UTOPIA AND DETERMINISM: ARCHITECTURAL DETERMINISTIC THINKING IN URBAN UTOPIAS

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Much dissatisfaction has been expressed about current urban design practice by various groups, such as users, clients, social scientists and members of the architectural profession. Each of these groups is influenced in a unique way by the results of the current practice. Users, or "user clients" in Zeisel's (1981, 34-35) terms, who are unsatisfied with the built environment often either try to change the layout of the environment so that it will afford the desired behavior patterns or end up suffering from problems which range from lack of maintenance to crime, in cases where they cannot bring about any changes. "Paying clients" (Zeisel, 1981, 34-35), on the other hand, have to confront financial burdens in similar situations. A well-known example where both user clients and paying clients suffered from crime, the former being affected physically and psychologically, and the latter, financially, is the Pruitt-Igoe housing project in St. Louis which was partially demolished by the authorities in 1972, 21 years after it won an award from AIA. There are also some social scientists and architects who are responsive to the problems in their environment and who reflect their dissatisfaction by means of a critical discourse. In this kind of discourse, the weaknesses in current urban design practice have mostly been ascribed to its reliance on the urban utopian models developed in the West during late nineteenth and early twentieth centuries. However, a consensus has not been reached over the reasons cited for the fallacy of these models. While many critics agree that the major reasons for the fallacy of these urban utopias are rooted in their narrow conception of function, or "convenience" in Vitruvius' terms, as being based only on biological needs and technological innovations and not on social or psychological needs, and in their presumption of the universality of the application of prototypes, a third issue has brought about confusion. One group of critics claim that another major reason behind the fallacy of the urban utopias is rooted in their belief in architectural determinism, i.e., the belief that the built environment is a major determinant of social life, while another group argues that the mistake lies in architects' erroneous prediction of future social life and designing accordingly. The aim of this paper is to resolve this confusion by re-evaluating some of the most well-known urban utopias of late nineteenth and early twentieth centuries.

Before discussing the ideas of the utopians of the period under concern for a possible reflection of a belief in architectural determinism, I would like to clarify the concepts of "architectural determinism" and "utopia". The concept

1 This paper was adapted from the Ph.D. dissertation titled Architectural Deterministic Thinking in the Development of Urban Utopias, 1848-1947 that the author completed in 1986 at the Ph.D. Program in Architecture, University of Pennsylvania.
of architectural determinism has been often confused with environmental or physical determinism. The emphasis in this paper is on "architectural determinism" which is a specific determinist theory that needs to be distinguished from "environmental determinism" and "physical determinism" for the purpose of clarity. The etymology of the English word "determinism," which was first introduced in the seventeenth century, is derived from the Latin determinare which means "to limit." Based on Gibson's definition of "environment" as consisting of a "terrestrial," an "animate" and a "cultural" component (Gibson, 1986, 7-30), environmental determinism refers to the belief that all environmental factors, including both physical and social ones, rather than hereditary factors, determine behavior. Since environmental determinism considers social as well as physical factors, it is not as objectionable as physical or architectural determinism, the former referring to "... the belief that the terrestrial environment shapes behavior,..." and the latter to "... the belief that changes in 'built form' will result in changes in social behavior" (Lang, 1980, 148). On the other hand, physical determinism, which also embodies architectural determinism in it, can be criticized because of its exaggeration of the influence of the physical environment, its assumption that the physical environment has only a direct influence on behavior, its perception of people as passive in the environment-behavior relationship with no choice or goals, and its assumption that the environment is a constant unlikely to be changed or modified (Framke, 1984, 412). Among the three types of determinism referred to above, architectural determinism is the concern of this paper with the emphasis being on the role of architectural deterministic thinking in the development of the urban utopias in late nineteenth and early twentieth centuries. The word "utopia" is derived from "... the Greek word topos (place) and a pun on eu (good) and ou (not) " (Reiner, 1963, 16). This ambiguity between eutopic (good place) and outopia (no place) has been reflected in Utopian writings which have sometimes presented feasible ideal structures, while at other times they have merely delineated unattainable dreams. Thus, in contrast to Mannheim's commonly cited definition of utopia which comprises only those ideas that offer revolutionary possibilities tending to shatter the bonds of the existing order either partially or totally (Mannheim, 1936, 192-196), the argument in this paper is that utopia can range from an image to a well formulated plan of action. In fact, an analysis of utopian texts which have actually existed throughout history, in spite of the fact that the word "utopia" was first coined in the sixteenth century (More, 1516), reveals that the nature of utopian thought underwent a transformation in history. As Rowe and Koetter point out, utopian thought embodied little activism before late eighteenth century; it remained as an idea rather than as a proposal of implementation (Rowe and Koetter, 1978, 14)4. The economic and technological changes brought about by the Industrial Revolution during late eighteenth century in Europe, and the simultaneous transformation in the intellectual background, characterized by rationalism, freedom of thought and political fights for human rights, influenced utopian thought. Thus, "the contemplative Platonic model" of utopia was replaced by a "far more energetic utopian directive" led by "Newtonian rationalism" which was based on the belief that society and the human condition are based on laws as infallible as those of physics (Rowe and Koetter, 1978, 15). This belief underlies the emerging emphasis on environmental determinism by the utopians of late eighteenth and early nineteenth centuries. The changing nature of utopian thought in history, however, does not affect its basic meaning which is rooted in a dissatisfaction with the current state of affairs. Whether utopia is presented as an image or a well formulated plan of action, it is based on a discontent with the present, and a desire to replace the present with an imaginary vision of the past or a future that is considered to be better than the present. In accordance with this definition, utopians are divided into two groups in this paper: those who strive to reconstruct the present by replacing it with images from the future are called progressive utopians and those whose aim is to revive the past in the present are identified as regressive
5. This division of utopian thought into “progressive” and “regressive” approaches bears a certain resemblance to Choay’s argument (Choay, 1969) with some differences in the period of concern and in the choice of terms. Focusing on planning in the nineteenth century, Choay defines two major utopian models of spatial organization in the nineteenth century as “progressive” and “culturalist”. In this paper, not only has this duality been extended to the twentieth century, but also the term “culturalist” has been avoided as a title for one of the Utopian schools of thought because of the meaning-laden nature of the term “culture” and the polarity that has often been perceived between “utopia” and “culture”.

As mentioned above, a belief in environmental determinism can be clearly observed in utopian thought after the Industrial Revolution. However, an analysis of utopian texts reveals that a belief in architectural determinism became prevalent in utopian thought only after the second half of the nineteenth century. For example, a study of the urban utopias of the first half of the nineteenth century, such as the proposals of Robert Owen and Charles Fourier, shows that they gave equal emphasis to the role of social and physical factors in creating an ideal community and that they did not profess a belief in architectural determinism. Owen, arguing that the character of man is not formed by education but for him, stressed the roles of both proper education and proper environment in reaching his ideal “New Moral Order” (Owen, 1813, 23). In his proposals for New Lanark in Britain (1817) and New Harmony in the United States (1825), equal emphasis was given to both social and physical organization. Fourier, in a similar line of thought, was not even concerned with the physical form of the Phalanx which he presented in 1822 as the ideal social and economic unit of organization in the last historical period humanity could elevate itself in the future (Fourier, 1971). His followers were the ones to draw the Phalanstery, i.e. the main building of the Phalanx, “...as a socialist version of Versailles” (Vidler, 1973, 88). There was one proposal in late eighteenth century, however, which carried implications for a belief in architectural determinism. This was the 1787 Panopticon proposal of the British thinker Jeremy Bentham. Bentham envisioned the Panopticon, or the Inspection House, whose plan would be a basis for the design of different institutions ranging from prisons to chicken coops, as “the universal panacea” (Figure 1). The Panopticon was a 4-6 story fenestrated cylindrical well which was covered on top and which had cells or rooms at the edges and a small cylindrical kiosk at its center embodying the lodgings of the manager of the institution (Evans, 1971, 21-37). According to Bentham, this plan which enabled one person to control a large group of inmates would “automatically and inevitably” reform them. In Bentham’s own words,

Morals reformed - health preserved - industry invigorated - instruction diffused - public burthens lightened - Economy seated as it were upon a rock - the Gordian knot of the Poor - Laws not cut but untied - all by a simple idea in Architecture! (Bentham, 1791, 1).

Figure 1. The Penitentiary Panopticon of Bentham.
The Panopticon idea which was based on such an explicit statement of a belief in architectural determinism remained only as a proposal and could not be implemented by Bentham due to various obstacles. Until mid-nineteenth century, only a few prisons which were either direct or deviant versions of the Panopticon model were built. In fact, it was not until the second half of the nineteenth century that the theory behind Panopticon, i.e., the belief that the physical environment can shape behavior, became prevalent in architectural and planning thought.

The transformation that architectural and planning thought went through in the second half of the nineteenth century which affiliated it with a belief in architectural determinism can be related to several major developments that took place in this period. The crisis of the 1848 Revolution in France is one of these. As Benevolo points out, planning thought was separated from social thought in the aftermath of the failure of the 1848 Revolution in France as social and political scientists became inclined to dismiss attempts at physical improvement as partial reforms which would be a setback to total social revolution while architects, planners, technicians and reformers began to focus on the physical aspects of planning which could be more easily controlled than the social aspects (Benevolo, 1971, 105-147).

The confusion experienced by architects who were in the process of defining their role in society during this period further enhanced the emerging emphasis on architectural determinism. In fact, with major changes taking place in building patronage and in the types of buildings required after the Industrial Revolution, architects were faced with the problem of clarifying their place in "... the tradi...the relationship of artist - technologist - social engineer..." (Lipman, 1974, 26). Architects found themselves dislocated from their self-image as artists since they no longer functioned merely as designers of works of art for wealthy patrons whose values and social background they shared. In the second half of nineteenth century, they were instead confronted with the problem of designing mostly new kinds of settings and objects for the daily use of a mass clientele in urban areas which had grown in size and population in a short period of time as a consequence of the new production and consumption patterns introduced by the Industrial Revolution. In contrast to their one-to-one relationship with wealthy patrons, architects now had an indirect relationship with the users of their buildings who had become distinctively different from their paying clients. Parallel to these developments, a social and administrative gap appeared between architects and their clients since architects had difficulty in adapting to the new relationship between themselves and their clients. This phenomenon, in return, generated a sense of dissatisfaction about the built environment because the users no longer had choice or control over the settings and objects they used and because the emerging products were not suitable to their needs or values. In their confusion, architects, who were equipped with various technological inventions of the nineteenth century, moved closer to the self-image as technologists. However, as a compensation for their dislocation from the self-image as artists, architects also leaned on the self-conception as social engineers. By believing that the settings they designed could determine social behavior, architects must have hoped to counter their alienation from their user clients.

A third factor which contributed to the prevalence of a belief in architectural determinism in the second half of the nineteenth century is the conclusion reached by numerous studies which were carried out with the aim of analyzing the causes behind the various cholera epidemics in England and Europe. These studies argued that there was a strong correlation between unhealthy physical conditions in which people lived and the physical, social and psychological problems they had. Influenced by these studies, architects and planners tended to believe that good physical form would bring about a healthy social structure. Various studies carried out by social scientists in the early twentieth century further reinforced the belief in architectural determinism because of their unclear...
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The work of classical ecologists like Louis Wirth, Ernest Burgess and Robert Park, who were the early members of the Chicago School of Sociology, were especially misleading. These studies about the structure of the American city, which were carried out in the 1920s and 30s, adopted a simplistic view of causality and claimed that it was possible to predict the effects of ecological factors on social life. This kind of research which was based on an unclear conception of environment-behavior relationship complicated the problem more as architects who were in search of role definition adopted these analyses literally and used to support their belief in architectural determinism.

The prevalence of a belief in architectural determinism in architectural and planning thought lasted until mid-twentieth century. After the 1950s, some social scientists and architects adopted a different approach. In fact, although there were some social scientists who pursued a similar line of thought as the classical ecologists, there were others especially after the 1950s, such as Janet Abu-Lughod and Maurice Broady, who became aware of the problems of the belief in architectural determinism and argued that although the physical environment is an important factor in fostering social relations, its role is not deterministic. A transformed attitude towards the belief in architectural determinism can be observed not only among social scientists but also among architects after mid-twentieth century. The Second World War years during which building activity was largely curtailed had given architects and planners time to re-evaluate and criticize some previously held beliefs. This critical outlook was reflected in the sixth Congress of CIAM held in Bridgewater, England in 1947, where a new emphasis was given to socio-psychological needs. As Kenneth Frampton points out, the sixth Congress, which led to the formation of Team 10, marks the beginning of the third and final stage of CIAM (Frampton, 1980, 271).

Based on the preceding discussion, the limits of the period in which a belief in architectural determinism becomes prevalent in Utopian thought can now be set more distinctly as extending from 1848 to 1947.

In fact, a content analysis of the texts of some of the most influential urban utopians of the period from 1848 to 1947, including Soria y Mata, Howard and Wright from the regressive utopian school of thought, and Garnier, Sant’Elia and Le Corbusier from the progressive utopian school of thought, shows that most of them explicitly stated a belief in architectural determinism. Soria y Mata, for example, who was the promulgator of linear planning, proposed the Ciudad Lineal in 1882 as a means of resolving all complex problems of the world at once (Figure 2). He was so confident in his scheme that he envisioned the Linear City as a 500 meter wide street which would extend from Cadiz to St. Petersburg, and from Peking to Brussels. He claimed that the Linear City would bring peace to the world and eliminate the need for the police” (Soria y Mata, 1968, 189-193). In a similar line of thought, Frank Lloyd Wright who developed the Broadacre City proposal in 1932 expected a lot from architecture and the architect (Figure 3). In fact, the architect was assigned the most powerful position in the Broadacre City: "... free leader of free human beings in our new free country” (Wright, 1957, 24), who would be responsible for the development of the physical structure of the city, the control of the suitability of buildings in Broadacre to the principles of organic architecture, and the allotment of land to the residents. Wright presented the architect .... as savior of the culture of modern American society; ... savior now as for all civilizations heretofore (Wright, 1957, 24).

Broadacre City itself was proposed by Wright as a means of saving civilization. In his words, we are impelled to build this city if we desire salvation for our civilization (Wright, 1968, 156).

These statements reveal Wright’s belief in architectural determinism. The only
person from the regressive utopian school of thought, among those chosen for evaluation in this paper, who does not explicitly state a belief in architectural determinism is Ebenezer Howard. His Garden City proposal which he develops in his book *Garden Cities of To-morrow* (1898) is based largely on a belief in environmental determinism and on a desire to fit his design to the social life he anticipates (Figure 4). In fact, the “town-country marriage” which lies at the root of the Garden City proposal involves a new physical and social structure which Howard claims will provide “... opportunities for social intercourse...” (Howard, 1965, 48). However, there is a difference between Howard and the early nineteenth century utopians, such as Owen and Fourier. Although Howard, like Owen and Fourier, expects his proposed city to solve all major social problems of humanity, i.e.,

... (to) banish despair and awaken hope in the breasts of those who have fallen; ... silence the harsh voice of anger, and ... awaken the soft notes of brotherliness and goodwill ... (Howard, 1965,150).

he presents the new physical structure of his proposed city as a basis for all other changes he proposes. On the other hand, as discussed previously, Fourier, for example, does not even demonstrate the physical form of the Phalanx in his writings.

An evaluation of the progressive utopian school of thought in late nineteenth and early twentieth centuries generates similar results. Among the three architects chosen for analysis in this paper, two have been found to express a belief in architectural determinism. One of these architects is Antonio Sant’Elia, a futurist architect from Italy who developed the *Città Nuova* proposal in 1914 (Figure 5). *Città Nuova* was a reflection of Sant’Elia’s fascination with mechanization, technology and speed. It was based on technological and scientific developments which according to Sant’Elia would generate “... profound changes in our conditions of life ...,” and enhance “... the formation of a new ideal of beauty (which would be) stirring the masses with its fascination” (Banham, 1967, 128-129). In fact, Sant’Elia claimed that technical and scientific factors, rather than social ones, were capable of changing general conditions of life, the general taste and the general character of architecture. This emphasis on the role of technological and scientific developments, which Sant’Elia saw as the major source of inspiration for architecture, in changing the conditions of life lies at the root of Sant’Elia’s belief in architectural determinism. Le Corbusier, another architect who belonged to the progressive utopian school of thought, was more explicit than Sant’Elia in expressing his belief in architectural determinism. In contrast to the utopians mentioned above who developed only one proposal for an ideal city, Le Corbusier advocated three different urban forms as alternatives to the nineteenth-century city, i.e. *A Contemporary City* in 1922 (Figure 6), *The Radiant City* in 1930 (Figure 7), and *The Industrial Linear City* in 1935 (Figure 8). However, in all of his writings which accompanied these proposals, a belief in architectural determinism is dominant. For example, in *The City of Tomorrow*, he claimed that

hygiene and moral health depend on the lay-out of cities (Le Corbusier, 1971, 86);

in *The Radiant City*, he remarked that

... only architecture and city planning can provide the exact prescription for (contemporary society’s) ills (Le Corbusier, 1967, 143);

and in one of his talks, he stated that

the third human establishment, the linear city of the industrial age ... would bring about unity, union and fraternity among countries by creating contacts by economic units of favorable sizes (Le Corbusier, 1970a, 169).

One can find traces of a belief in architectural determinism not only in Le Corbusier’s writings which deal specifically with his urban design proposals, but
also in his discourses on architecture in general. In fact, the most powerful
statement that Le Corbusier makes reflecting his belief in architectural
determinism is the often quoted final sentence in his book *Towards a New
Architecture*:

Architecture or Revolution - Revolution can be avoided (Le Corbusier,
1970b, 269).

For an architect who believed that

it is the question of building which is at the root of the social unrest
of today (Le Corbusier, 1970b, 14)

social revolution could be prevented if the correct type of architecture and
urban planning was applied. Another architect from the progressive utopian
school of thought whose ideas have been influential on the architectural and
planning thought of the twentieth century is Tony Garnier. An analysis of the
text accompanying the drawings of the *Cité Industrielle* proposal published
in 1917 reveals that unlike Sant’Eia and Le Corbusier, Garnier did not profess
a belief in architectural determinism (Garnier, 1929) (Figure 9). Although his
emphasis was on the physical organization of his proposed city, he did not claim
anywhere in his text that the physical organization would determine the social
organization. Rather, Garnier assumed that certain social changes had already
taken place and planned his city accordingly. However, Garnier differs from
the early nineteenth century utopians like Owen and Fourier because he does
not discuss the details of the social organization in the *Cité Industrielle* while
he goes into minute details of its physical organization.

In short, content analysis of the texts of six urban utopians from the regressive
and progressive utopian schools of thought in the period from 1848 to 1947
reveals that four of these utopians, Soria y Mata, Wright, Sant’Eia and Le
Corbusier, professed a belief in architectural determinism. This analysis also
demonstrates that the consideration of the social organization as well as the
physical organization in an ideal city proposal does not necessarily inhibit the
belief in the deterministic role of the physical environment. In fact, even though
Wright and Le Corbusier considered and developed a social organization model
for their proposed ideal cities, they still professed a belief in architectural
determinism.

These findings support the claim that one of the reasons for the limitations of
contemporary new towns which have been developed on the basis of the urban
utopias of late nineteenth and early twentieth centuries must be related to the
belief in architectural determinism dominating these urban utopias. In order
to eliminate these limitations, architects and planners need to re-evaluate the
relationship between the built environment and the social environment. In fact,
many recent studies have shown that the influence of the built environment
on social behavior and social change is only indirect. The architect and planner
can provide affordances, however, this does not necessarily mean that they will
be perceived and used by the people involved. The use of affordances provided
by the layout of the environment depends on the competencies, predispositions, values and interests of the users (Lang, 1980, 146-155). In other
words, the architect and planner can only provide "the potential environment";
"the effective environment," on the other hand, is defined by the users. Architects must realize that design can only provide the potentials for desired
patterns of behavior and reduce the affordances for the undesired ones. Thus,
as Ackerman states,

... (architects') demanding role is to find ways to aid and encourage
their society to speak through its buildings, in other words to be
catalysts, or translators in the sense of the distinguished poets who
re-form literary achievements in another language” (Ackerman,
1969, 8).
ÜTOPYA VE DETERMİNİZM:
ONDOKUZ VE YİRMİNİCI YÜZYIL KENTSEL ÜTOPYALARINDA MİMARİ DETERMİNİST DÜŞÜNÇENIN ROLÜ

ÖZET


Makalede ütopik düşünceye tarih içindeki gelişiminden söz edilmiştir ve mimari determinizm ondokuzuncu yüzyıl sonuyla yirminci yüzyıl başlarında ortaya çıkan bu uygulamaların genel çerçevesini açıklıyor. Bu dönemdeki ütopik kent modelleri - progressive (geleceğe yönelik) ve regressive (geçmişe özlem duyan) yaklaşımların ürünü olarak iki ayrı grupta ele alınmıştır. İlk gruptaki ütopik kentler, geçmişin yerel topluluk ruhuna özlem duyan kentsel yaşamı doğayla yeniden ilişkilendirmeyi amaçlamış, ikinci gruptaki ütopik kentler ise, geçmişle tüm ilişkilerini kesmiş ve verimlilik, temizlik, hız, rasyonellik ve ekonomi, yeni çağın en önemli özellikleri olarak ele alınmıştır.

Geleceğe yönelik yaklaşımı benimseyen Sant'Elia, Le Corbusier ve Garnier ile geçmişe özlem duyan yaklaşımı benimseyen Soria y Mata, Wright ve Howard'ın kent tasarımıyla ilgili yazılarından verilen örnekler, mimarının sosyal yaşamın belirleyeceliğini kanıtlar ve bu dönemdeki kentsel ütopyaların genel olarak ütimli olduğu göstermektedir.


REFERENCES


BENTHAM, J.S. (1791, 1787) Panopticon; or The Inspection House, (3) T. Payne, London.


