cultures that once meant travelling, it is now practised in browsing the Web, joining social networks, and so on. As a matter of fact, as noted by Olivier Roy with regard to religions:

The territorialization of religions resulted in their acculturation, or inculturation to use a more recent term (they establish themselves within an existing culture). Christianity and Islam respectively had an undeniable Westernizing and Arabizing effect (...) But nowadays, “religion” circulates outside all systems of political supremacy (...) in order to circulate, the religious object must appear universal, disconnected from a specific culture that has to be understood in order for the message to be grasped. Religion therefore circulates outside knowledge. Salvation does not require people to know, but to believe. Both, of course, are far from being incompatible in religions which are embedded in culture and where theological reflection is stimulated by contact with philosophy and literature. But not only is this connection no longer necessary, it also becomes an obstacle when it is a matter of circulating in “real time” in a space where information has replaced knowledge (Roy 2013, 5-7).

Culture-from-anywhere does not mean culture-as-a-whole, since, the price to pay is the loss of any local feature, any characteristic, and virtually untranslatable, trait of people, places, and cultures; in brief, almost any meaning that face-to-face interaction usually produces. It is like the passage from local idioms to a national language, which allows much more people to communicate with each other, provided that are eliminated all elements too connected to specific, place-dependent contexts.

Even so, it is still true that “all experience is local” (Meyrowitz in Nyíri 2005, 21) and knowledge is also made of social practices that make possible specific applications of an innovation, and above all constitute the primary sphere in which workers are trained and further knowledge is developed. Electronic media can disseminate the expert knowledge through accurate procedures, but can hardly replace the practices, which always involve some improvisation, creativity, and shared time.

I realise that the reader could object that in order to tackle a topical popular theme like “smart cities” I am going all round the houses, but I beg to differ.

The fact that the world population is predominantly urban now, for the first time in human history, is no longer a novelty. What is less known is the fact that statistics refer to an idea of the city which is

outdated. In reality, a larger amount of people than the statistically certified ones live in dimensions and relations once considered exclusive to the city.

In 2000, William Mitchell epitomised the impact of the Web on urban life by using the catchphrase “Urban Life, Jim – but Not as We Know It” for the subtitle of his bestselling *E-topia*. The question is that the meaning of *city* has changed dramatically indeed, but not exclusively due to the impact of communication and information technologies. The worldwide spread of citified lifestyles and expectations we are witnessing nowadays cannot be exclusively associated any more to the city as intendeds in Western culture: i.e., the European or American city.

The issue of urban cultural heritage itself concerns more and more countries of all continents, partly due to the pressure exerted by globalisation, partly to the growing economic exploitation of cultural assets (with the correlative bottom-up emergence of stances concerning the community dimensions of those assets).

My intention, then, within this general preliminary framework, is to approach the topic of smart cities, particularly as far as Mediterranean cities are concerned, starting from the difficulty in finding an universally valid and accepted definition of what a city is.

Smart cities?

From the point of view of European historians, already in 1963 Roberto Lopez meaningfully gave voice to their frustration in finding out a formula to define city's essence:

Cities are hard to single out. They do not differ from other agglomerations as men from dogs or black from white. In between, there is a broad grey area of inhabited centers that meet some but not all of the tests (...) To assess the historical role of the city, any definition or classification based solely upon figures will not do. A city is a unique corporate entity. Not unlike physical individuals, it lends itself to generalizations which can be quantified or reduced to formulae, but formulae are valid only within the context of one specific historical period and geographic home. Quantity does not adequately represent quality. There has been only one Athens, one Florence, one Paris (...) ‘A city is a city is a city,’ one is almost tempted to say (Lopez 1963, 28, 30 and 32).

Still, when it comes to the currently very topical subject of smart cities it is striking how plain and simple are the definitions proposed.

One of the most renowned interpretations sounds: “Smart cities are those that are able to shift from being just reactive to being proactive, based on the use of better information” (Eric Woods, cited in

Granelli 2012, 39) and is clearly concerned with the improving of cities' life by exploiting information technologies: basically, a city is smart when has better information available and makes good use of it. Another renowned one defines a smart city as one that "uses information and communications technology (ICT) to enhance its livability, workability and sustainability" (Smart Cities Council 2015, 9).

The early definition by the European Commission, instead, while still relying on technological networks, was focused on the subject of energy and the transition to sustainable energy technologies (European Commission 2012).

The Smart City Model, developed by a group of universities led by Vienna, has greatly influenced the way European Union's institutions conceived this topic. Fact is that such model reduces the complexity of cities to six characteristics, so expecting to condense the whole complex urban life into the sum of its would-be basic features, like in a building blocks toy (Giffinger *et al.* 2007).

As noted by Russo, Rindone, and Panuccio (2014, 981), definitions have become more and more inclusive, but basically not taking on the complexity of urban phenomenon:

A Smart City consists of not only components but also people. Securing the participation of citizens and relevant stakeholders in the Smart City is therefore another success factor. There is a difference if the participation follows a top-down or a bottom-up approach. A top-down approach promotes a high degree of coordination, whereas a bottom-up approach allows more opportunity for people to participate directly (European Parliament 2014).

The problem is basically that the idea of smart city itself comes from the world of corporations, specifically IBM and CISCO, and the basic tenets of the model and the language employed has come accordingly (Granelli 2012).

It is not a chance that in the case of the project by IBM for Italy it was used the expression "smart towns", so misunderstanding the nature of Italian cities, whose smallness, when compared to the size of great cities IBM had in mind, was interpreted as if they were indeed urban but at a backward stage along the obliged path to growth. This is a crucial mistake in misinterpreting the concept of *scale*, but on this subject I will return by the end of the article.

For the moment, I have to ask the reader to accept a very concise formulation of my thesis, apologising in advance for not elaborating properly on the subject due to the limited space at my disposal and the ongoing character of the research on which this essay is based.²

So, what is city's *smartness*? Which kind of *intelligence* can be ascribed to cities, not reducible to the computing³ version put in place by the definitions already cited?

Given that the most relevant theories about human mind have established that our minds are not just computing machines processing information, but indeed they are producers and processors of *meanings* (Rowlands 2010, Tagliagambe 2008, Damasio 2003), and that, as previously showed, the relation between people and urban places is a complex one (not just a mutual relation but a *coevolving one*) I contend that not only basically *any* city is smart, but also that the issue at stake is which options of coevolution planning and decision making select among the many evolutionary paths a city can follow; and, as a basic tenet on which the previous statements ground, that the city, seen as an original human environment, is possibly *the oldest known form of artificial intelligence*, which means, as a consequence, that the richness of urban cultural heritage is hardly represented by the mainstream definitions that I quoted earlier.

In order to develop, however in general terms, my argument, I will follow three steps:

- first of all, pointing out the necessity to not mistaking city's smartness (or "creativity") for the conscious exploitation of urban cultural heritage put in place by the current trend of regeneration projects, which intentionally miss for profit the same mark which the idea of smart city should enhance;
- secondly, outlining the cultural and historical contexts from which the Italian urban cultural heritage comes, as an example of the complexity of urban environment;
- finally, I will return to the question of city's smartness, trying to indicate a possible line of research.

Debunking the myth of Mediterranean city

The ways in which Mediterranean cities were represented, the fact itself that so many different urban settlements were gathered together and sorted out under a single common label, are useful examples of the misdirected uses of the past, and of how even well-meaning interpretations can be more detrimental than intentionally spiteful ones.

² A more developed, though provisional, argumentation can be found in my latest book: *Europe's Design: Mapping European Identities through Time*, Springer Publishing, in press.

³ Or their related bureaucratic version.

According to Cattedra, Governa, and Memoli (2012), the paradigm of the so called “Mediterranean city” developed into a three-tier device, whose poles are the “unitary image”, the “image of divergence”, and the “image of the recomposition”. As metaphorical catalysts condensing the mainstream interpretations of the urban phenomenon in the Mediterranean, such images would have appeared in different historical moments, while coexisting later in a somewhat contradictory interplay. The complex picture portrayed by the authors must be here necessarily summarised roughly.

The first image is an outcome (probably one the most enduring and influencing) of the essentialist and continuist interpretation of a supposed “Mediterraneanity” which informs the works of geographers like Vidal de la Blache, Sorre, Sion, and historians like Braudel or Aymard: the urban Mediterranean is a unique model of urbanisation, based on the recurrence of a morphological pattern, a preferential coastal location, and a long-standing networks of exchanges. The Mediterranean city would be cosmopolitan and a cultural model as a cradle of civilisations.

The second image opens a gap in such unitary model, and reveals the bias towards a reading of Mediterranean urbanism through the screen of a modernity supposed as an exclusive distinctive mark of “Western” cities (Benevolo 1993, in part. XVII-XVIII). The Mediterranean city is identified with a stereotypical pattern – largely drawing on the Orientalist rhetoric of “cultural specificity” carefully investigated by Said – which is summed up by the “Arab-Islamic” or “Eastern” city. Privileging the identification of urban morphological and functional features with the cultural-religious traits, such alleged specificity would explain the “resistance” of Mediterranean cities to modernity, to the political form of nation state, in a word its “delay” when compared with “Western” cities, considered as the original and natural-born model of modern urbanism.

Paradoxically, while mainly produced by the reaction to the decolonisation phase within the framework of Cold War, such image was endorsed even by some schools of thought in South and Eastern Mediterranean as an alternative, opposing cultural model, which could re-evaluate the supposed common Arab-Islamic background.

Beyond the efforts made by many authors to remove the preconceived idea of spatial anarchy as a specific character of the Arab-Islamic city, it has succeeded in establishing itself as a key variable and has been conceived as a fact. Within this process, urban disorder - from morphological, economic, and social points of view - becomes functional to the achievement of another urban taxonomy which strongly contributes to the disjunction of the unitary image: the paradigm of 'the Third World city', 'the city of underdevelopment', 'the in-development

city', or 'the city of the South'. These categories, different but similar, are linked to the recognition of the role of the newly independent States on the global scene during the fifties and the sixties of the twentieth century (Cattedra, Governa, and Memoli 2012, 44).

Finally, the third image has arisen recently as, in a sense, a retrieval of the myth of *Mediterraneity*, carried out as a way to re-evaluate the supposed “cultural specificity” of Mediterranean heritage as a postmodern rhetoric, and in light of the recent trendy focus on cultural heritage, as a “creative resource”, so that the “informality” of Mediterranean urban milieus could take the role of a value in itself, meaning

by the term informal: social, ethnic, and linguistic hybridization, musical and culinary tradition, uses of public spaces, self-organization of inhabitants in the absence of the State and public authorities, and so on. Within this perspective, the characters of pre-modernity are seen as opportunities and assumed as new values (...) According to this perspective, the anti-planned practices and the creativity of the informal - which could be considered as some of the main dimensions of post-modernity - would have their origin in the Mediterranean (Cattedra, Governa, and Memoli cit., 45).

Fact is that today the supposed cosmopolitan nature of Mediterranean cities has been enlisted as an economic resource.

As effectively summed up by David Harvey,

the knowledge and heritage industries, the vitality and ferment of cultural production, signature architecture and the cultivation of distinctive aesthetic judgments have become powerful constitutive elements in the politics of urban entrepreneurialism in many places (particularly Europe). The struggle is on to accumulate marks of distinction and collective symbolic capital in a highly competitive world. But this brings in its wake all of the localized questions about whose collective memory, whose aesthetics, and whose benefits are to be prioritized (Harvey 2012, 106).

In the case of Mediterranean cities, through the promotion of international events like Olympic Games, World Cups, World Fairs, G8, urban renewal programmes concerning cities' disused areas (like docklands) or considered in decay (like historic centres), European programmes like the European Capital of Culture, we have witnessed a huge and enduring flow of public and private investments which radically has been transforming large areas of Mediterranean cities, on both shores, mostly led by the monopoly rent logic.

Especially in the case of waterfronts and historic centres, the extensive use of “territorial marketing” and “city’s branding” has produced very popular cultural places, like the MACBA - Museum of Contemporary Art - in Barcelona, the MADRE - Museum of Contemporary Art Donnaregina - in Naples, but also the huge project for the Marseilles’ waterfront *Euroméditerranée*. But the same logic also applies to the regeneration programme in Tunis, as well as to the waterfronts’ projects in Tangier and Casablanca, all mainly driven by investments of global players coming from Gulf countries (Cattedra, Governa, and Memoli, cit., 49-53).

In all these cases, what Harvey calls “the art of rent” (Harvey cit., 74-5, 100-5) is the very engine of change, a force that cannot be simplistically dealt with as a resource to be exploited and controlled to produce the “urban commons” necessary to reduce the gap between the city of stones (*urbs*) and the city of people (*civitas*). Such programmes indeed, while enhancing disused or unoccupied areas, through the *spillover* effect of the rent increase nearby property prices in surrounding districts, so reducing affordable housing chances in favour of high-income residential lots, and forcing the relocation of low-income residents.

It is curious enough that in this recent trend – of Mediterranean cities competing to affirm their brand in order to attract investments – it is quite easy to find similarities with a widespread and trusted strategy of industrialisation, which caused mainly in the 1960’s a radical transformation in many Mediterranean regions.

Such strategy was based on an interpretation of the “growth poles” theory originally developed by the French economist François Perroux (Perroux 1950).

The main tenets of such theory are:

- economic development, or growth, is not uniform over an entire region, but instead takes place around a specific pole (or cluster);
- this pole is often characterised by core (key) industries around which affiliated industries develop, mainly through direct and indirect effects;
- direct effects imply that the core industry gets goods and services from its suppliers, or it supplies goods and services to its customers. Indirect effects can involve the demand for goods and services by people employed by the core and affiliated industries supporting the development and expansion of economic activities (retail);
- the expansion of the core industry implies the expansion of output, employment, related investments, as well as new technologies and new industrial sectors. At a later stage, the emergence

of secondary growth poles is possible, mainly if a secondary industrial sector emerges with its own affiliated industries, so increasing the regional economic diversity.

Growth poles strategy was responsible for settling huge industrial complexes, like in Gabès-Ghannouch (Tunisia), El Hadjar (Algeria), Taranto in Southern Italy.

Such complexes, in just a few years from their opening and in spite of their initial success in terms of employment and rise of the average household incomes of the regions involved, revealed their weak points.

Basically, not only they didn't promote new secondary growth poles, so balancing the growth all over the region, but also they drained all the workforce from other traditional activities so destroying many jobs whose skills were necessary to meet local needs, but above for their vital role of social bond in local communities. Moreover, being strictly dependent on external markets and investments, they were disconnected from the local economies and cultures, as much as they were connected to the international scale of iron and steel industry, chemicals, and so on.

Even leaving aside the huge cost of pollution, such strategy reinforced the existing gaps, while destroying the assets of local social and territorial systems.

Now, if you replace the terms "growth poles" and "industry", by "city brand" and "real estate", it is done.

Indeed, in spite of the apparently striking differences between the two situations, just like the big industrial complexes were disconnected from local cultural, social, and economic orbits (save for workforce and supply chain firms) but strictly connected to the global market of iron and steel, chemicals, etc., so monopoly rent follows a logic which, while investing in concrete (even literally), material things, like buildings and infrastructures in localised areas, it is anyway mainly linked to the financial market, whose very nature is global.

In order to attract external investments cities have to accept competition on the international scale, then implementing big plans and urban developments radically changing not only areas somehow abandoned, like old docks, but also all the neighbourhoods bordering the areas involved, rising dramatically real estate prices, so expelling not-affluent residents and small economic activities, and, above all, attracting all the tourism-related business as well as pushing local business to focus on goods and services for tourists.

This is the contradictory nature of monopoly rent logic applied to urban renewal remarked by Harvey (cit., 109-110): the more "different", the more "unique" a place is or can be represented from a cultural

point of view, the more attractive is to investments, but the more successful are investments the less “different” becomes the place, like in the case of Barcelona:

the later phases of water-front development look exactly like every other in the western world: the stupefying congestion of the traffic leads to pressures to put boulevards through parts of the old city, multinational stores replace local shops, gentrification removes long-term residential populations and destroys older urban fabric, and Barcelona loses some of its marks of distinction (Harvey, cit., 105).

Above all, in the declining role of culture as “land factor”, as already stated, such contradiction appears all the more relevant. But to elaborate properly on this point it is necessary to consider before the complexity (in systemic terms) of urban cultural heritage.

If the “Mediterranean city” has been an image retrieved intentionally from the past as a cover for real estate developments, the image of the Italy of small towns (more than seventy per cent of total), while taking advantage of a rhetoric to gain also economic benefits, is not entirely fictional, and can reveal a useful direction to research.

Complexity of urban cultural heritage

The Italian landscape was widely renowned in the sixteenth and seventeenth centuries, but above all in eighteenth century, the golden age of *Grand Tour*.

Basically, it was this fashion which spread across the continent that gave Italy the fame of a country to be visited.

Such fashion was triggered by a *secular* version of pilgrimage, as it were. Christian culture condemned wandering because it was a metaphor of the sinful soul damned to be eternally errant, while praising instead travelling with the aim of reaching a sacred place, a travel in which prayer was the experience itself of the trip, with its very slow time, stopovers, weariness, weather, encounters, and so on (Dupront 1987).

Such important custom gave the pilgrim a specific, albeit temporary, social status (one of the features Christianity shared with Islam).

In the course of time, travel's *formative character* would trigger the fashion of *Grand Tour*: the idea that travelling can give shape to your mind, enrich your worldview, training yourself to life's uncertainties, giving you discipline, and enlarging your parochial horizons so making yourself more tolerant, in a word, more *enlightened*.

It belonged to the wave of education surge which spread, above all among bourgeoisie between mid-seventeenth and mid-nineteenth century, and whose main literary outcome was the *Bildungsroman*, the educational novel, telling the story of maturation of an individual or a group.

Now, *Bildung* in German stands for “education”, but *Bild* means “image”, so here we are dealing with a concept of education having its fundamental ground on *imagery*.

Young people (above all males from affluent middle class and aristocracy) who wanted to complete their education to be admitted into adult’s world, followed this fashion, so practising an *educational travel*, the *Grand Tour*, indeed.

But which images made the basis on which the educational travel could rely?

Landscapes of course, but above all *urban views*.

With the great fortune of the first bestsellers concerning this experience (one for all, the *Voyage to Italy* by Goethe) this literary genre would become very attractive for publishers and writers, but also for painters and illustrators, because more and more such books were enriched by images, which were reproductions or following the style of *vedutisti*’s paintings.

The view of San Marco’s basin by Caspar Van Wittel (whose son born in Italy would have become the famous architect Luigi Vanvitelli) is likely one of the most famous image of Venice, made by an artist considered the founder of such manner. The familiarity this image inspires, even if it is the first time you see it, it comes from the fact that such image is indeed not only a forerunner of modern photographic postcards, but also, and above all, the one who invented the *archetype* itself. This image was reproduced countless times, either faithfully or in so many variations that today we find it natural to have the impression of a *déjà vu*.

The wide circulation of such images of Italian cities and landscapes gave a crucial contribution to the definition of the myth of Italy as a place for leisure travel, and, above all, as the land in which *travelling across space meant travelling across time*.

Travel guides and the books of travel memories, in giving their preference to some cities, defined a sort of classification of best Italian itineraries, and mostly their model was an itinerary which was a time travel from the contemporary Europe (Milan, Turin), to the Renaissance (Venice, Florence, Rome), Middle Ages (Bologna, Siena), classical antiquity (Rome, Naples) and, finally, the alleged sources of European culture (the archeological landmarks in Campania and Sicily) and nature (Campi Flegrei, the volcanoes).

So Italian landscapes and cities, notwithstanding their tormented territorial history, and in spite of the inequalities and imbalances which marked the different evolutions of the many regions into which

what was called 'Italy' was divided at the time, all these fragments were gathered, were composed in an unique image. The image of Italy produced by the *Grand Tour* was so convincing that when it came to the real unification of the country in a single nation state in the second half of nineteenth century, the chosen image of its cultural heritage was the one produced by the *Grand Tour*, that is the image which foreign travellers created.

And the new medium of photography stressed such choice, in following the model of *vedutisti* as well. If photographic views made by the company which more than any other produced the public image of the recently unified Italy, the Alinari brothers, are taken into account, you can find a careful imitation and restaging of Van Wittel and followers' views.

But we have more. Everybody knows that Rome is the Italy's capital.

Actually, the first capital of the new nation state was Turin just for a few months, and then Florence was chosen in 1864. Florence was capital for six years, and during that time, following the Paris model, an urban plan was implemented to turn it into a capital city.

Among all the modifications carried out, there is one that is particularly meaningful: the observation platform of Piazzale Michelangelo on the hill of San Miniato, the highest vantage point of the city and its surroundings, still an obliged stop for tourists.

Such view is totally alien to medieval and Renaissance Florence. But it was necessary to display the city as a symbol of what Italy was considered to have the most. What nowadays is called *cultural capital*: history and art (Neve 2004).

Still, for all this construction of the myth of Italy, such myth grounded on an enduring reality: the complexity of urban cultural heritage, which, in the case of Italy, was made of the singular relation between cities and countryside and the *density* of relations in the Italian historic centres preserved even after the 19th century, which is the fundamental mark missed by mainstream definitions of smart city I pointed out earlier.

Smallness of towns is not a sign of delay, of backwardness, but a distinctive trait of a complex urban culture which is impossible to understand unless a different concept of *scale* is adopted.

As to the first point, any Italian town took shape along with its countryside, as well as on the horizon of the gaze of any farmer in the fields there was always a city, or, anyway, an urban settlement, as pointed out by the French geographer Henri Desplanques (Desplanques 1969), contrary to what in the rest of France was meant by the term '*ville*' (either a town or a village) because of the blurred border between city and countryside.

It is in this sense that the term '*paesaggio*' (landscape) has emerged in the Italian language, deceptively traced from the French *paysage*, but with a quite diverse sense, just because of the different meaning of the word '*paese*', unavoidably linked in Italy with the mutual glance between the farmer and the citizen.

As to the second point, as it was evident since Middle Ages, the density of relations concerned both the built environment *and* society. Places and their contexts of meaning were not partitioned, as in modern cities, but fitted one inside the other, so setting for work and everyday life activities real *nested networks*. Residents, on the other hand, if their social conditions and mentality could be different, they couldn't avoid to encounter each other and share the same public places, so being obliged to integrate in a small world with forms of sociability which were unknown in villages: a specific, urban way of life, implying the everyday use of money and, for someone, to be open-minded in a certain measure. Moreover, the contrast between the nobility and the middle class was less striking in Italy than in the rest of Europe. At the era of the late medieval commercial revival, the nobles of the cities of Lombardy even interested themselves in the business of the merchants and put some of their income into business enterprises.

It is surely meaningless to try to reconstruct what a citizen of a medieval town perceived exactly. Nonetheless, what both citizens shared was a kind of *consistency* (I could not find a better term) between the urban culture they shared and the matter of the built environment. In the fifties, Francesco Rodolico noted that, at least until the early 19th century, each Italian city showed a distinct aesthetic quality of the built environment, in spite of the great variety of stones, found locally or brought from other places.

Cities like Venice or Milan had for a long time taken their stone from areas far away. However, and here lies the difference, these areas depended on the cities from many economic, political and cultural points of view. Even if, in these extreme cases, the stones were detached from the surrounding natural landscape, they were always 'Venice's stones' or 'Milan's stones', because they were bound to the particular context of the human values produced by each city.

The perceptual difference between Florence and Bologna, even before the differences of topography and in the streets orientation, lies in the mimetic relationship of Bologna with the countryside, the very fact of building materials. Which remain the same not only between town and country, but even in its highest urban manifestations: like in the prevailing architectural motifs, of rural origin, of towers and porches; that of common colours red and ochre - precisely the colour of the earth - of houses and palaces, well different from the shrill white of the facades of houses in Florence, markedly urban,

exported in the countryside to mark the domain of the city over the countryside. In Bologna, on the contrary, the movement in the past centuries has been the reverse. It is the city that has imported rural shapes and colours, because it has acted in the service of its hinterland (Farinelli 2010).

Just by these brief remarks it should be plain why the complexity of the Italian urban networks cannot be reduced to some branding formula or marketing slogan. Even more plain it should be why I contend that any city, as a complex assemblage of people, things, and media, is smart: because “the way we think is the property of a hybrid assemblage of brains, bodies, *and things*” and “the understanding of human cognition is essentially interlocked with the study of the technical mediations that constitute the central nodes of a *materially extended and distributed human mind*” (Malafouris 2013, 15 and 19, italics added).

But Italy provides a good example of networks' complexity as well, in many Southern historic centres, where the intermingling of different material cultures through time established a traditional knowledge in town's building, craftsmanship, agriculture (Laureano 2013), setting them as a meaningful instance of the *theme and variations* paradigm which constitutes the shared ground which Mediterranean material cultures continually reworked throughout history. A still living ground, notwithstanding the homologation induced by forced industrialisation.

As an example, let us consider the plan of most historic centres of Southern Italy, namely in Salento region, in which building and cultivation techniques represent a long-standing and successful *mélange* of different cultural patterns: Neolithic, Greek, Arab, Byzantine, and so on.

As I previously stated, such *mélange* was exploited to build the myth of Mediterranean city, and all that has come since. But if we try to go beyond the screen of the Orientalist myth retrieved by contemporary neoliberal policies, the lessons to be learnt from our investigation into the city as the earliest form of artificial intelligence are many.

Besides the formal aspects (the maze-like plan) which were considered either a distinctive mark of “cultural specificity” or of “anarchy and backwardness”, the way of life made possible by such settlements' structuration, by the interrelation of their parts in an organised whole, and their strict functional connection to the dwelling conception reveal their complexity, their *smartness* (Neve and Santoro 1990).

In such apparent disorder, there is no real mixing, but a *nested* hierarchy of places (Hofstadter 1979), to be figured out like in the famous engraving by Escher, *Print Gallery*: with the observer being led level by level to the paradoxical situation of the subject gazing at one print displayed on the walls of

the gallery containing an urban view in which there is a gallery in which a guy is gazing at a print which contains an urban view...

Here any urban feature is an *in-between* place toward different elements of the global structure. In such a way, the nesting pattern allows, at the same time, a high density of housing, a high degree of domestic privacy, and an extreme fluidity of communication in public spaces.

There is a sort of continuous variations, at disparate scales, on the theme of the *patio*, which is a shared open place for a single house, turning into a semi-public one serving all the houses facing it as a common area in which neighbourhood relations are carried out (as an informal playground for children games or little trades and businesses), and even becoming a square, a larger public space whose character and function as a typical European urban feature (Romano 2015) show once more the smartness of a settlement pattern able to combine efficiently different material and symbolic cultures.

The *recursive* character of this pattern is motivated by the need to guarantee privacy to households while ensuring communication through social groups. Topography is useless here to know the city – exactly like Saskia Sassen remarks about digitally connected contemporary cities (Sassen 2010). To understand a city like these it is necessary walking through their streets, using observation and memory to progressively learn city's forms and relations through places, making reference to any detail or viewpoint (the gaze trained to linear perspective here is of no use) which our path reveal, comparing them step by step, knowing them *phenomenologically*.

The distribution of shops, trade activities, craftsmen's workshops, is also an integral part of such pattern, and it is recently regaining place, after the long period of abandonment due to the already mentioned industrial development driven by the “growth poles” policy.

Fact is that, beyond the comfortable myth of the Mediterranean city and its avatars, these cities are not only examples of a living heritage but a living example of networked urban milieus too: not as an immobile and fixed tradition, but as a successful one *precisely because* was able to change and being evolutionarily fit, to the extent that their patterns are studied anew for their sustainability (Laureano 2013).

The visual representation currently used for networks indeed (Drucker 2014, 82-4) focuses on connections and degrees of connectivity, useful for computing through adjacency matrixes (Barabási 2016), but misleading as far as real networks are concerned. When it comes to urban environments like these the complex intermingling of built places (from the single room to the square) and customs (from the social behaviours in families to conducts in shops, workshops, public offices, workplaces) is

really enabled and regulated by *in-between places* made of shared (while always varying) interactions brains-bodies-things, since “cognition is not a ‘within’ property; it is a ‘between’ property” (Malafouris, cit., 85). Such interactions are the stuff that the feeling-at-home sentiments of inhabitants are made of.

All That Is Solid...

As I have stated since the outset, there is a misunderstanding made by mainstream interpretations of smart city's topic, and it concerns the concept of *scale*. Even in the insightful remarks by David Harvey on scale there is still a patent difficulty in finding in-between level of analysis (besides the overused couple local/global) which could account for the complexity of issues involved (Harvey 2012, 69-70). Most of the time, the notion of scale implicitly or explicitly employed is the *cartographic* one, based only on the quantitative side of reality. But things are more complicated than that.

Actually, it can be affirmed that basically most of the literature concerning cities, in considering scales' issues thinks in terms of the cartographic one⁴.

Fact is that when we think in terms of 'large' or 'small' scales, we are not simply moving along a quantitative range only (Racine, Raffestin, and Ruffy 1980; Péguy 2001; Sayre 2009) but we are implying also *qualitative* and *temporal* issues, whose interactions are *non-linear* (Raffestin 1983). And that scale couldn't be oversimplified was evident since its first definition in geography, dating back to the 2nd century (Neve forthcoming).

Complexity cannot be investigated in terms of a single object or level of observation, since meaning is never context-free, and information is *differential* (Bateson 1972), so it grows insofar as differences grow, which means to the extent *interconnections* grow (Taylor 2001). Then reasoning in terms of scale implies being aware that scale is a *code linking contexts of meaning* (Boisot 1995).

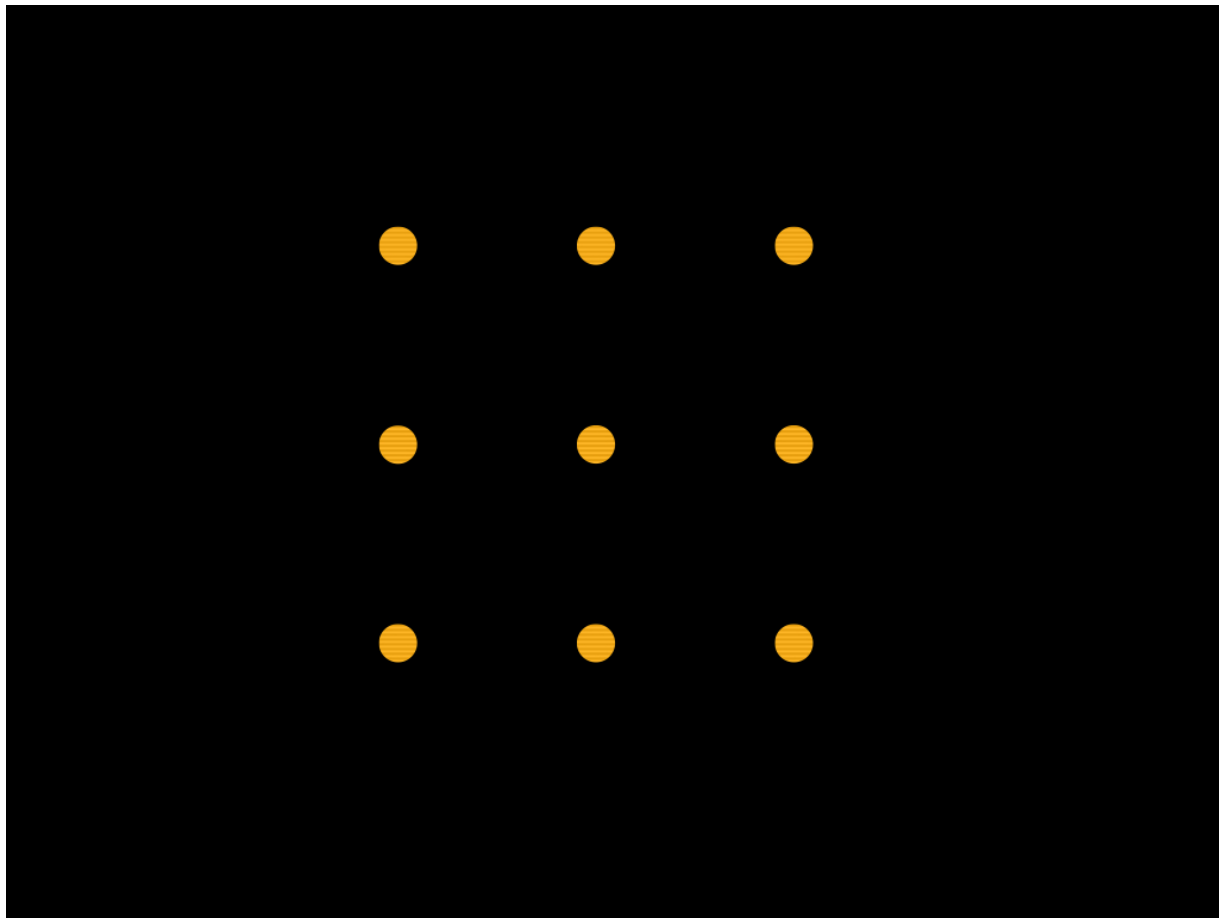
This is why what I called previously “the declining role of culture as a land factor” makes the exploitation of “uniqueness”, “authenticity”, “cultural specificity” pursued by renewal projects driven by monopoly rent ephemeral and detrimental: not just because they are speculative operations, but also because cultures and places are no more strictly related.

⁴ Being maps objects deceptively familiar, they often work the opposite one would expect: while in informal everyday speech we are used to say ‘at a large scale’ thinking about something which covers a great extension, in cartographic terms one refers to the relation between numerator and denominator of scale's ratio. Since 1:500 means that one unit on the map (e.g., 1 cm) is equivalent to 500 units (5 m) on the ground, if I want to represent larger areas, I have to make, so to speak, the denominator ‘grow’ – 1:1000, 1:25000, 1:100000, etc. –, but in this way the numerator ‘shrinks’. This is the reason why a world map is drawn on a very small scale: 1: 40-50 millions, while on a scale of 1:500 we can represent a city block at most.

This does not mean, however, that places are nowadays unable to generate and develop cultures on their own. It is crucial here to focus on the already mentioned gap between the *intensional* nature of places (their singular and endlessly reworked coevolution of people and things building practices, experiences, and conducts) and the potentially *extensional* character of their representations (the possibility to make them circulate outside their original context).

The Net, reducing all communication on the quantitative plane of computing, represents the highest degree of *extensionality* ever reached by a medium. It generates a milieu in which any local feature, any virtually untranslatable trait of a place needs to be previously typified in order to spread along the network: this is the reason why places easily become stereotypes when presented on the Web, e.g., for the purposes of promoting tourism.

In order to clarify the sense of scale at stake here is better resorting to the 9-dots puzzle made famous by Paul Watzlawick (Watzlawick, Weakland and Fisch 1974, 25).



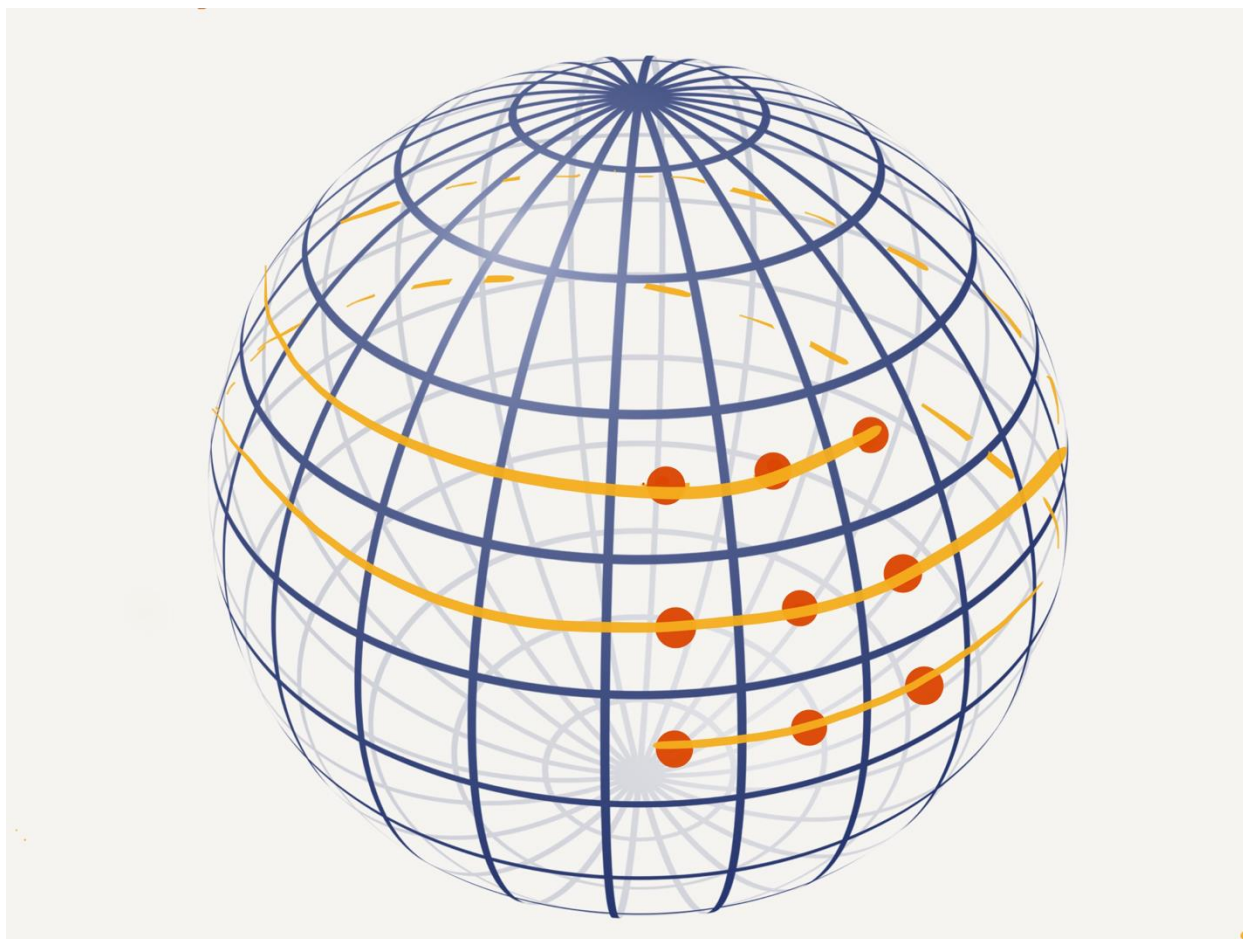
The challenge is to draw four continuous straight lines which connect all of the 9 dots without taking the pencil off the paper. Most of people fails in trying to solve it because they tend to see a *virtual border connecting the outer dots*, they tend to see a border where there is none. But this is a quite normal

behaviour, because of an evolutionary pattern we share with all living beings using light to orient themselves.



The solution is found changing scale, but not a quantitative one. It is necessary to *change context of meaning*, taking into consideration a wider framework than the one apparently delimited by the external dots.

In order to understand the world it is sometimes necessary to access a *further dimension*, as Watzlawick would say to “think outside the box”; just as to solve the 9 dot puzzle you need to think outside the border that you imagined to see in the figure. Think that, when translated onto the globe, the same puzzle can be solved with a *single* continuous line.



Geography teaches us how to see totalities, to move through contexts and changing dimensions without losing the sense of the whole framework. In 2D you are on the geometrical plane, the typical dimensions of maps, what a geographer calls *space*, in which all things are taken into account solely from a *quantitative* point of view.

On the globe, instead, you have the real world of our lives, full of *qualitatively* different peoples, cultures, languages, habits: what a geographer calls a world of *places*: “the geographer is the one who knows that the Earth is round. And being aware of it” (Péguy 2001, 172).

A network doesn’t mean just a web of connectivity and relationships to be imagined *extensionally*, but also *intensionally*, in the sense of stratifications, layers of relations that reduce information’s dispersion and noise. This means that changing scale in a network implies changing context of meaning, since any meaning is related to a context (Tagliagambe 2008).

So, relations put in place by urban networks, above all when belonging to a long-standing culture, are webs of connectivity to be imagined as stratifications, layers of relations, to be studied taking into account their complexity.

The concentration of activities in neighbourhoods densely packed by people and relations is a real effective network model in action. It is no use, then, keeping the usual way of considering urban cultural heritage just as an economic asset, let alone thinking to enhance it by reducing historic centres resides and their *complex wholeness* to gentrified lots or functionally distinct zones.

So, in the end, where is the *smartness* of cities? I prefer to close this article with an example which, I think, can be a living embodiment of what I have tried to develop in this article.

Palermo, in Southern Italy, has been suffering for a very long time, among the various and tragic consequences of the pervasive presence of the Mafia, from the abandonment of the historic centre by residents, shopkeepers, and craftsmen. Recently, thanks to the establishment of an agreement between the city, represented by the municipality council, and immigrants, the historic centre is reviving (Merelli 2016, Tondo 2017). Not only the population of residents has been growing – and still is: in 25 years, more than 60% of the city's historic buildings have been renovated (Tondo 2017) – , but also the little neighbourhood businesses are thriving, namely the local street markets.

The truth is that the historical market is still nowadays a total social fact, using a favourite expression of French sociology, especially of Marcel Mauss, where human mutual relations established through the exchange do not strictly involve economic issues only, but also religious, playful, and integrating issues in various forms. A place in which not only commodities or goods are exchanged but also skills and experience, a place of interrelation and communication as the founding element of every culture (Sorgi 2015, 11).

Pay attention: neighbourhoods and markets are reviving *precisely because a change is taking place* (almost literally): the culture of places is still alive because people (old and new) are adapting it to their needs. Besides, immigrants are quite refractory to some aspects of the town's customary practices because of their *in-between* condition (earning a living while mediating between their culture and the local one)⁵: like the custom of secrecy (*omertà*), binding criminals and victims in a tacit mutual pact of silence against law enforcement (also this being part, like it or not, of tradition). A tradition with which immigrants have broken in reporting abuses and making possible arrests of criminals controlling local street markets (Merelli 2016).

Notwithstanding the limits of such example, it should be plain that when the screen of exoticism which makes urban cultural heritage prone to manipulations is taken away, cities' *wholeness* can be

⁵ Of course the process is not going without troubles. But since entropy is a social loss of memory (Boisot 1995, 138-43) which typically spikes in times of transformation, such a radical change cannot go straightforwardly in communities whose enclosure has been enduring throughout the entire history of the Italian state.

grasped and enhanced only by studying it *systemically*, then by taking into account the interrelations among *all* their parts (including peripheries, decaying zones, suburbs) and the potential of cultural heritage to bring out urban *smartness*: since it is the very core of cities' *mind*, meant as a coevolving assemblage of built environment (*urbs*, the city of stones) and people (*civitas*, the city of human beings).

The scope and scale of the issues implicated by this scenario are ungraspable unless a real interdisciplinary research stance is adopted, getting rid of the old-fashioned and detrimental divide between the so called *hard* and *soft* sciences.⁶

Besides, any analytical attempt would be doomed to failure (or, at least, to very limited outcomes) if not placed within the correct geographical framework in historical perspective. Which means, today, making any effort to think on a cosmopolitan level, working on comparative frameworks, not being intimidated or inhibited by the fundamental issues at stake: like coping with subjects usually considered as exclusive to study fields such as cognitive sciences.

It is in working on this ability to reconcile the city of stones and the city of people, in creatively using local culture to build a common ground (an ability someone could call *resilience*), that any city can bring out its latent smartness, on condition of being aware that is a never-ending job.

Marshall Berman, eight years ago, in recalling the extraordinary path followed all over the world by his classic work *All That Is Solid Melts into Air*, summed up, with a hint of his usual (a little) bitter irony, what happened in New York after the Reagan era, in which his book appeared, with the growing reaction of people to zoning (a planners' favourite in US) and the relative splitting of neighbourhoods into "functional" areas:

They [residents] came to feel crowded streets, human concentration, people pressing together, intimacy between strangers, as primary sources of joy; "public space," sectors of cities that made this joy possible, needed to be nurtured and cared for, not destroyed. Now, too, within cities, despite their many polarizations, the horizon of empathy expanded: people came to see the human benefits of keeping other people's neighborhoods alive, even if they would never go to those neighborhoods or share in that life. Once there was a critical mass of people who not only loved their cities but knew why they loved them, and recognized they had to take care of them, the *Lebensraum* for imperial bureaucrats shrank fast (...) Ironically, though, the collective learning

⁶ It is ironic (and disappointing) that, already in the early sixties, John Burchard, in writing the conclusions to an important collection of essays concerning the city as historical subject could plainly affirm that "all the world tries to be interdisciplinary" (Handlin and Burchard 1963, 251). A firmly held belief not too shared nowadays by academic bureaucracies.

that thwarted [Robert] Moses, and made the world 'love New York' more than ever, generated a real estate boom that has driven out, and keeps out, a great many of the people who 'love New York' most (Berman 2010).

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Mario Neve, Degree *summa cum laude* in Political Sciences at the I.U.O. of Naples (thesis in Political and Economic Geography), PhD in Urban and Regional Geography at the University of Pisa, Mario Neve is full professor of Geography and currently teaches: *Cultural Geography*, *Geography of Historic Towns and Landscapes*, and *Geography of the Euro-Mediterranean Region* at the Department of Cultural Heritage of the University of Bologna, Ravenna Campus.

He is Program Director of the international MA *International Cooperation on Human Rights and Intercultural Heritage* of the Department of Cultural Heritage.

Among his various teaching and research activities abroad, he has been visiting scholar at the Faculty of Arts of the University of British Columbia of Vancouver (Program in Canadian Studies), at the Robarts Centre for Canadian Studies of York University of Toronto (with a fellowship awarded by the Canadian Studies Faculty Research Award), KRAFT Senior Research Fellow of the Institute of Advanced Studies Köszeg, Hungary, visiting scholar at the History Department of the East China Normal University of Shanghai.

He has published four books and many articles and essays in Italy and abroad. His latest book is *Europe's Design: Mapping European Identities Through Time* forthcoming by Springer.

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