The pain of being in a city

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Abstract. Every day citizens and visitors in Greek cities often find themselves constantly struggling with impediments: obstacles to their movement, their vision, their breath of air, etc. One cannot walk without being cautious so as not to stumble upon some poor workmanship that was once done to the sidewalk; although there is the possibility of repair. You may find yourself next to the sea, but masses of blocks of flats may hide it from you, restricting you to an endless maze; even though studies highlight the benefits for human health when coexisting with the natural element of water. One almost seems to be always in a suffocating distance to roads with many car lanes; again despite the fact that studies highlight the effects of car emissions to health. Why is this happening? Why do we choose and create such conditions? Is this a distinct phenomenon of just some Greek modern cities? This paper will attempt to shed some light on these questions by examining historical references, as well as contemporary ones.

Keywords: urban environmental design, urban degradation, urbanisation problems and causes

1. Introduction

By studying, researching and working in the field of urban environmental design one might be impressed by wondrous images, marvelous ideas and promising examples of environmental Promised Lands that are proposed by various researchers, scholars and professionals throughout history; surely alluring dreams, so much desired. However, more than often, contemporary cities seem to fall short of these Promised Lands. Many times everyday life appears to be filled with impediments to even primary needs of human beings, such as the need to breathe fresh unpolluted air. However, the fumes coming from cars and industrial facilities causing air pollution are only but one effect of urban degradation. The list appears many times rather long, so much so that it may trigger troubling thoughts concerning the existence of these environmental Promised Lands. Where could they be?

This paper, however, is not an attempt to find them. Instead, it tries to shed some light and draw attention to this curious phenomenon of the fact that despite solutions do appear to exist in terms of environmental design of cities, for at least a couple of thousands of years now, their implementation, and especially their long term and continuous application, appears to be somewhat deficient and in many cases totally absent.

This study will, hence, begin with a short exploration of 'past promised lands', mainly views throughout history concerning environmental notions and the city. Despite these conceptions, urban degradation seemed to be widespread. Then, we continue by discussing some of the causes that lead today to urban degradation, to conclude with some closing remarks and a short discussion at the end.

Figure 1. A view of a central section of Athens, Greece. (Photo: Syrakoy AC)

2. Past Promised Lands

One of the most known works on environmental urban design is no other than Vitruvius' 'The Ten Books On Architecture', the known ancient textbook of good design and construction practices. Vitruvius appears rather adamant in terms of what the architect/urban designer/urban planner needs to know '*the architect should also have knowledge of the study of medicine on account of the questions of climates…, air, the healthiness and unhealthiness of sites, and the use of different waters*' (Vitruvius, p 10). He then continues noting that the art of building is divided into two parts: '*the construction of fortified towns and works for general use in public spaces, and the second is the putting up of structures for private individuals*' (Vitruvius, p 16). Next, he marks the importance of a good choice of a site for a city, which needs to be '*a very healthy site*' (Vitruvius, p 17). He then refers to all those environmental aspects that he considers relevant. For example, he discusses the direction of the

streets in terms of air movement, being rather meticulous on the effect of different winds on human health, and the way to block those that are considered unhealthy (Vitruvius, p 24-26). Reading Vitruvius' work and particularly the above-mentioned parts, one may not help but to feel amazed about the environmental consciousness and relating design solutions that he presents. Surely, one might think, the world of his time had found and implemented those solutions, and the images of ancient cities were not only pleasing to the eye, but also environmentally thought of. But were they truly? Indeed, ancient cities like Priene (Dontas, p 44) appear to have a design that does seem to follow principles of environmental design. Yet, *the* city of Vitruvius' time does not seem to have followed similar patterns, as accounts from that era portray a completely different picture. It is noted that '*Tacitus attributes the ease and speed with which the terrible fire of 64 A.D. spread through Rome to the anarchy of these confined streets winding and twisting as if they had been drawn haphazard between the masses of giant insulae*' (Carcopino, p 45). In addition, the majority of streets '*were daily defiled by the filth and refuse of the neighbouring houses and were neither so well kept as Caesar had decreed in his law, nor always furnished with the foot-paths and paving that he had also prescribed*' (Carcopino, p 46). Where is Vitruvius' Promised Land? Again reality seems to be rather distant from what seems to be the 'right way' of doing things.

Certainly Vitruvius' example is not the only one to have provided guidelines for 'good' environmental design in contrast to what it can be seen in everyday life. An interesting example appears in the work of Ibn Khaldûn in the 14th century. Similarly to Vitruvius he also highlights environmental concerns and how the selection of a site for an urban settlement and design of the city can affect health. For example he notes that overcrowding in cities has resulted in degradation of air quality, leading to epidemics, and that: '*science has made it clear that it is necessary to have empty and waste regions interspersed between urban areas. This makes circulation of air possible. It removes the corruption and putrefaction affecting the air after contact with living beings, and brings healthy air. This is also the reason why pestilences occur much more frequently in densely populated cities than elsewhere, as for instance in Cairo in the East and Fez in the Mahrib*' (Ibn Khaldûn, p 256). In general Ibn Khaldûn appears to support the idea that the air quality in cities as well as other factors, such as lack of exercise of their citizens, lead to health problems, in contrast to the inhabitants of rural areas (Ibn Khaldûn, p 327- 328).

Another supporter of the idea that the conditions in the cities were not always desirable was Andrea Palladio in the 16th century. Interestingly he notes that a '*Gentleman*' is sometimes '*obliged*' to reside in the city, and then continues by referring to the advantages of having a house in the countryside were he can '*…preserve his body strong and healthy… and the mind being over labored by the fatigues of the city, will be singularly recruited and recreated*' [Palladio, Second Book, p 17 (p 549)]. The '*Situation*' of the buildings in the country appears to be of the outmost importance, since '*…not being commonly (as in Towns) straitened for room by public buildings, nor confined by our neighbours to certain determinate bounds,*

it is the duty of an able Architect to find out with all care and diligence the most commodious and healthy places' [Palladio, Second Book, p 18 (p 550)]. Palladio also highlights environmental concerns in the design of the city. For example he begins his chapter titled '*Of the compartment of the Ways (or Streets) within the City*' as following: '*In the compartment, or distribution of the Ways in a City, or Town, regard must be ever had to the temperament of the air, and also to the region of Heaven, or the climate under which the place is situated: because where the air is cold or temperate, there the Streets ought to be made large and noble, since thereby the City will become more wholesome, convenient, and beautiful: it by being certain, that by how much less piercing, and withal by how much freer the air is, by so much more a Town is situated in a cold place, or in a piercing air, and that the houses are high, by so much the larger ought the Streets to be made, that they may be visited by the Sun in every part of them….But if a Town is situated in a hot climate, the Streets ought to be made narrow and the houses built high; that by the shade and straightness of the passage, the heat of the air may be tempered, and consequently that it may become more healthy…*' [Palladio, Third Book, p 6 (p 756)].

By the end of the 19th Century the proposal of Sir Ebenezer Howard '*Garden Cities*' (Howard, 1898) appears to be yet another example of an attempt to introduce environmental design notions on the urban fabric. This study seems to have had a profound influence mainly in the UK, after World War II, when the New Towns Act (1946) adopted Ebenezer Howard's concept. The concept of the garden city has been also influential in the US as well as elsewhere.
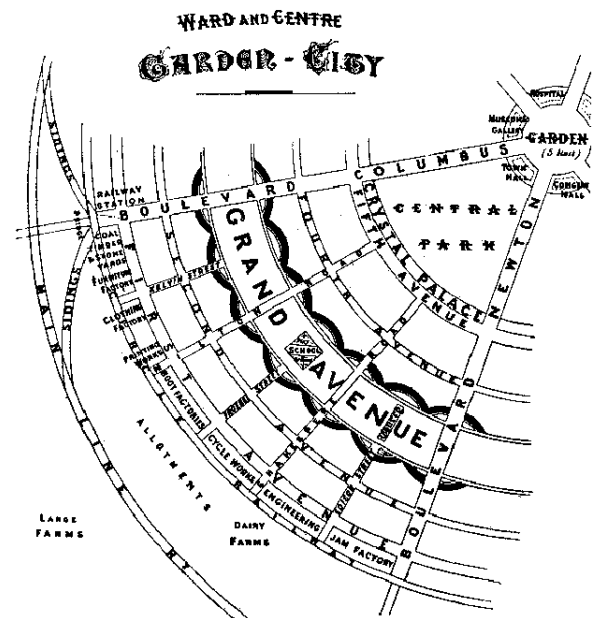

Figure 2. Ebenezer Howard. Ward and Centre of the Garden City plan. (Howard, 1898, http://urbanplanning.library.cornell.edu/DOCS/howard.htm)

Later, the Modern Movement showed initially environmental design sensitivities. For example, one of its leading figures, Le Corbusier, notes in his book *Towards a*

New Architecture, the following: 'Instead of our towns being laid out in massive quadrangles, with the streets in narrow trenches walled in by seven-storeyed buildings set perpendicular on the pavement and enclosing unhealthy courtyards, airless and sunless wells, our new layout… would show great blocks of houses with successive set-backs, stretching along arterial avenues. No more courtyards, but flats opening on every side to air and light, and looking, not on the puny trees of our boulevards of to-day, but upon green sward, sports grounds and abundant plantations of trees' (Le Corbusier, 1931,1986, p 61-63).

However, despite Le Corbusier's best intensions, he was later accused that his Modernized ideas regarding pure minimal form, his favourite material reinforced concrete, industrial materials and methods, etc 'could ruin the harmony of an entire townscape...and have... destroyed the appearance of the entire city.' (Dalrymple, Autumn 2009). In general, the Modern Movement has been possibly harshly, yet perhaps justly, criticised for quite a few things, such as for the deterministic views on how people are supposed to live their lives: 'when architecture develops without any consideration of the social conditions within which it operates, it is inevitable that the "purity" it aims for is no more than an illusion' (Heynen, 1999, p 124); an illusion from whose ramifications we are still today, as it often seems, trying to free ourselves from.

Looking at the above examples it becomes evident that indeed guidelines and recommendations existed throughout history in terms of environmental design of cities. However, as it is perhaps also rather clear, these were most of the time design theories of an almost utopia, since they never really worked in full in real everyday life. Why did this happen? Why does it seem so difficult to truly be able to implement our environmental design ideas and instead we are left to what seems to be an eternal struggle to fight urban degradation? We will proceed in viewing some of the causes of urban degradation in order to understand the complexity of this issue.

3. Causes of urban degradation

Defining the causes of urban degradation seems to be a somewhat confounding subject. Researchers believe that: 'urban degradation appears to be a fact in several urban landscapes, with different characteristics, different historical development, in different cultural, social, economic and geographical environments, etc. Therefore, the causes for urban degradation may vary from region to region and from one time period to another' (Syrakoy, 2012, p 117).

However if we were to name but a few, studies have shown that the main causes of contemporary globalized urban environmental degradation, as is discussed below, are connected with the rapid and uncontrolled urbanization, the negative aspects of urban expansion, (urban sprawl or/and compactness) and the devastating priority on economic growth.

3.1. The rapid and uncontrolled urbanization

According to the World Health Organization (WHO, 2015), 'The urban population in 2014 accounted for 54% of the total global population, up from 34% in 1960, and continues to grow'. WHO, through the Global Health Observatory (GHO) data, appears to record the emerging trends concerning the global urban population growth: 'The global urban population is expected to grow approximately 1.84% per year between 2015 and 2020, 1.63% per year between 2020 and 2025, and 1.44% per year between 2025 and 2030'.

There are, however, countries, such as Greece, where the percentage of population living in urban areas seems to be exceeding the 54% mentioned by WHO. The National Statistical Service of Greece (NSSG, 1983, 1993, 2004) shows the continuous growth of the urban population from the 38.1% of the total population in 1920, to the 75.1%, according to the 2001 census. During this period a sharper growing curve is recorded between the 1960's and 1970's, which '...indicates the period of time of the most rapid urbanization in Greece' (Chatzicocoli, Syrakos, 2006). Nevertheless, the last decade's censuses show a relative smoothness of the growing curve of the urban population. During the three last decades '...the rate of urban population growth has been 14.77 % per decade, approximately double the rate of the total population growth in Greece, which, for the same period of time, has been 8.14 % per decade' (Chatzicocoli, Syrakoy, Syrakos, 2009).

However, more recent data (CIA, 2016) shows that the urban population in Greece has already reached the 78% of total population in 2015, while the annual rate of change (estimated for the time between 2010-15) of urbanization is 0.47%.

3.2. The negative aspects of urban expansion (urban sprawl or compactness)

In response to rapid urbanization, cities, planned or 'unplanned', have expanded significantly by sprawling or/and by 'compacting'. Thus urban planners have to face the problem that '*many cities are expanding at rates that exceed their capacity to accommodate the growing population*' (WHO-UN Habitat, 2016).

One form of urban expansion is by stretching the city's limits, a phenomenon known as urban sprawl. Residents of the sprawling parts of the cities might be of different characteristics and needs. For example, they might be relatively wealthy residents seeking more space in lower density settlements; or relatively poorer residents seeking more affordable housing in the peripheral settlements or constructing informal settlements at the fringe of the city, where there is usually a shortage or even absence of city services and sufficient infrastructure. The sprawling cities' problems include: less accessible necessities of everyday life (markets, healthcare facilities, schools, etc) for many residents, that become more car-dependent, especially on private motor vehicles, driving longer distances, resulting to high energy consumption. Furthermore, greater numbers of private vehicles on the road and longer distances travelled are directly related to health problems associated with air pollution and road traffic accidents (Hanaki, 2011).

Another form of urban expansion is the increase of urban compactness hence the increase of the 'density' of the city, leading to urban crowding. This results in limited housing

supply, which can lead to an increase of house/apartment prices and rents. As studies have shown (ODPM, 2004) urban crowding can also be a cause of ill-health.

3.3. The priority on economic growth

According to UN-HABITAT (2011) *'Cities have become engines for economic growth, generating more than 80% of global economic activity'*. Taking into account the global economic competition of cities, it is understandable that the qualitative needs of citizens and the urban environment have been left off the designers' planning priorities.

Additionally, according to WHO-UN-HABITAT (2016) *'When people and their quality of life are not recognized as priorities, the consequences are likely to be at least unhealthy and at worst fatal'*.

These consequences usually include substandard housing, underserved neighbourhoods, extensive urban sprawl or/and compactness, streets clogged by heavy traffic patterns, toxic air and water quality, etc.

It is also understandable that often the poorest parts of the cities are most affected, and are thus further driven into poverty and despair.

From the above it becomes perhaps evident that even those few mentions on some of the causes of urban degradation present quite complex issues. Urban environmental proposals for solving some of them might seem truly burdened with rather difficult and sometimes even obscure tasks.

Conclusion

In terms of environmental urban design, guidelines and recommendations have existed throughout history. However, these design notions and instructions seem to have been difficult to follow; their implementation, and especially their long term and continuous application, appears to be somewhat deficient and in many cases totally absent. Even today a similar pattern seems to exist with prevalent phenomena of urban degradation.

Amongst the main causes of such phenomena are recognized to be the rapid and uncontrolled urbanization, the negative aspects of urban expansion, (urban sprawl or/and compactness) and the devastating priority on economic growth.

Indeed it seems not enough to just know a certain design technique to achieve a 'successful' environmentally designed urban area. Even if urban leaders, planners and designers, by anticipating each individual city problem, had a plan for achieving urban growth in a way that eases or prevents urban environmental degradation (and some of them actually do), it is not certain that they would/will succeed.

Some are trying to address this issue, such as, for example, in the field of 'Environmental Communication' (see for example: Hansen & Cox, 2015), which concerns, roughly speaking, the way we communicate environmental issues. Obviously this is a rather complex matter, but one that needs to be addressed, although it does raise some issues

on its own. In particular, one, concerning urban environmental design solutions, could be whether one such solution should integrate from its creation its relationship with the people that it is meant for, rather than resorting after its conception to communicative skills and means in order to be implemented.

It is almost clear that it is not enough to just invent the most technically appropriate design solution for an environmental problem. It is also necessary to be able to successfully implement it, and this, many times, appears as a completely different task on its own. It is a task that needs to be addressed, otherwise our environmental solutions become an illusion, a promised land, one of many, lost in the realms of time as its predecessors did. The pain of being in a city then is not related solely on a present situation, but more on the realization of the strong possibility that our promised lands might never come true in the future, and therefore we will be left doomed in our dreams…

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