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URBAN PLANNING THEORY AND THE ROLE OF DOXIADIS' THEORY OF EKISTICS

Abstract: Over the span of the 20th century, planning theory evolved from an architectural to an engineering and then to a more socio-political approach. All of these approaches are still to be found in the world of urban planning, sometimes in uncomfortable juxtaposition with each other in the same planning agencies and offices. Rapid urbanization and industrialization along with The Great Depression, World War II and the Civil Rights Movement were key moments in this evolutionary process in the USA. Outside the US, and to some extent within it, the approach of Constantine Doxiadis has played a significant role in synthesizing these various approaches, while also contributing important new concepts to the theory of urban planning itself within his new science of Ekistics. Doxiadis enjoyed great success as a planner and theoretician in many parts of the world during the 1960 s and 1970 s but was less successful in promoting his ideas in his own country, which raises interesting philosophical questions about the nature of planning, and the theory that inspires it.

Key words: *planning theory, Doxiadis, Ekistics, planning history*

INTRODUCTION: The History of Planning Theory

For many years and in many countries of the world today urban planning is seen as a form of architectural design. The architect with a superb sense of synthesis is expected to encompass all of the complexity of urban space in a single master design that would accommodate present and future activities in the same manner, as he or she would design a complex building. In the history of such efforts and up to a certain scale these efforts have been more or less successful in planning for cities. One can think of Haussmann's plan for Paris and Major L'Enfant's plan for Washington D. C. as examples well suited to their times. Louis Kahn, Frank Lloyd

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Wright and Le Corbusier are other architects who have influenced the form of cities with greater or lesser success in the recent past. The architect/engineer, Doxiadis [3], however, stands apart from these efforts because of his willingness to engage in extensive research on the full range of urban problems before attempting to create a design to solve them.

But this is to move ahead of the story without filling in the details of the history of planning theory, particularly in the U. S. A., before Doxiadis came on the world scene, as it were, in the 1960 s. From the late 19th Century on, social planning of all sorts in the industrial world was directed to the idea of "applied rationality", as one would expect in a cosmos so influenced by Newtonian science and technology. Jacques Ellul [4] has outlined the elements of this 'Technological Society' in his book by that name, though the French title, *La technique, ou L'enjou du sičcle*, is perhaps more descriptive of his purpose. Ellul describes the history of the modern West as a gradual replacement of earlier prototypes by the *machine* as the ultimate ideal form of all things in nature and society. Technique is the means whereby all things will be transformed into a machine. Technique is applied through standardization and rationalization where everything must be 'resolved in advance', where one must rely upon method and not upon ('unreliable'?) human beings. In the modern society, the means are more important than the ends, and 'efficiency', a means, becomes the 'end'. There is a belief in the "one best way", which, according to Ellul, devolves into a kind of 'technological mysticism'.

David Noble [10], in his book, *America by Design*, describes how this technological philosophy was applied in American society from the late 19th century on, as a part of the process of preparing a largely rural, immigrant population for participation in modern industrial society. The engineering model was to be applied both in production, as well as in society, in general. The population was to be 'engineered' for work in industry and this was to be accomplished by reorganizing the educational system so that a rural population could be 're-socialized' for participation in 'modern' society. Actually, little seems to have changed in the American educational system from those days, except for the greater emphasis on consumerism, the influence of neo-liberalism, and the increase of authoritarianism, as well as the technology itself, of course [5].

Catherine Bauer [1], in her book, *The Future of Cities and Urban Development*, offers a similar study of the engineering approach to city and regional planning. She describes the gradual shift from architecture to engineering as applied to the planning of American cities. Two factors were important in this shift. One was the need for society-wide economic and welfare planning during the 1930 s' Great Depression in the USA. Most economists were unable to either predict or explain, theoretically, the failure of the so-called "free market" system at that time, much less endorse the extensive state planning interventions necessary to restore a functioning economy (any more than they have been able to do so for our current crisis, for that matter). Nevertheless, much effort was expended during the New Deal to extend the idea of planning to a society-wide basis, and some important successes were realized as a result of this effort.

It was, of course, the Second World War that reestablished the (then state controlled) free market to some sort of equilibrium during the 1940 s. This 'lesson' was not lost on the corporate leaders after the war, when they argued for a permanent war economy (and the necessary 'enemies' that are a part of such a system), with all the deleterious social effects we have witnessed until today. General (then President) Eisenhower warned against just such a possibility in 1960, but who was listening! Nevertheless, the experience of complex military planning required during the war reinforced the idea that cities and their regions could be successfully planned within such an engineering framework.

This 'modernist' idea of planning was based upon the idea that the State, with all its resources, could design a better society based upon the 'laws' that govern human behavior. Social science would supply the laws, and technocratic experts would supply the skills to turn this knowledge into plans for the rationalization (improvement) of society. However, such knowledge could, and did, also allow individuals to better understand the effects of their actions so as to correct them, possibly undermining the authority of the State in the process, as we shall see below. Thus, the '*postmodernist*' idea of planning sees sociological knowledge as a means of emancipating individuals by showing them how to better judge and redirect the unintended consequences of everyone's intentions and actions, which would have as a likely effect of the undermining the authority of planning as social engineering, hope for this approach having lessened, in any case.

This postmodern analysis, however, came much later, and was not available to the University of Chicago program in city and regional planning which was founded after the war by Rexford Guy Tugwell and Harvey Perloff, two veterans of these social *and* military planning efforts of the 1930 s and 1940 s. This program lasted for not much more that 10 years owing to the hostile environment produced by the 'Chicago School' economists, for whom any interference in the 'free market' system at the social level was anathema. Meanwhile, the Chicago planning program had no design component whatsoever. It was, however, a multi-disciplinary program, including courses in anthropology, sociology, geography, civil engineering, political science, law and public administration.

The core planning courses included spatial analysis of cities and their regions, using the mathematical techniques of spatial physics as their inspiration. Meanwhile there was greater emphasis placed upon theories *of* planning, rather that *in* planning, that is, on planning, itself, as a process rather that upon those things planned for. Under this rubric planning was expected to be:

a) comprehensive – to include all the elements in the system being planned for

b) rational – to choose the most efficient means to achieve the stated goals

c) objective – to act in no one's particular interest, but in the interest of the total system

d) to act in the public sphere and in the public interest

Unfortunately, this emphasis upon instrumental rationality ignores certain important factors, such as, how goals are set, and by whom. It also ignores many of the specific characteristics of the planning problem, itself. For example, cities are dif-

ferent from businesses, which are different from the military, etc. In fact, no planning theory can cover all situations or all problems. The reason for this is that the knowledge requirements are formidable for complex systems. Simplifying assumptions are usually necessary and often hide biases that are unknown to the planner. As a result certain interests are served while others are ignored.

1. DOXIADIS' PHILOSOPHY

Unlike the Chicago program, Doxiadis [3] was not interested in planning theory as a process, apart from the object being planned for. His interest was in the relationship between humans and the spaces they occupied; he aimed for a structural analysis of human settlements. He and his colleagues studied urban settlements or what he called 'ekistic' environments extensively. The word 'ekistic' derives from the Greek word '*οικιστική*', deriving from the word '*οίκος*', meaning house, and is the common root in English words such as economics, ecology and ecosystem. He defined the word 'Ekistics' as 'the Science of Human Settlements', and for many years published a periodical under that title. He and his colleagues continuously surveyed all the research coming out of urban geography and the social sciences prior to and including the 1960 s when he was formulating his ideas.

As a result, Doxiadis had enormous insights into the workings of cities and their regions. Like the Chicago planners, he understood the need to maximize accessibility and avoid obstacles to the movements of humans and their vehicles. However, he chose the linear form for the cities he planned in order to avoid the congestion at the city centers that characterized most older cities as a result of their continuous growth. He chose the term, 'Dynapolis", to express the idea of a rapidly growing city, and he applied this idea to the planning of Islamabad, the capital city of Pakistan. He also attempted to plan for the future of existing cities in a similar manner, by altering the incentives for property developments and investments in those regions. He would have moved the entire administrative center of Athens, for example, to a location outside the existing center, and, then encouraged the city to expand in that direction. However, his vision appears to have been overrun by political forces aligned with vested property interests, including very likely those represented by recently expatriated capital brought by Greeks from Nasser's Egypt.

At the same time, Doxiadis understood that most movements in the city were related to a hierarchy of centers and communities, as recent urban research had discovered in U. S. cities, so that he incorporated this idea in the grid system associated with his linear form. At the same time, he conducted a major empirical research project in Athens on what he called the 'Human Community', or the internal urban community of a certain size focused on the elementary school and similar services at this scale, free of vehicular traffic, so that pedestrian traffic, including especially small children, could move freely in this space. In short, Doxiadis could solve most of the planning problems faced by modern cities without recourse to planning theory as it had developed in the U. S., as a result of the Chicago pro-

gram. His was a theory *within* planning not a theory *of* planning, as a process in itself. As such, however, he was aware of the contributions that the social and human sciences could make to such a theory, in a much greater depth than most of the 'Grand Designers' of the 20th century.

Two interesting questions remain, however: First, how was he so successful in obtaining contracts for major planning projects all over the world, since he was so little interested in the planning process, itself? And, Second, Why was he ignored in his own country when he proposed a planned change in the Athens metropolitan area that would have avoided the horrendous problems that that city now faces? To answer these questions we must take up the story of how planning theory evolved in the U. S. after the 1950 s.

2. PLANNING THEORY IN THE 1960s AND 1970s IN THE U. S.

As in the 1930 s and 1940 s, another crisis influenced a further change in planning theory. This time it was a socio-political and not a political-economic, nor a wartime crisis, though the antiwar movement did play a role. It was, in fact, the civil rights movement, which then evolved into an antiwar movement, as both these movements involved especially young middle class men and women in a struggle for a society that would come closer to the ideals formulated by the founding fathers of the country 200 years earlier.

These movements gave rise to the Great Society Program of the Johnson administration, which was modeled to a certain degree after the earlier New Deal program of the Roosevelt administration in the 1930 s. As a result of the pressure from the Civil Rights movement, anti-poverty programs were established throughout the country. The most important feature of these programs was that monies were sent directly to urban (and rural) communities, bypassing the intervening state and municipal governments in the process. The newly franchised technocratic planners were *not* in control of these programs.

Meanwhile, a number of less bureaucratically oriented planners agreed to work directly with the local communities. As a result, their perceptions of planning and its theories changed. As they were absorbed into the local planning efforts they had first to fend off accusations that they were a mere extension of the technocratic mentality found in the municipal and state planning organizations. If and when they expressed allegiance to the local planning process they often actually found themselves in conflict with the official planners in the administrative jurisdictions where they were located. At times they constituted themselves as, or found themselves in cooperation with, "Guerrillas in the Bureaucracy" as the book by Needleman & Needleman [9] has described their efforts at that time. Out of this experience grew a much more phenomenological understanding of the planning process and a new sense of the limitations of the technocratic approach.

These planners came to understand themselves as *actors* in a community sociodrama as described by Gutenschwager [6], pp. 57–69, and Ch. 9. They learned the importance of effective communication, of rhetoric and persuasion in their dealings

not only with their clients with whom they were allied, but with politicians and bureaucratic planners as well. They originated the phrase, 'participatory planning' to illustrate their changed understanding of the process of planning within an envisioned more truly democratic society. In the process they came to understand the human dimension of planning, something missing in the technocratic vision of the scientific approach to planning.

3. PLANNING THEORY IN THE 1980s AND BEYOND

The Vietnam War and the protest movement against it, as well as the earlier Civil Rights movement, directed a great deal of attention to the character of the American political economic reality, which in turn generated interest in the Marxist structural analysis of capitalism as a system, something more or less successfully discouraged in academia following the McCarthy witch hunt in the 1950 s. Few people appreciate the extent to which Marx was influenced by the thinking of the ancient Greek philosophers. While we all know the importance of the idea of the dialectic found in the writings of Heraclitus, we may (or not) be surprised to learn that Marx' doctoral dissertation was a study of the differences between Democritus and Epicurus on the question of how one should understand human society. Democritus believed in the deterministic approach taken by most positivist social scientists today, while Epicurus believed that human volition played a major role in forming human society in a much less deterministic formulation of the dialectic between the individual and his/her environment, both social and natural. Needless to say, Marx came down on the side of Epicurus, and this perspective influenced his subsequent thinking on the nature of capitalism and the prospects for its evolution into something different in the future, whatever that future might be.

Meanwhile, this renewed interest in Marx led some scholars to study the structure of cities within such a framework of analysis. These scholars included geographers and sociologists as well as planners themselves. See, for example, Harvey [7 & 8] and Dear and Scott [2]. Their main finding had to do with the way in which capitalism, or more specifically, how the circuits of capital intersect with urban space, creating an urban form that has little to do with the understandings of scientific planning. Industrial capital may be interested in the efficient and productive use of urban space, but real estate capital is not. Congestion and centralization are good for real estate investors because, at least up to a certain point, they increase rents at the center of the city. Other techniques of real estate capital, such as destroying values near the center of cities in order to increase demand at the periphery, or the use of racism to alter the form of cities, etc., are equally disruptive of efficient urban form, at least from a technocratic standpoint. Indeed, real estate capital and the construction industry have little to do with mathematic models of urban space or with the technocratic approach to city and regional planning, making it a major obstacle to efficient urban form under any paradigm.

4. ANSWERING THE QUESTIONS ABOUT DOXIADIS SUCCESSES AND FAILURES

Doxiadis successes were based upon his intuitive understanding of the sociodrama [6] that is involved in public planning (and, indeed, in all of social life). He was a consummate communicator and persuader. He knew how to communicate to all types of audiences in a language they could readily understand. Because of his education and social class he was comfortable with government officials all over the world. He also had significant experience with American corporate leaders and politicians gained during his tenure as the Minister of Reconstruction and, subsequently of Coordination, in postwar Greece, where the U. S., was heavily invested during the five years of the civil war and beyond. He was also extremely well organized and prepared for each and every encounter with officials who were responsible for planning in their respective countries and cities. He was *a*political with regard to the ideological conflicts concerning socioeconomic organization such as raged in the postwar period, as he concentrated his attention solely upon the form of cities and their regions, whatever the larger issues about how such things should be organized and financed at the national level. Thus, his ideas could be equally well applied in capitalist or socialist countries.

As a result of this he was very successful, both as a businessman and as a scientist. He headed a firm with 500 employees in Athens and another 200 employees in locations throughout the world. He had major projects on most of the continents. He organized conferences attended by all the leading intellectuals in the world at that time. Many of these conferences were held on a luxury liner sailing the Mediterranean and ending on the island of Delos, hence the name 'Delos Conference'. He organized a planning journal called *Ekistics* which at first summarized all the planning literature from the major academic journals and circulated it at low cost to most of the countries of the world, including especially those of the Third World. Thus, he not only collected ideas from the best minds of the world at that time, but also circulated them throughout the world, both as a way to educate people about urban planning, but also as a way of 'advertising' his services to potential consumers. But, at the same time, he also had an excellent 'product' to sell, with many satisfied consumers throughout the world. In short, he used all the sociodramatic techniques known to leaders in business, politics and religion throughout history. He was bound to be successful, as indeed, he was.

Why, then, was he not successful in planning the capital city in his own country, when his ideas were so obviously successful in other countries in the world? Part of the answer has to do with the well-known phrase, 'a prophet in his own land'. He was part of the local political scene with all the petty conflicts and jealousies that are known to all. He had risen very quickly on the political scene after the war because of his outstanding organizational competence. His wealth, his aristocratic social class and his extensive education set him apart from many of the other political 'contenders' on the local scene at that time. He was an 'irritant' that many wished to see gone from the local 'contest' for power. And, indeed, he did leave for a time

in the 1950 s, moving to Australia to get away from the 'fray', as it were. Upon his return he set himself up in the private sector where he realized his greatest successes in the following years.

But there is another reason that is at least partly related to his political problems in his home country. He worked through and around the political economy of power in the capitalist world. He was also not necessarily interested in the political economy of *space* in the capitalist system. The structural analyses of urban space mentioned above did not begin appearing on the academic scene until the late 60s and early 70s, too late to influence his thinking about how that space was organized in an empirical sense, apart from his normative thinking on the subject. His planning successes were realized in locations and in projects where he could bypass such issues, using his formidable communicative skills, as seen above. The demands of capitalism as a system, as well as its ideological underpinnings developed 150 years earlier (and still in force, for that matter) gave impetus to actions by real estate capital and the construction industry that were not in any way concerned with the efficient functioning of urban space. They were driven by the search for profit as an expression of 'Homo economicus', the locus of individual rationality, which, according to the logic of 18th and 19th century thinking, should lead to the the 'best' overall collective outcome for society as a whole.

In Athens, this force was represented by investors and contractors who sought to maximize profit on their investments in urban space. It appears that many of the investors might have been expatriates from Nasser's Egypt, looking for safe investments for their capital. Greece was approaching its incorporation into the globalized world capitalist system where the rules of the World Trade Organization governing the free movement of multinational corporate capital would make it unlikely that Greece could compete, even at home, in the industrial or even commercial sector (much as the American colonies in the 18th and 19th centuries had had to confront unequal competition from the more advanced English companies at that time). In such circumstances real estate seemed like the only wise investment. Decentralizing Athens and allowing for a more rational linear development would jeopardize returns on real estate investments in the center of the city. Doxiadis was not familiar, theoretically, with these questions. He failed to appreciate the structural analysis of the 'construction' of urban space as mentioned above and as it has unfolded during the creation of the modern capitalist city. He had been able to bypass and/or ignore this issue in his planning successes up to and beyond that point. In Athens this indifference caught up with, not only him, and but with many other efforts around the world to rationalize urban space within the technocratic framework of scientific planning – yet another example of the victory of individual rationality over collective rationality.

CONCLUSION

Any city and regional planning effort that ignores important dimensions of the social, political and economic forces that are dominant in the circumstance in which

those cities and regions are found can only provide partial solutions to the problems faced by those cities and regions. Centrally planned systems have their own dynamics, as do 'free market' systems, as well as any combinations of those two. Technocratic planning based upon the engineering approach may very well overlook important human and/or political economic dimensions, no matter what the characteristics of the larger system are. A holistic approach should combine both human and larger systemic questions in its planning efforts. This can only happen when the dialectic of C. P. Snow's 'Two Worlds' [11] evolves into a new synthesis in the academic and practical world.

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