

POSITIVISM AND ITS INFLUENCE ON CITY PLANNING

by

Yau-Tak Joannes Wong

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Master of City Planning
in
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A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
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Yau-Tak Joannes Wong

給執愛的雙親

To my parents, with love

有很多人賽跑失敗了

是在最末幾步

跑當跑的路已經不容易

跑盡更難

To run the race is not easy
To finish it is even harder

ABSTRACT

This thesis attempts to examine the influence and, consequently, the effects of the philosophy of positivism on planning.

A brief overview of planning history reveals that the planning profession is moving away from the earlier reform ideology to rely more and more on the positivistic knowledge and methods in carrying out its functions. This trend is manifested in the dichotomy of planning which expresses the two principal roles that planners are currently performing, namely, the advisory technocrat and the active reformist roles.

The inadequacy of the positivist ideology in dealing with the experiential world limits planners in not being able to link knowledge to action. By rediscovering planning in the societal context, planners are forced to immerse themselves in an education process which focuses on a moral concept and a value system that positivism has abandoned according to its "verifiability principle". To this end, planning can become proactive in advancing social purposes, such as equity and fairness in allocation and distribution of resources.

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TABLE OF CONTENTS

ABSTRACT	vi
ACKNOWLEDGEMENTS	vii

<i>Chapter</i>	<i>page</i>
I. INTRODUCTION	1
FOREWORD	1
SCOPE AND METHODOLOGY OF THE STUDY	3
ORGANIZATION OF THE STUDY	4
II. POSITIVISM: AN OVERVIEW	5
INTRODUCTION	5
HISTORY OF POSITIVISM	7
Positivism Before the Seventeenth Century	7
Positivism in the Seventeenth Century	8
Auguste Comte(1798 - 1857)	12
Logical Positivism/Logical Empiricism	14
SUMMARY	17
III. A BRIEF OVERVIEW OF PLANNING HISTORY	18
INTRODUCTION	18
THE REFORMIST	19
THE PHYSICALIST	21
The Garden Cities	21
The City Beautiful	22
The City Efficient	24
IV. POSITIVISM AND PLANNING	28
INTRODUCTION	28
POSITIVISM IN PLANNING	30
PLANNING AS A SOCIAL SCIENCE	32
Instrumental Planning - A Comprehensive Outlook	34

V.	EFFECTS OF POSITIVISM ON PLANNING	38
	TWO ROLES OF PLANNING	38
	Reasons for the Declining Influence of the Reform Movement	40
	DICHOTOMIES OF PLANNING	42
	What Is Planning?	42
	Two Sides of Planning Theories	46
	Two Forms of Planning Practice	51
	RATIONALITY AND PLANNING	53
	SCIENTIFIC AND NON-SCIENTIFIC PLANNING PROBLEMS	59
VI.	POSITIVISM AND PLANNING: WHERE DO WE GO FROM HERE?	62
	PLANNING AS INHERITED: A SYNOPSIS	62
	CRISIS IN PLANNING	65
	A Challenge to Planning	67
	REDISCOVERING PLANNING	75
	WHERE DO WE GO FROM HERE?	80
	Re-education of the Planner	81
	What Is to Be Done?	82
	BIBLIOGRAPHY	85

Chapter I

INTRODUCTION

The philosophers have only *interpreted* the world, in various ways; the point is to *change* it. (Karl Marx)¹

1.1 FOREWORD

City planning is in Crisis!? It is accused of not being able to guide the growth of cities. Ever since the birth of modern planning, planners have been considered as being able to present the so-called the "best" alternative to the perceived needs and/or problems of the community. In fact, this is the result of the adoption of the doctrine of positivism/scientism which has been passed down from the Scientific Revolution, the Enlightenment, and the Industrial Revolution. The mandate of these periods was that by reason alone it was possible to create and advance knowledge. Logic and reason became the principal pillars in rational thinking. When planning became influenced by these ideas, planners believed it was possible to experimentally investigate, understand, and manipulate societal growth. In this perspective, nature is seen as an ordered system, man is part of

¹ Cited in Robert C. Tucker, ed., *The Marx and Engels' Reader*. 2nd Edition. New York: W. W. Norton and Company Inc. 1978, p. 145.

nature, and therefore can be studied and examined in a scientific and positivistic manner. In addition, there was the belief that through an "empirical" understanding of the real world, better living conditions could result. The development of positivistic social sciences further suggested that planning can go beyond the physical dimension and incorporate the social aspects of society resulted in an image of planning as being more "comprehensive".

The progress of scientific development within planning discourse led planners to become technocrats who, over the years, turned knowledge into information, values into instrumental economic values and themselves into efficiency experts. This separation of value and facts, focusing only on objective knowledge, forced planners to deal with complex planning issues as scientific technical problems which consist of a one-to-one, problem-solution relationship. Thus, the questions of the relation of knowledge and action, theory and practice had to be regarded as invalid. It is not that the knowledge generated is insufficient to provide guidance for the community, but that the progress in developing such a way of dealing with planning problems had reached a situation so paradoxical that it had lost control in almost every aspect within the community. In Capra's words,

"We can control the soft landings of space craft on distant planets, but we are unable to control the polluting fumes emanating from our cars and factories. We propose communities in space colonies, but cannot manage our cities. The business world makes us believe that huge industries producing pet foods and cosmetics are a sign of our high standard of living, while economists try to tell us that we cannot 'afford' adequate health care, education, or public transport. Medical science and pharmacology are endangering our health, and the Defense Department has become the greatest threat to our national security"(Capra, 1983, p. 42).

Within this context, it is necessary to examine what is responsible for to the separation of planners from their environment. The intention of this thesis, thus, is to examine the influences and, consequently, the effects of the philosophy of positivism on planning.

1.2 SCOPE AND METHODOLOGY OF THE STUDY

There is no doubt, that theoretical research generally tends to express a particular viewpoint. Inevitably, individual biases emerge either intellectually or idiosyncratically. This study is no exception. However, this is not an apology, since the author believes that absolute objectivity is not only unattainable, but may also be undesirable. After all, subjective explorations may stimulate discourse and intellectual growth and thus, cannot always be assumed to be negative.

The crisis in planning, as we have described, is a result of a web of intermingled factors. It seems, at least in theory, that this crisis can be solved, or at least understood, with little difficulty. However, the current crisis is a result of a mixture of both ideological and political belief and influence in the historical development of planning. It needs a much more broader view and scope to cope with the current difficulty. The present study however focuses on one such ideological and theoretical constructs, namely the philosophy of positivism, and its influence on planning thought and practice.

In terms of methodology, a literature review was undertaken to understand, first the concept of positivism and second the theory and practice of city planning. A review of existing planning literature not only helped in examining the present theory and practice, but also in being able to find the indirect linkages between positivism and planning. This is not a thesis on Positivism but on influences of Positivism on Planning.

1.3 ORGANIZATION OF THE STUDY

The first chapter enunciates the problems and objectives, the scope, the methodology used, and the overall organization of the thesis.

Chapter two sets out to introduce the subject matter of the philosophy of positivism. The third chapter summarizes the history of planning into two distinct groups, namely the reformists and the physicalists. It also suggests that the emergence of the positivistic approach in solving planning problems arose with the development of the concept of City Efficient.

Chapter four attempts to make a connection between the philosophy of positivism and planning and the influences of positivism on planning theory. Chapter five assesses several aspects of the effects of positivism in planning focussing on planning practice from reformist and technocratic point of view. The last chapter explores some of the current crisis in planning and presents some alternatives the planning profession faces.

Chapter II

POSITIVISM: AN OVERVIEW

Positivism: "A theory that theology and metaphysics are earlier imperfect modes of knowledge and that positive knowledge is based on natural phenomena and their properties and relations as verified by the empirical sciences"(*Webster's New Collegiate Dictionary*, 1980, p. 890).

Logical Positivism: "A 20th Century philosophical movement that holds characteristically that all meaningful statements are either analytic or conclusively verifiable or at least confirmable by observation and experiment and that metaphysical theories are therefore strictly meaningless"(*Webster's New Collegiate Dictionary*, 1980, p. 671).

2.1 INTRODUCTION

Positivism is a term which designates a philosophical position or doctrine oriented around natural science and strives for a unified view of the world of phenomena, both physical and human. From the point of view of methodology, as shown in the dictionary definition above, the term "positive" is conceived in polemical opposition to the "metaphysical" abstractions of the more traditional philosophy. Essentially, the term positive implies facts and things of immediate perception as well as the relations and uniformities which thought may discover in them without

transcending experience. The term metaphysical, on the other hand, is inquiry which claims to go beyond the sphere of the empirical and seeks either hidden essences behind phenomenal appearances, or ultimate efficiency and final causes behind things. It is as well as any attempt that attributes reality and logical intentions to species, ideas, or concepts.

From the standpoint of results and aims of knowledge, positivism shares with science the practical ideal of knowledge in contrast to the merely contemplative and speculative goals of metaphysics. According to the positivists, the aim of knowledge should not end with knowledge itself, with an otiose complacency in its own superiority and aloofness from the interests and cares of ordinary existence; but it should embrace the real world(Ruggiero, 1933, p. 261). The motto of modern science and that of philosophy which would ally itself to science is to know in order to foresee and provide, that is to say, to know in order to have a useful guide for conduct and to be in a position to control the forces of nature for the sake of the commonweal(Ruggiero, 1933, p. 261). From this standpoint, the characteristic thesis of positivism is that positive science is the only valid knowledge, and facts the only possible object of knowledge.

2.2 HISTORY OF POSITIVISM

The history of positivism extends over the past three centuries as a reflection of the increasing success of science as a means of describing the world. Only in the nineteenth century, however, did the positivist position become explicit and conscious, taking the form of a definite system of thought.

2.2.1 Positivism Before the Seventeenth Century

It was Auguste Comte who first formulated positivism in the nineteenth century and made it an evolutionary paradigm of modern civilization, but positivism as a school of thought can in fact be traced back to the Middle Ages.

In the thirteenth century, Roger Bacon(c. 1212 - 1292), a Franciscan at Oxford, argued that the only reliable means of acquiring knowledge about the world was through experimentation and deduction and maintained that this type of knowledge was necessary to gain control over nature.

In the fourteenth century, William of Ockham(c. 1290 - 1349)² proposed that philosophy concern itself only with those conceptual categories that would be confirmed by experience, thus, "... Only concrete

² Ockham is famous of his "Ockham's Razor" which, in Latin phraseology, is "*Essentia non sunt multiplicanda practer necessitatem*" which is translated as "one must not proliferate constructs beyond necessity"(Leshan and Margenau, 1982, pp. 72 - 73).

objects and their properties are real"(Kolakowski, 1968, p. 13). Many other scholars, according to Kolakowski, argued similar positions, for example, Jean de Mirecourt formulated a fundamental tenet of positivism, namely that only analytic judgements and descriptions of experiences deserve the name "knowledge". His contemporary, Nicolas d'Autrecourt, reduced all infallible knowledge into two kinds: one based on the principle of identity, the other consisting of records of immediate experiences.

In short, positivist thought in this period sought to discern what is absolutely reliable in our knowledge and what is not, in order to arrive at ultimate, infallible cognitive content. All that is reliable is constituted of infallible rules of reasoning, which are in themselves self-evident, and directly experiential. In other words, "it may be said that mediaeval thought gave birth to and, in its own language, gave expression to the fundamental ideas of positivism, which aim at establishing rules of meaningful knowledge and confine it to analytical statements or matter-of-fact observations"(Kolakowski, 1968, p. 17).

2.2.2 Positivism in the Seventeenth Century

Positivist thought received its greatest boost in the seventeenth century with the triumph of the scientific method and the birth of modern mechanics(science)(Kolakowski, 1968, p. 18) through the scientific discoveries of Nicolaus Copernicus(1473 - 1543),³ Johannes Kepler(1571 -

³ Copernicus believed that the sun is at the centre of the universe, and that the earth has a twofold motion: a diurnal rotation, and an annual revolution about the sun(Russell, 1945, p. 526).

1630),⁴ Galilei Galileo(1564 - 1642),⁵ and Issac Newton(1642 - 1727).⁶ Bertrand Russell commenting on this particular era noted that "it is not 'what' the man of science believes that distinguishes him, but 'how' and 'why' he believes it. Their beliefs are tentative, not dogmatic, they are based on evidence, not on authority or intuition"(Russell, 1933, p. 54).

Parallelling these achievements in sciences were also great achievements in philosophical thought. Philosopher Marin Mersenne(1588 - 1648) provided a general outline which built upon mechanistic and anti-metaphysical outlooks, emphasizing quantitative knowledge of the phenomenal world. Likewise, Pierre Gassendi(1592 - 1655) also postulated against metaphysical speculation and the fallability of theology. His claim reflects one essential characteristic of the development of positivist thought -- that no knowledge can be regarded as indisputable or irrevocable, and that it is all subject to different solutions and further refutations and corrections based on new experience.

⁴ Kepler's great achievement was the discovery of his three laws of planetary motion. The first law states that the planets describe elliptic orbits, of which the sun occupies one focus. The second law states that the line joining a planet to the sun sweeps out equal areas in equal times. The third law states that the square of the period of revolution of a planet is proportional to the cube of its average distance from the sun(Russell, 1945, p. 530).

⁵ Galileo first discovered the importance of acceleration in dynamics. Applying this concept, he established the law of falling bodies: When a body is falling freely, its acceleration is constant, except in so far as the resistance of the air may interfere; further, the acceleration is the same for all bodies, heavy or light, great or small(Russell, 1945, p. 531).

⁶ Newton formulated the famous law of universal gravitation: Every body attracts every other with a force directly proportional to the product of their masses and inversely proportional to the square of the distance between them(Russell, 1945, p. 535).

The works of two great British Empiricists in inspiring the progress of the development of Positivism cannot be overlooked. The first was John Locke(1632 - 1704) whose criticism on "innate ideas", in his *An Essay Concerning Human Understanding*, proclaimed that all our knowledge arises from perceptual experience and is in fact the fruit of long experience and training: "since man is born with no knowledge innate in him, his mind at birth must be a kind of *tabula rasa*, ready to receive impressions"(Morris, 1931, p. 24).

To illustrate that knowledge is dependent on received impressions, Locke set out to discover how we do in fact arrive at knowledge. He claims that every man is conscious to himself -- that he thinks. But when we think, we think *about* something, and that without something to think about we cannot think; therefore, that which we think about must be provided by some means other than thinking. Since one cannot admit "innate ideas" from which thinking may start, in other words, the mind must be provided with ideas before it can think, therefore, these ideas must necessarily come into the mind through the senses, through sense-perception of objects(Locke, 1961, pp. 77 - 78).

The second great empiricist was David Hume(1711 - 1776), who expanded on Locke's works. He divided the perceptions of the mind in two distinct kinds -- impressions and ideas -- the difference being their degree of influence upon the mind. For him, all our simple ideas are derived from simple impressions as they exist. The joining of ideas occurs through association, which Hume does not explain but accepts as an observed fact

and then simply asks himself what the particular principle of this association as observed are. Thus, he sets out to show that the causal principle is the basic principle upon which validity of all knowledge depends. Hume attempts to illustrate that knowledge depends ultimately on two things: the receiving of simple impressions by senses and the connection of the ideas corresponding to these impressions in accordance with a causal principle(Hume, 1973, pp. 155 - 170). Since observation and experience can never infer any properties between objects or ideas, direct observation only shows us that certain events are associated -- but this association implies no necessary connection, in other words, cause and effect. If it does exist, it can only be known through experience, never *a priori*. Hume's final definition of a cause is this: "a cause is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other"(Morris, 1931, p. 138 and Hume, 1973, p. 170).

In brief, then, according to Hume, the conjunction between events is not revealed in experience -- all that is disclosed to us is the conjunction itself which occurs in our minds and not in the objects or things themselves. In his final analysis, he concludes that there is no such thing as rational knowledge about the world, only pragmatic knowledge in the form of a collection of principles, useful and indispensable in practice.

Even though Hume failed to search for the necessary connection between ideas, he left one fundamental question yet unsolved: Is there

anything absolutely certain in our knowledge, and if so what? This, in fact, is the basis of Auguste Comte when he formulated his positivist philosophy.

2.2.3 Auguste Comte(1798 - 1857)

The term "positivism" is closely associated with Auguste Comte not only because he invented the term, but he was also the first person who coined the term "sociology"(science of society) and applied scientific method to social circumstances. Auguste Comte was born on 19 January 1798 in the City of Montpellier. Comte was influenced by Saint Simon, Condorcet, and de Maistre,⁷ in formulating his own comprehensive view about the new society. Thus, he wrote a series of lectures comprising a "course" in the positive philosophy and published a series of six volumes entitled *Course in*

⁷ A major influence on Comte was that of Henri Saint Simon. As Comte himself said that "I certainly owe a great deal intellectually to Saint Simon..."(Thompson, 1976, p. 9). For example, Saint Simon had already proclaimed a theory of historical development similar to that of Comte's Law of Three Stages; as well as foreseeing an improved society based on planned economy free of political and social anarchy and economic crisis.

A second major influence on Comte was Condorcet's idea of laws of progress of civilization. "(Condorcet) first saw clearly that civilization is subject to a progressive course, every step of which is strictly connected with the rest by virtue of natural laws, discoverable through philosophic observation of the past..."(Comte, 1913, p. 570).

Thirdly, Comte borrowed de Maistre's idea to complete his theory. He says, "... de Maistre was of material assistance in preparing the true theory of progress..."(Comte, 1913, p. 50).

Thus, positivism was the result of these impulses and the theoretical framework of the new science -- sociology. The new science, then, is based on a principle of classification of phenomena derived from a general theory of development which is capable of reconciling social order and progress. Society, then, can be viewed as a collective organism and social progress is marked by an increasing specialization of function and a corresponding tendency towards an adaptation and perfection of organs

Positive Philosophy.

The whole of Comte's program can be stated in his Law of the Three Stages and the Hierarchy of the Sciences. According to the Law of the Three Stages, the development of the human history, as well as of human knowledge, progresses through three theoretical conditions, namely, the theological/fictitious; the metaphysical/abstract; and the positive/scientific(Andreski, 1974, p. 20). Similarly, the Hierarchy of the Sciences postulates that the development of different branches of knowledge develops at a different rates depending on their degree of generality, simplicity, and independence. Astronomy, the most general, and independent of the sciences developed first, followed by physics, chemistry, biology, and finally, sociology. It is, thus, in the final stage, i.e. the positive/scientific stage and in sociology, that man gives up the vain search for the absolute notions -- the origin and destination of the universe -- and studies their relationship(i.e. the relation of succession and resemblance). This is, hence, in a polemic opposition to earlier stages which suppose that all phenomena are the products of some supernatural beings or some abstract forces of some kind. In sum, "the positive mind no longer asks 'why', ceases to speculate on the hidden nature of things. It does not employ terms that have no counterpart in reality"(Kolakowski, 1968, p. 56).

In addition, the final science, sociology, is the application of scientific methods in establishing the general course and the stages of development of society. Using the positive knowledge gained through observation, facts,

and social disturbance can be regarded as malfunctioning of the social organism and are the subject matter of social pathology.

and their relationship about society, it can be deduced and verified and then be improved. The goal of sociology, thus, is to gather, study, verify the relationship between human interaction and change the direction of the progress of society.

2.2.4 Logical Positivism/Logical Empiricism

The term logical positivism was coined in the 1920s to characterize the standpoint of a group of philosophers, scientists, and mathematicians who named themselves the "Vienna Circle". Since that time its reference has been extended to cover other forms of analytical philosophy. The Vienna Circle came into being in the early 1920s when Moritz Schlick became professor of philosophy at the University of Vienna. On the philosophical side its leading members, besides Schlick, were: Rudolf Carnap, Otto Neurath, Herbert Feigl, and Friedrich Waismann. They started the Circle because they found a common interest in the course of philosophical development.

Their influence was first felt in 1929 with the publication of a manifesto entitled "Wissenschaftliche Weltauffassung, Der Wiener Kreis" -- "The Vienna Circle; Its Scientific Outlook" -- which gave a brief account of the philosophical position of the group. This manifesto -- which was written by Carnap, Neurath, and Hahn -- was also of interest in showing how the Circle situated itself in the history of philosophy. Also in this pamphlet is the Circle's affiliation with Ludwig Wittgenstein. Wittgenstein's

Logisch-Philosophische Addandlung was published in 1921. This book was better known as *Tractatus Logico-Philosophicus* and had an enormous effect upon the positivist movement.

The main objective of the positivist movement was the attack on metaphysics.⁸ Like Hume, they divided significant proposition into two classes:

- (1) formal propositions, which are those of logic or pure mathematics, which they held to be tautologies, and
- (2) factual propositions which can be acquired by verification.⁹

This trend began when Moritz Schlick saw a turning point in philosophy¹⁰ which is inherent in the nature of logic itself.¹¹ According to Schlick, the nature of logic is to be found in the fact that every cognition is an expression or representation. That is, it expresses a fact which is cognized

⁸ See Rudolf Carnap's paper "The Elimination of Metaphysics Through Logical Analysis of Language" in *Logical Positivism*. Edited by A. J. Ayer. Illinois: The Free Press, 1959, pp. 60 - 81.

⁹ Carl Hempel in his paper "The Empiricist Criterion of Meaning" also proposes these objectives. He began by stating that the principle of modern empiricism says that all non-analytic knowledge is based on experience. However, contemporary logical empiricism has added to the traditional maxim that a sentence makes a cognitively meaningful assertion, and thus can be said to be either true or false, only if it is either (1) analytic or self-contradictory or (2) capable, at least in principle, of experiential test. According to this so-called empirical criterion of cognitive meaning, many of the formulations of traditional metaphysics, and a large part of epistemology are devoid of cognitive significance.

¹⁰ See Mortiz Schlick's paper "The Turning Point in Philosophy" in *Logical Positivism*. Edited by A. J. Ayer. Illinois: The Free Press, 1959, pp. 53 - 59.

¹¹ This trend has its origin in logic where Lugwig Wittgenstein, in his *Tractatus Logico-Philosophicus*, 1921, is the first to have pushed forward to the decisive turning point.

in it. This can happen in any number of ways, in any language, by means of any arbitrary system of signs. He asserts that all these possible modes of representation which must have something in common, namely, their logical form.

Thus, one of the main goals of logical positivism is to unify science by making every science empirical. With the objective of establishing an all-embracing empirical science, logical positivism holds that all assertions are meaningless if there is no possibility of verifying them in experience. This is stated in the "verifiability principle" -- the basic doctrine of logical positivism. It states that "for any sentence to be cognitively meaningful it must express a statement that is either analytic or empirically verifiable"(Ashby, 1967, p. 240). However, this does not mean that sentences may not have "emotive", "imperative", or other kinds of meaning besides cognitive meaning. But for a sentence to have "cognitive", "factual", "descriptive", or "literal" meaning, it must be held that they are either analytic (or self-contradictory) or capable of experiential test, i.e. "they must be shown that, at least in principle, be true or false, or to some degree probable, by reference to empirical observation"(Ashby, 1967, p. 240). Hence, according to the positivists, what is not cognitively meaningful is not knowledge; empirical science is the only method by which we can attain valid knowledge; and that facts are the only possible objects of knowledge.

2.3 SUMMARY

The early nineteenth century marked the progress of natural science and new awareness of the relevance of the expanding field of social and political phenomena. In both the French positivist school and the English empiricist school, the relevance of the scientific methods to other sciences -- such as political science, history, economics, and psychology -- was suggested. The question of whether the study of political and social life could be scientific, particularly within the current reformist context, was prevalent in both schools of thought. It was strongly believed that the phenomena of society were like the phenomena of nature and, so, must also conform to a set of fixed laws, and that, indeed, all phenomena of society are phenomena of nature.

This link of the scientific to the social has been one of the most important movements in the history of philosophical thought and, inevitably, has been manifested in the pure idea of social science in the field of psychology, sociology, anthropology, political science, economics, and all forms of planning. In fact, it remains one of the most dominant and strongest guiding principles in most fields of social science despite the critical periods of idealism, mysticism, and romanticism which followed the positivist era, claiming the incapacity of science to penetrate ultimate reality.

Chapter III

A BRIEF OVERVIEW OF PLANNING HISTORY

Planning: "The act or process of making or carrying out plans: the establishment of goals, policies, and procedures for a social or economic unit"(*Webster's Third New International Dictionary*, 1986, p. 1731).

Planner: "One who plans: designer, projector; one who supervises, participates in, or advocates social or economic planning"(*Webster's Third New International Dictionary*, 1986, p. 1731).

3.1 INTRODUCTION

Modern planning is a product of the industrial era. In fact, Benevolo states, in his book *The Origin of Modern Town Planning*, that "the birth of modern town planning did not coincide with the technical and economic movements which created and transformed the industrial town, it emerged later, when these changes began to be felt to their full extent and when they began to conflict, making some kind of corrective intervention inevitable"(Benevolo, 1967, p. xi). Ever since the mid-nineteenth century, cities on both sides of the Atlantic, in England and North America, were overwhelmed by the problems of the Industrial Revolution. People poured

into cities from the countrysides. According to the ideology of the time -- the *laissez faire* principle -- private industrialists were thought to be capable of dealing with the urban problems and of providing the necessary remedies. However, inefficiency, congestion, poverty, crowded living conditions, unsanitary conditions, and poor housing conditions became the most distinguishing features of the period as cities increased in complexity, industries multiplied, slums mushroomed, and central areas became intolerably congested (Scott, 1969, p. 2). It was a response to these problems that gave birth to planning as a profession.

3.2 THE REFORMIST

Modern planning is a distinctive social function which aims at improving the quality of life in our cities, towns, and regions. In this perspective, the reformists, as a group, were one of the first to react to various urban problems and subsequently dominated the planning profession at the turn of the century. The intellectual background for these reformers was influenced by social and utopian thinkers such as Robert Owen and Charles Fourier of the nineteenth century. These social reformers believe in reforming society through physical determination and social reconstruction.

As cities grew in size and complexity, there appeared problems of diseases, pure water supply, fire, sanitation, slums and so on. Thus, the early reformers, consisted mainly of settlement house workers, public

health officials, sanitarians, professionals, and assorted lay reformers, and others, who first, acknowledged that there are problems, such as the badly planned, pathogenic tenement house, that effect the quality of urban living and second, they increasingly realized the need for planning of the larger urban environment and reconstructing deteriorating neighbourhood. For instance, in the interest of public health and safety, cities had enacted laws in providing for the inspection of boarding and lodging houses and had occasionally instructed officials to remove dangerously deteriorated buildings. In addition, through the years of the legal precedents for requiring improvements in ventilation, sanitation, and cleanliness had accumulated. These pioneering efforts in dealing with various urban problems later transformed into various movements¹² which became major social goals of the planning profession of the following years.

These reformist ideals, in fact, influenced the development of planning concepts in two ways, as suggested by Hodge,

"On the one hand, they are the first attempts at community planning that consider not only the physical form but also the sources of employment and the social structure of the inhabitants. On the other hand, they represent the beginning of the development of technical and geometric skills applied to community planning. The widespread enthusiasm garnered by these proposals indicates the increasing willingness of people to accept technical professional advice in improving communities"(Hodge, 1986, p. 83).

¹² There are four concerns/movements, as indicated by Hodge, about city and town development at the end of the nineteenth century in Canada. These are (1) the Public Health Movement, (2) the Housing Reform Movement, (3) the Conservation Movement, and (4) the Civic Reform Movement(Hodge, 1986, pp. 87 - 92).

3.3 THE PHYSICALIST

The physicalists believed that man could consciously control his physical environment and thereby his social environment as well. This group comprised mainly of architects, landscape architects, and engineers designing parks and boulevards; area wide park systems; streets of undeveloped sections of cities; and sewers, water, and transit system. They sought to achieve social objectives, to seek a restoration of order, and to improve living conditions through the control of the physical environment and produce the desired social results through physical amelioration.

3.3.1 The Garden Cities

The concept of "Garden City" was originated and presented by Ebenezer Howard, a British Philanthropist, in 1898. What Howard envisioned was a self-sufficient community in which living and working were integrated. Indeed, the Garden City community would include all kinds of services -- schools, playgrounds, gardens, churches, town hall, concert and lecture halls, theatre, library, museum, hospitals, and so on; as well as a "greenbelt" which would separate the functional districts of the community; in other words, this greenbelt is meant to divide the area for factories, warehouses, and so on from the residential areas. Thus, the Garden City concept had an impact, at least psychologically, on the physical form of communities in two ways: first, it would disperse the population and industry of a large city into smaller concentrations, and

second, it would create more amenable community living environments(Hodge, 1986, p. 56).

The Garden City concept is said to be important to planning because, according to Wilson, there are three virtues with which it can be identified:

- "(1) its adaptability to regional planning on a human scale,
- (2) its controlled growth, and
- (3) its functional balance between commerce, industry, agriculture, and residence"(Wilson, 1983, p. 113).

In short, the garden city movement impinged on the planning process several identifiable stages:

- "(1) a thorough survey of the region's total resources,
- (2) a "revaluation" of common assumptions and ideas about the region, bringing them into line with newly discovered realities,
- (3) experts drew up the plan, and
- (4) implementation and the necessary modifications"(Wilson, 1983, p. 113).

3.3.2 The City Beautiful

Primarily a North American phenomena, the City Beautiful movement can be traced through the works of Charles Mulford Robinson and Daniel Burnham. Meek found that while the campaign for a "city beautiful" could take diverse forms, it often revolved around the design of streets, civic centres, and parks and boulevards(Meek, 1979, p. 207). Thus,

three guiding principles can be identified: coherence, monumentality, and aesthetics.

The City Beautiful movement strengthened the aesthetic initiative by providing design principles that could, and subsequently would, govern the design of city halls, public libraries, banks, railroad stations, civic centres, malls, boulevards, and university campuses. City Beautiful plans created grand civic vistas and avenues, and provided for the perception of open space, sunshine, and fresh air, all these are clearly a reaction to the dense industrial city and urban ills of the nineteenth century.

These elements together with the Renaissance design principles of symmetry, coherence, and monumentality reached their zenith when they were exhibited at the Chicago World's Fair -- The World Columbian Exposition of 1893. "The White City", as it was referred to, was a "temporary wonderland of grand perspectives and cross-axes ... shimmering lagoons and monumental palaces ... and enthralling amalgam of classic Greece, imperial Rome, and Bourbon Paris"(Scott, 1969, p. 33).

The design of the grounds and buildings of this Fair, as Hodge indicates, not only "is credited with stimulating a surge of concern for the design of cities in North America for at least forty years"(Hodge, 1986, p. 58), but also for affecting the evolution of planning thought. For instance, Thomas Adams once wrote:

"City Planning in its more modern application probably had its genesis in the grouping and spacious lay-out of the buildings erected for the Chicago Exhibition 1893. Springing from such a source it has developed into a movement for remodelling existing cities especially in regard to the grouping and situation of their public buildings and parks"(Meek, 1979, p. 1).

The emphasis of the physicalists has thus been highly design oriented, despite the fact that the two movements are different in their imperatives: i.e. while Garden Cities attempted to give physical/design form to social imperative, the City Beautiful movement was entirely based on the idea that aesthetic could produce some health/social benefits to society.¹³ These concerns with beauty and design in planning are still held to a certain extent in planning today. For example, the American Planning and Civic Association stated one of its functions as "the advancing of higher ideals of civic life and beauty in America"(American Planning and Civic Association, 1935, p. 33).

3.3.3 The City Efficient

As time went by, the City Beautiful movement gave way to a new phase of planning -- the so called City Efficient,¹⁴ -- which was both a reaction to the City Beautiful as well as a natural evolution of it. Indeed, the development of planning is an evolutionary process, its concepts undergoing continual refinement, with new ideas being added and others dropped(Meek, 1979, p. 49).

¹³ -----
According to Hodge, the Garden City approach emphasizes that "wholly new communities designed to allow new patterns of living in less-congested surrounding" and the City Beautiful movement emphasizes "the re-design of major streets and public areas in existing cities"(Hodge, 1986, p. 55).

¹⁴ It has to be mentioned that "city functional", "city scientific", and "city efficient" were used synonymously.

Different factors accounted for this shift from City Beautiful to City Efficient. Among these were the changing attitudes towards what planning was supposed to be such as the reaction to new arising urban problems and the belief in the efficiency of physical development issues. The City Beautiful was charged with a narrow concern for superficial and meretricious urban decoration in the midst of unplanned squalor and decay(Wilson, 1983, p. 88). The new initiatives were reinforced by empiricism, a comprehensive view of urban problems, and the ability to merge encyclopedic knowledge to reconstruct the urban community. It was with these that everything that is urban -- such as housing, education, public health, recreation, and mass transit -- came to be associated within the professional field of planning(Wilson, 1983, pp. 88 - 89).

With the belief that urban problems and living conditions were directly affected by the physical environment, the idea developed that planners were to be the masters of the physical field. Planning thus came to be considered as no more than the design of physical features. In short, the early planners believed that the situation would be eased through the appropriate technical skills related to physical site planning in terms of the arrangement of buildings, streets, and land uses. Thus, the keywords of City Efficient were "economy" and "efficiency". Planners found themselves confronted with issues of how to manage large-scale, rapid land development and began to promote planning as a means of obtaining efficiency in city development(Hodge, 1986, p. 95).

Despite the concerns for efficiently improving the physical environment, planning became aware of various connections with other fields during the second decade of the twentieth century, being greatly affected by emerging interests, especially in the social sciences, with respect to the collection and analysis of factual information (Albrecht, 1985, p. 10). As social scientists entered the planning arena, the physical planning trend was questioned and the fundamental ideology of the profession changed. As Hodge indicates,

"Town planning may be defined as the scientific and orderly disposition of land and buildings in use and development with a view to obviating congestion and securing economic and social efficiency, health and well-being in urban and rural communities" (Hodge, 1986, p. 98).

Hodge also identified three fundamental aspects of planning:

- "(1) The main concerns were with the *functioning* of the City rather than with its *beauty*, and the approach was rational (i.e., "scientific").
- (2) The emphasis was on *social* well-being, that is on the community as a whole as exemplified in Adams' dictum that 'town planning includes every aspect of civic life and civic growth'.
- (3) There was the belief that technical solutions to planning problems could be found, and that planners were equipped to supply them" (Hodge, 1986, p. 98).

The emergence of the interest in collecting and analyzing factual information and the enthusiasm of using the principle of scientific management techniques became the major concern within the planning profession. Thus, planning began to employ scientific methods in examining the urban problems and based the final proposals on factual information and exact analysis. Although planning, at its outset, aimed at finding solutions to all kinds of social and physical problems, the pursuit of more

rational means of solution tended to separate the former reformist role. As a consequence of this gradual, but decisive, transformation of the planner's role from reformers to technicians, planning began to neglect normative goals and narrow the perception of its function (Klosterman, 1978). In short, City Efficient planners concerned themselves mainly with providing positivistic/scientific solutions to urban problems, and turned themselves into efficiency experts and positivists as a result.

Chapter IV

POSITIVISM AND PLANNING

In order to be able to make a plan we must be able to predict; in order to be able to predict we must know; in order to know we must develop hypothesis or theories; in order to establish theories we must obtain and classify facts; we must know(John Dakin, 1960).¹⁵

4.1 INTRODUCTION

The positivistic/scientific attitude asserts that the real world, when ascertained by observation, critically examined, and classified systematically should provide an explanation of a certain event and should also make some kind of prediction about the future. In other words, this promotion of scientific aspects would give a sense of understanding of the causes of events of the world. Augmented by these attitudes, the social science researchers, in turn, emphasized a means-ends relationship. Thus, Herbert Gans, a well-known sociologist, once said that,

"the essence of planning was the deliberate choice of ends and the analytic determination of the most effective means to achieve these ends -- means which make optimal use of scarce resources and, when implemented, are not accompanied by

¹⁵ Cited in Gerald Hodge, *Planning Canadian Communities. An Introduction to the Principles, Practice and Participants*. Agincourt, Canada: Methuen Publications, 1986, p. 170.

undesirable consequences"(Gans, 1968, p. 71).

As planning borrowed more and more from the social sciences, simulation models and system analysis became a necessary part of the practice in interpreting and handling the large volumes of data being gathered.

On the other hand, the planning process, as illustrated earlier, thus required a different methodology that only the positivistic social sciences could provide. Hence, the influence of positivism revealed itself through the introduction of empirical analysis and social surveys to investigate urban problems. The method of measurement, observation, and social survey studies, which helped determine both the present and future trends, were carried out and implemented. This emphasis on data led planners to develop a method and technique to their practice.

The emphasis toward more social, core issues of poverty, housing, transportation, and other urban social problems indicates a tendency towards the criticism of the past emphasis on design and concern of beauty and order. These newly formulated, socially oriented intentions were directing planning activities towards a methodology which best determined the means to the desired ends.

4.2 POSITIVISM IN PLANNING

It is difficult to make a direct link between positivism and planning. However, through the analysis of how positivism has influenced the social sciences and how planning has borrowed from the social sciences, evidence can be obtained.

As indicated earlier, the planning profession was dominated by two groups of professionals, the reformists and the physicalists/positivists. A reformist is a planner who must be committed to social change and to ensuring that his plan/policy/proposal should promote the best interest -- which involves value consideration -- of his client or population at large. On the contrary, the positivists, as we have seen, depend solely on objective scientific methods and techniques to draw out the best means without concern for the public/client's consensus. As Richard P. Appelbaum stated, planners with a positivist influence always presented themselves as "politically neutral, objective policy-scientists, technicians attempting to efficiently realize externally-given societal goals"(McCarney, 1980, p. 40).¹⁶

This technical and value-free image distinguishes between means and ends whereby means are the "best" or the "most efficient" alternative to the "given" ends. In addition, the ends -- usually described as "societal goals" or "common/public good" -- are externally defined. The means can be

¹⁶ Originally from Richard P. Appelbaum, "Planning as Technique: Some Consequences of the Rational-Comprehensive Model", a Preliminary Draft prepared for the Conference on "Planning Theory and Practice: Economic Context, Emerging Coalitions and Progressive Planning Roles" at Cornell University, Ithaca, New York, April 27 - 29, 1979. Cited in McCarney, 1980, p. 40).

determined through scientific analysis of quantifiable data. However, when ends are considered, planners find themselves in a helpless situation because ends are usually value-laden and often constitute ethical consideration.

This dilemma can be explained by the logical positivist approach to the concepts of ethics and means-ends relations. Firstly, it is stated that only the best alternative provided an adequate means for achieving a given end can be rationally justified and evaluated. However, the question of how an end will be rationally justified and evaluated raises problems for planners. In so doing, Klosterman states that an end which guides the selection of one set of means may, of course, provide a means for achieving 'higher' or more valued ends and be rationally evaluated with respect to those ends. However, in this view, "the chain of means and ends must stop with an 'ultimate' end whose selection is a mere matter of individual taste or preference which cannot be justified on rational grounds"(Klosterman, 1978, p. 41).

Secondly, according to the logical positivists, statements which are neither true nor false (by virtue of the meanings of the words they contain) nor empirically testable are cognitively meaningless, and therefore, neither true nor false. It is thus the logical positivist's view that an "ethical" statement (stating that an action is good or bad, right or wrong, and so on,) is cognitively meaningless and therefore, neither true nor false. Thus, it is assumed that,

"a clear distinction can be drawn between factual and ethical statement and that a 'logical gap' separates the two, i.e. that no set of factual statements entails an ethical statement(and the reverse)"(Klosterman, 1978, pp. 40 - 41).

As a result of the two fundamental constraints set forth by the logical positivist viewpoint, planners often restrict their attention to questions which can be considered scientifically and rationally. Supplemented by the means-ends rationality, the rational planner must consider only those courses of actions which consist of quantifiable or substantive ends.

4.3 PLANNING AS A SOCIAL SCIENCE

The chapter, "**Positivism -- an overview**", showed how positivism and logical positivism became the dominant paradigm in science and later influence the social sciences. There was a belief in the relevance of the scientific method in studying the relationship between social life, under the banner that all phenomena of society are natural phenomena. In fact, the linkage between social issues and the method of scientific inquiry was originated by Auguste Comte -- in his treatise stating that the final science would be "social physics", or sociology. In addition, the increasing awareness upon the social environment was introduced via empirical studies and social surveys. Through methods of observation, measurement became the essential technique that the social scientists depended solely upon for their analysis.

Major contributions from the philosophy of positivism in planning are the means/ends conception of rationality, the rational comprehensive planning model, and scientific planning methods and techniques employed

in analytical and synthesis phases of planning. In fact, current planning literature and articles in planning journals reflect this positivist influences in planning thought and practice. In the early 1970s, Lawrence Mann reviewed the influence and impact of social sciences advances on the period of 1900 and 1965, with emphasis between the period between 1956 and 1965, when the degree of empiricism and quantification in planning method reached its highest point of influence. In fact, Mann stated that planning has become an applied social science(Mann, 1972, p. 346).¹⁷ Despite the fact that there were criticisms of positivism, the social scientific approach to planning problems, the empirical method and quantitative analysis of social knowledge still dominated the planning arena.

Positivism eventually became the dominant paradigm in planning practice and education as well. As Lawrence Mann states, "this is evident in the curriculum of planning schools, in the prior training of today's faculty and students, and the manner in which practicing professionals carry out their tasks"(Mann, 1972, p. 346).

In his article, Mann cites the work of three scholars: Karl Deutsch of Harvard, John R. Platt of Michigan, and Dieter Senghass of Goethe University in West Germany who formulated a list of social science advances which he summarized as the Deutsch-Platt-Senghass Analysis. However, Mann did not stop here. He augmented the list with other advances such as in the areas of demography, geography-location

¹⁷ ————
Similar claims can also be found in various planning articles and journals. For example, Klosterman stated that ... planners' role has become an applied scientists as the profession has been replaced by an increased reliance on the theories and models of the social sciences.

economics, and others such as advances in organizational theory(Mann, 1972, p. 351), which later impacted on the planning discourse.

The "chop-suey" status of current planning practice is not anymore clearer than in Mann's findings. According to Mann, planning borrowed from social sciences from disciplines such as political science, sociology, psychology, geography, and economics. Methods and techniques such as regional accounting, linear programming, cost-benefit analysis, cost-effective analysis from economics; content analysis, quantitative models of political decision making; sociological multivariate analysis, ecosystem theory from sociology; learning theory, pragmatic behaviourist aspects of psychology which contributed to the neighbourhood concept; functionalism, structuralism from anthropology; and so on, were incorporated. All these were the manifestation of the positivistic attitudes which the planning profession has borrowed from the social sciences often indiscriminately. As a result, planning has essentially become more of a social science discipline than the traditional roles of reformists or physicalists. This is affirmed by what Mann says as, "evidently, the applied social science approach to urban planning has considerable substance and even more potential"(Mann, 1972, p. 358).

4.3.1 Instrumental Planning - A Comprehensive Outlook

Further investigation of the positivistic approach in planning can be traced to the theory of instrumental planning.¹⁸ The emphasis on

¹⁸ In this genre, there are a number of other type of planning languages

techniques and means orientation¹⁹ is, if indirectly, derived from positivism and its tenets. According to Klosterman, instrumental planning views planners as technicians who collect data, analyze it and arrive at the "best" alternative.

The best example of instrumental planning can be said to be the rational comprehensive planning approach. This approach requires a process, using increasingly sophisticated and scientifically oriented tools of analysis, to select the "best" course of action. It was believed to be effective and logical decision-making process in seeking public interest. Martin Meyerson and Edward C. Banfield reveals that a planner would be acting rationally by following three general steps:

- "(1) to consider all the alternative courses of action;
- (2) to identify and evaluate all of the consequences following from the adoption of each alternative; and
- (3) to select the alternative that will most likely achieve the community's most valued objectives"(Meyerson and Banfield, 1955, pp. 312 - 313).

Ira Robinson re-formulated the idea and proposed the following five steps:

- "(1) Identify the problem or problems to be solved, the needs to be met, the opportunities to be seized upon, and the goals of the community to be pursued, and translate the broad goals into measurable operational criteria;

that emerged at this time:

synoptic planning(Hudson) - it provides for all the principal parts of the community, physical and social, to be brought into the picture;
holistic(Geddes) - this has its root in organic analogy, the ideas of Sir Patrick Geddes and his stress on being able to see, to know, and to appreciate the basic facets of any community before making plans for it. He urged on planners that survey and diagnosis must precede treatment.

¹⁹ This concept brings up the debate of means versus ends conflict as ends or goals are concerned more with the value-laden and ethical questions.

- (2) Design alternative solutions or courses of action(plans, policies, programs) to solve the problems and/or fulfill the needs, opportunities, or goals, and predict the consequences and effectiveness of each alternatives;
- (3) Compare and evaluate the alternatives with each other and with the predicted consequences of unplanned development, and choose, or help the decision maker or decision-making body to choose, that alternative whose probable consequences would be preferable;
- (4) Develop a plan of action for effectuating or implementing the alternative selected, including budgets, project schedules, regulatory measures, and the like;
- (5) Maintain the plan on a current and up-to-date basis, based on feedback and review of information to adjust steps 1 through 4 above"(Robinson, 1972, pp. 27 - 28).

Barclay M. Hudson, however, summarized it into four elements:

- "(1) goal setting;
- (2) identification of policy alternatives;
- (3) evaluation of means against ends; and
- (4) implementation of decisions"(Hudson, 1979, p. 388).

No matter which variation is chosen, the 'best' or preferred set of consequences should be the outcome. Looking beyond the approach to the consequences, they can be broken down into:

- "(1) deterministic models(trend extrapolation, econometric modelling, curve-fitting through multiple regression analysis);
- (2) probabilistic models(Monte Carlo methods, Markov chains, simulation programs, Bayesian methods); or
- (3) judgemental models(Delphi technique, scenario writing, cross-impact matrices)(Hudson, 1979, p. 389).

As a result, the rational comprehensive planners must be dedicated to objectivity, careful collection and analysis of data, and rigorous adherence to the concerns of the scientific methods using mathematical models relating ends and means, trade-offs and action-taking, with heavy reliance on numbers and quantitative analysis. Augmented with the increases in theoretical and methodological sophistication and the implicit emphases on

analytic techniques and social science theories, the positivistic idea thus reinforces the planner as "a 'value-free means technician' who collects and analyzes 'factual' data concerning the means for achieving public policy objectives but avoids the 'value' questions of defining these objectives"(Klosterman, 1978, p. 38).

In short, under this positivistic and rational comprehensive approach, the focus of planning shifted further away from the early reformist ideals. The tendency was to ignore the broader context of social/political aspects of the public good as well as the emotional and subjective aspects of information/knowledge.

Chapter V

EFFECTS OF POSITIVISM ON PLANNING

The empiricist approach to planning is ill-conceived because it omits a level of meaning which is essential; it fails to understand planning as a social process, and as a reflection of man's conception of himself (Harper and Stein, 1983, p. 15).

5.1 TWO ROLES OF PLANNING

It is obvious that the planning profession is currently playing a double role²⁰ -- on the one hand, the advisory, value-free technocrat, and

²⁰ There is no clear definition of the practice of planning, nor is there one way to describe what planning practitioners are doing. According to the Canadian Institute of Planners (CIP), the role of a planner may be defined as "the way in which responsibility, expectations and commitments are structured in regard to the planner's job". T. J. Gunton (1980) identified seven differing roles that planners have adopted and employed throughout the history of planning:

1. **Technocrats.** This role grew out of the problems created by the industrial city. Planners saw themselves as professional experts using objective, scientific knowledge to solve existing problems.
2. **Analysis of means-ends relationship.** In this role, the planner analyzes both the means and end of planning decisions and the relationship between the two.
3. **Referees.** This role consists of assisting politician and interest groups in reaching acceptable compromises. This is based upon the theory of incremental planning.
4. **Advocates.** Planners can also act as advocates for a certain interest group. Planners use their technical skills to help the disadvantaged.

on the other hand, the active, value-concerned reformer. During the previous discussion of the history of planning, it was mentioned that the reformist tradition was dominant before the turn of the twentieth century. Later, the emphasis shifted from regulations and reformist ideals to the city aesthetic, which was a manifestation of ideas centering on the notion of reconciling the countryside with the city and of establishing an urban-rural continuum as an attempt to improve living conditions. As Albrecht states, "This emphasis on aesthetics, status, and success negated an earlier, more humanitarian tone in the overall reform movement and was certain to have alienated social and housing reformers. Yet, without this orientation, the prospect of creating a municipal function for planning and a new profession dedicated to improving the city may not have occurred so soon"(Albrecht, 1985, p. 10).

In short, the main direction of planning was set and its advisory nature established. However, should planning be taking a more value-laden or a more value-free role is a question that will be discussed later. The influence of reform movements with strong value-laden-influence in a broader social context kept planning's commitment to improve social

5. **Bureaucrats.** Planners adapt the role of self-serving bureaucrats. These bureaucrats have independent power.

6. **Social Learners.** Planners in this role help clients by setting goals, developing plans and implementing policy.

7. **Social Reformers.** Planners in this role are committed to fundamental social change involving redistribution of power and wealth. The ultimate goal is to have worker ownership and community co-ops effectively eliminating the need for planners.

Others, such as Quadeer(1986), de Neufville(1979), Lindblom and Cohen(1979), Witty(1986), have expressed their ideas on what role the planner should play; no matter what, these discussions fall back on the two main roles that planners generally perform, i.e. the advisory technocrats and the active reformist roles(Janz et al., 1988, pp. 1 - 3).

conditions in a different way. This commitment never fully lost its appeal, with the sixties recently showing its influence on planning, i.e. the concern for fairness, equity and so on. As planning became institutionalized, broad reform objectives were the main concern which shifted the focus more on technical skills -- a shift of emphasis from what ought to be done to how it is done had occurred; that is, instrumental approach in planning is developing at the expenses of normative interest.

5.1.1 Reasons for the Declining Influence of the Reform Movement

In order to understand the decline of the reform movement, two aspects have to be examined: the first being the nature of the reform movement itself and second, the influence of the scientific technological approach in planning. To start with, there are two reasons concerning the nature of the reform movement itself that contributed to its deteriorating importance in the planning profession. The idea of the reform movement was usually very broad in scope and had difficulty in attaining popular support and understanding from the public at large. As a result, it was not very successful. Even if they were able to attain support and understanding from the public at large, the nature of the reform movement could sometimes be counter to the established and normally powerful interests of society, and therefore, the public may take the necessary action to prevent these reform movements. Consequently, many reform movements were forced to rely heavily on individual or small group efforts.

Another problem, "The weightier problem ... was that many reform objectives lost their original content the moment they became more popular or, rather, were deliberately transformed to serve other objectives"(Albrecht, 1985, p. 11). For example, the City Beautiful Movement -- originally was perceived as a means to control harmful private decisions -- later turned into a publicly financed program for preserving the commercial and private interests of the central business district. Also, zoning -- in theory, intended to be the main instrument for urban development and change -- became accepted because it helped to maintain the status quo, to protect property values, and to exclude unwanted minorities or other groups from preferred residential districts (i.e. in the practice known as exclusionary zoning)(Albrecht, 1985, p. 12).

The fact that rapidly growing urban cities demand practical plans and direct results forces planners to take into account the emphasis on practicality and technicality -- a means to cure social ills through physical layout plans. A significant portion of early "planners" consisted of architects and engineers who were considered experts in developing technical and efficient solutions.²¹ Another influential factor that was responsible for turning planning into a technical problem solver was the profession's sole emphasis on physical determinism. This emphasis on the physical aspects of the city makes it possible to explain the shift from social to aesthetic considerations on one hand and to technical and practical on the other.

²¹ Efficient solution seeks to achieve social objectives at the lowest possible cost.

5.2 DICHOTOMIES OF PLANNING

Although planning is influenced so strongly by the positivistic/scientific/objectivistic canons of science, it is, as we have examined, still struggling between the two roles namely, the reformists and the physicalists. However, one aspect of planning that is no doubt agreeable to both sides is the fact that planning represents some activities concerned with and directed towards the future.

With this in mind to undertake an examination, first to the question of what planning is and to delineate the various planning theories in order to explain the two forms of planning.

5.2.1 What Is Planning?

What is planning? Sir Geoffrey Vickers says "planning is what planners do"(Alexander, 1981, p. 136). Similarly, the Canadian Institute of Planners (CIP) defines the role of a planner by stating "the way in which responsibility, expectations and commitments are structured in regard to the planner's job". E. Alexander, after examining what planning is not in his article "If Planning Isn't Everything, Maybe It's Something", states "planning is the deliberate social organizational activity of developing an optimal strategy of future action to achieve a desired set of goals, for solving novel problems in complex contexts, and attended by the power and intention to commit resources and to act as necessary to implement the chosen strategy"(Alexander, 1981, p. 137). These definitions suggest that

planning is a rational process of thought and action which ultimately aims at promoting human growth. However, these definitions of what planning is lead us nowhere and we are back to where we started: without a definition which is capable of telling us, once and for all, what planning is.

Since the two roles of planning has, no doubt, been established, at least in some literature, the question of what planning is can be logically answered by using these two perspectives. When planning is seen as an advisory role, it suggest a strong reliance on the scientific or positivistic mode of thought and methods and emphasize rational decision-making to seeking desired ends. It seeks utilitarian functions. Similarly, when planning is seen as a reformist activity planning is usually defined as a social process(activist role of planning) which deals with normative issues.

Among those who perceive planning as an advisory role, T. Moore(1978) generalizes that all those making decisions about the allocation and distribution of public resources are, in fact, planning. G. Chadwick(1966)²² sees planning as a basic activity pervading human behaviour at the individual and every social level. In this view, planning is an activity that is basically a "process": a process of human rational thought and action based upon this thought, nothing more or less than this. If so, planning concerns not with content of plan but in the process involved in plan making.

²² -----
Cited in Roy Darke, "Procedural Planning Theory -- Explanation or Control", *Evaluating Urban Planning Efforts*. Edited by Ian Masser. London: Grower Publishing Co. Ltd., 1983, p. 29.

T. Parsons argued that planning constitutes a rational action "insofar as it pursues end, ... by means which, among those available to the actor, are intrinsically best adapted to the end for reasons understandable and verifiable by positive empirical science"(Albrecht, 1985, p. 16). E. Banfield(1959) views planning as being the design process for courses of actions that can be expected to lead rationally to the attainment of ends(which are considered as given). Lastly, A. Faludi declares that "planning has many meanings depending on the problems one wants to tackle"(Faludi, 1986, p. 115). He then opts for a view that planning is a "process of responsible decision-making concerning future courses of actions"(Breheny and Hooper, 1985, p. 6; Faludi, 1985, p. 30; Faludi, 1986, p. 115). However, the foundation for all these is the application of scientific method to these policy decisions and planners, therefore, take an advisory role -- as a supplier of scientific intelligence.

To summarize, planning is a rational process of identifying choices and selecting the best course of action. Thus, planning, decision-making and implementation are three distinctive but related activities according to this perspective.

On the other hand, planning as a social process not only concerns the means of actions and choices of issues, but also the formulation and achievement of the goals. E. Dunn sees planning as a conscious and ongoing intervention in the development of society(Albrecht, 1985, p. 17). Davidoff and Reiner argue that "planning becomes a process for determining appropriate future actions through a sequence of choices"(Davidoff and

Reiner, 1962, p. 103). In regarding these choices, Davidoff later states "the prospect for future planning is that of a practice which openly invites political and social values to be examined and debated"(Davidoff, 1965, p. 331). This means the rejection of the prescribed role of planners as technicians.

Rittel and Webber(1973) view planning as an argumentative process subject to critical judgement in the course of which the nature of the problems and the solution emerge from all participants. S. Grabrow and H. Heskin's new paradigm for planning "is based on societal change and the realization of a communal society that promotes human development, in an ethical context, by social experimentation. This change is facilitated through a dialectical synthesis of rational action and spontaneity"(Albrecht, 1985, p. 17).

J. Friedmann, a leading American planning theorist, contributes much to planning theory. Similar to Faludi, he declares that a definition of planning will have to be devised that will be sufficiently broad to encompass the entire spectrum of published writings. He proposed a model of planning that fuses action and planning, saying that "it is possible to assert that any action that is deliberate is also a certain degree planned. The problem is no longer how to make the decision more 'rational', but how to improve the quality of the action"(Friedmann, 1969, p. 312). Thus, planning is an activity centrally concerned with the linkage between knowledge and organized actions. As a professional activity and as a social process, "planning is therefore located precisely at the interface between

knowledge and action"(Friedmann and Hudson, 1974, p. 2) and is a way of achieving a measure of self-direction in the evolution of social systems -- directed towards the future.

The rationale for this category of definition, according to Friedmann, is:

- (1) that knowledge is derived from the societal context in which human activities take place;
- (2) that the consequences of the planning actions are social in nature; and
- (3) that therefore the implementation of the planning procedures need appropriate communication channels among participants.

In short, planning as a social process can be synthesized using Etzioni's articulation, "to be is to be social"(Etzioni, 1968, p. 2). Planners must expand the simple one-way causal model and paradigms borrowed from the sciences, and become more aware of the dialectical relationships between people, nature, and the social world. Indeed, these are reciprocal relationships where nature shapes people who shape the social world, and nature and the social system in turn, shape people(Bolan, 1974, p. 31).

5.2.2 Two Sides of Planning Theories

The division of planning definitions into two categories, one dealing with planning as a scientific/positivistic process and the other with planning as a social process, reflects the dichotomy in planning theory as well. Three approaches can be identified following this dichotomy:

- (1) rational-empirical versus normative-reeducative strategies;

- (2) theory *of* planning versus theory *in* planning; and
- (3) John Friedmann's taxonomy.

When theories focus on the rational-empirical strategy, reality is observed and verified and then reduced to generalized relations between facts which is comparable to the formulation of scientific theories. The motive behind this strategy is that reason and rationality generate power for driving knowledge and that men are rational and will follow their rational self-interest once these are revealed to them. On the contrary, theories dealing with social aspects are concerned with the purpose and goals of planning in the context of societal values and ethical norms, with the social consequences of planning and with its implementation, and with knowledge that is based on experience. This kind of knowledge rests on the assumption that knowledge and experience are inseparable, that the mind helps to influence experience. Consequently, judgement and experience are necessary in establishing knowledge. Knowledge obtained this way is, then, better able to deal with reality than the scientific version which is only a limiting abstraction of comprehensive reality. As Camhis states, for normative theory the criterion is "reality or the coincidence of reality with a certain view of reality", and for rational-empirical theory "reality is the process. The characteristics of good planning coincide with an ideal process"(Camhis, 1979, p. 4). The emphasis of the two planning theories has shifted from changing reality to managing reality according to certain criteria.

Another distinction, first used by A. Faludi, is between "theory of planning" and "theory *in* planning". Hightower distinguishes the two theories as "... theories of planning process -- procedural theories -- and theories concerning phenomena with which planning is concerned"(Hightower, 1969, p. 326). Thus, "theory *in* planning" refers to the significant attention the city planner pays to the descriptive and predictive theories that address the structure and the functioning of the city or the urbanization process; which in turn draws heavily from sociology, economics, politics, psychology, and geography. Faludi admits that the distinction of "theory of planning" and "theory *in* planning" lies in the difference between "form" and "content"(Faludi, 1973b, p. 3). Theory of planning, thus, emphasizes "procedures". The process of planning, then, focuses on what behaviours are exhibited, what resources are employed, what social and cultural contexts are involved, and what consequences follow when the episodes of human activity known as planning occur(Galloway and Mahayni, 1977, p. 63 and Bolan, 1974, p. 14).

J. Friedmann and B. Hudson distinguish four different intellectual traditions of planning theories:

- (1) tradition of rationalism;
- (2) tradition of empiricism;
- (3) tradition of philosophical synthesis; and
- (4) tradition of organizational development(Friedmann and Hudson, 1974, p. 3).

The tradition of rationalism concerns only how decisions can be made more rationally. Thus, planning is synonymous with decision-making. This theory

assumes that man is utility-maximizing and the relationship to one another is defined in purely instrumental terms. "A decision (usually about the proper allocation of resources) will be called rational when it aims at arriving at a single 'best' answer to a stated problem"(Friedmann and Hudson, 1974, p. 4). The tradition of empiricism focuses on the functioning of the large-scale political and economic system. It uses the rational decision-making model as the appropriate standard against which to measure the performance of planning in practice. Thus, it consists of less normative elements and seeks a more positivistic framework of analysis for the explanation of environmental circumstances.

The tradition of philosophical synthesis concerns a larger historical and social context. It stresses the limitation of and incapacity to gain a comprehensive overview of the social system and that planning should be a form of mutual learning in which, through dialogue, "scientific and technical knowledge is seen to fuse with personal knowledge of client actors"(Friedmann and Hudson, 1974, p. 7). Theories concerning organizational development focus on ways to achieve desired changes in organizational structure and behaviour. These changes involve a complex educational strategy intended to change beliefs, attitudes, and values so that people can better adapt to changes in their environment.

More recently, J. Friedmann, in his book *Planning in the Public Domain*, identifies four traditions of planning theory, although slightly different from the previous formulation:

- (1) Social Reform;
- (2) Policy Analysis;

(3) Social Learning; and

(4) Social Mobilization(Friedmann, 1987, p. 51).

Social Reform begins with planning as a scientific activity with improvements to society made possible through decision-making using knowledge acquired from the scientific paradigm. This tradition puts tremendous emphasis on the power of technical reason and the application of scientific knowledge to public affairs. Thus, it develops an objective, politically neutral, advisory role in the planning profession.

Policy Analysis focuses on the behaviour of large organizations and particularly on how planners might improve their ability to make rational decisions. Influenced by Herbert Simon, this tradition stresses synoptic analysis and decision-making as the means of identifying the 'best' action. The 'best' rational action being limited by external sources such as resources, information, and time available for making the decision. Thus, policy analysis borrows quantitative analytic techniques such as game theory, simulation models, linear programming and so on as tools to help draw alternatives.

Social Learning focuses on the unification of knowledge and action and stresses "learning by doing"(Friedmann, 1987, p. 81). In this view, knowledge is derived from a dialectical process which emphasizes the new practical understanding of the existing theory. Social Learning is, then, a continuous process of action and change. The correct scientific way to understand the social world -- according to social learning theorists -- is through social experimentation, careful observation of the results and a willingness to admit to error and to learn from mistakes.

Social Mobilization represents a radical form of planning as system transformation and advocates "direct collective action from below"(Friedmann, 1987, p. 83). It attaches itself to Marxist, utopian, and anarchist thought which express the condemnation of pervasive oppression and alienation of a human being under the institutions of capitalism and the bourgeois state. Moreover, through politics of disengagement and confrontation, social emancipation can be achieved based on a vision of empowerment of the powerless and through the self-realization of the individuals that the institutional change is possible.

5.2.3 Two Forms of Planning Practice

The two roles of planning thus far has affected the development of planning definitions, planning theories and strategies; moreover, this dual role also contributes to the emergence of the two forms of planning as well. John Friedmann, in *Retracking America*, identifies two forms of planning. He states "in spite of the difficulty of distinguishing actions aimed at maintaining systems from those designed to change them, two forms of planning have evolved, one addressing itself primarily to maintenance, the other to change. I have chosen to call them allocative and innovative planning"(Friedmann, 1973, p. 52).

The purpose of allocative planning is the maintenance of the status quo of the social system. As Friedmann says allocative planning is "the distribution of limited resources among a number of competing

users"(Friedmann, 1973, p. 52). The planner, in this sense, is seen as making a series of adaptive changes which will affect the degree of efficiency of the system in general. However, it is believed that the actions the planner takes is towards the common good of the public (i.e. the common goal/end) and through these rational actions/options the social system's equilibrium state is assured. For instance, a master plan of a city is best thought of as an instrument of resources allocation, the resource being, in this case, limited urban spaces(Friedmann, 1973, p. 53). In this sense, allocative planning shows four distinguishing characteristics:

- (1) comprehensive;
- (2) system wide balance;
- (3) quantitative analysis; and
- (4) functional rationality(Friedmann, 1973, pp. 53 - 59).

However, the claim of comprehensiveness overestimates planning's capacity to understand the social system; the focus on a balanced system leads to the emphasis on stability rather than on equity; the quantitative analysis uses models that, somehow, neglect social reality; and the attachment of functional rationality makes planning ignore the more substantive element in the social system.

In contrast, innovative planning is committed to change in society. It is concerned with actions that produce structured changes in the guiding system of society. Innovative planning, then, is essential to the continued structural growth of a social system and, consequently, to development. Accordingly, the innovative planner often creates new solutions to the problems which according to Friedmann, "rather than preparing elaborate

proposals that are preliminaries to action, they achieve a fusion of plan-making with plan implementation activities during the course of the action itself"(Friedmann, 1973, p. 60) in which plan and action become united. In addition, innovative planning is concerned with interpreting new values into the social system in which existing ends are considered as temporary. During the planning process, ends are evaluated and reformulated until these ends become concrete; in other words, knowledge is not fixed and is rendered flexible through the process of mutual learning between participants. In short, innovative planning is concerned mainly with societal change oriented towards social actions, which is guided by a continuous process of learning and goal formulation(Albrecht, 1985, p. 21).

5.3 RATIONALITY AND PLANNING

J. Friedmann says, "If there is one theme that runs through all the discussions and debates on planning, it is that of rationality"(Friedmann, 1987, p. 97). Indeed, the advisory-technocratic, goal-oriented, rational-empirical, allocative type of planning defines rationality strictly in functional terms. On the other hand, the active-reformist, process-oriented, normative-learning, innovative type of planning employs rationality in a substantive way.

The development of Western thinking was derived from two patterns of thought whose ultimate origins can be traced back to Plato and Aristotle. These two methods of acquiring knowledge -- rationalism from

Plato and empiricism from Aristotle -- prepared the way for the seventeenth century philosophers and scientists, such as Roger Bacon, Rene Descartes, Issac Newton, and Galilei Galileo and later the logical positivists of the twentieth century. However, rationality is based on Rene Descartes' system of thought claiming that mathematics is the essence of pure reason and that "all science is certain, evident knowledge"(Capra, 1983, p. 57).

Breheny and Hooper states that "rationality has been unproblematically taken to be coexistence with the exercise of reason" and surmises that "we have a rational grasp of something when we can 'articulate' it, that means, distinguish and layout the different features of the matter in perspicuous order". Therefore rationality "sought to apply methods akin to Newtonian Science to the realms of morals, politics, economics, and human behaviour, implying an all-embracing scientific method of accumulating truth"(Breheny and Hooper, 1985, p. 2).

Two great men, Karl Mannheim(1893 - 1947) and Max Weber(1864 - 1920), contributed much to the definition of rationality. Weber began by distinguishing between rationality, a cognitive function, and rationalization, the action. In relation to action, Weber identifies two forms of rationality:

- (1) Formal or technical rationality is taken to designate the use of formal procedures, such as quantitative calculation and accounting, which must be instrumentally efficient and correspond to a particular logic of decision; and
- (2) Substantial or material rationality refers to particular social arrangements and their suitability with respect to the declared

purposes of the society (Darke, 1983, p. 18 and Friedmann, 1987, pp. 97 - 98).

Similarly, according to Mannheim, functional rationality means that a series of actions is organized in such a way that it leads to a given goal whereby every element in this series of actions receives a functional and instrumental position and role; or as J. Friedmann says, it is "the efficient relation of means to given ends" (Friedmann, 1973, p. 30). By substantial rationality, Mannheim means "an act of thought which reveals intelligent insight into the inter-relations of events in a given situation ... Everything else which is either false or not an act of thought at all (as for example, drives, impulses, wishes, and feelings, both conscious and unconscious) will be called substantially irrational" (Friedmann, 1987, p. 102).²³

²³ While K. Mannheim and M. Weber distinguish two forms of rationality, E. Reade and A. Faludi try to reject this fundamental distinction. As Faludi says in his book, *Critical Rationalism and Planning Methodology*, "My position is now, as Reade's is, that there is only *one concept of rationality*. Thus, I reject fundamental distinctions, such as that between functional and substantive rationality used by Mannheim, or between technical and political rationality so fashionable nowadays. With Reade I also agree that '... rational behaviour as generally understood is that which the agent has reason to believe most likely to produce the consequences desired'. Nothing more needs to be said about this statement than that it incorporates the demarcation criterion and the rationality rule for decision-making which I advocate. I also applaud what Reade says about applying rationality to the choice of goals:

'There are four ways in which this can be done. First, we can ask whether proposed objectives are in fact attainable; it is not rational to pursue a unattainable objectives. Second, we can ask whether, before adopting a given objective, we examined all the possible ones from which we were free to choose; it would not be rational to adopt an objective without doing this, for, having put considerable resources into pursuing it, we might find that we preferred another. Third, we can ask whether our objectives conflict with any higher order objective, or "end", which we value; it is not rational to engage in activities which infringe our

Hence while formal or functional rationality is a mode of action which seeks to maximize the quantitative outcome of decision-making within a social system, substantial rationality explicitly introduces values, ideals, and moral thinking into the discussion of action. Thus, as Weber argues, "to call a system 'formally' or technically rational was to say nothing about its capacity to satisfy human needs or fulfill other substantive purposes. This involved a judgement of 'substantial rationality' -- a judgement from a particular value standpoint"(Darke, 1983, p. 18).

When planning is said to be functionally rational, the goal/ends of the social system is usually given. This is because the formulation of norms, values, and objectives is not rational, since there is no positivistic means of verifying these formulations. It is, then, exactly because of this belief that planning is separated from the ends-oriented process and is focused on means-evaluation.²⁴ A planner's action exhibits formal rationality to the

fundamental beliefs. This is so, not only "logically" but also empirically, in that such infringement can be distressing. Fourth, we can ask the extent to which the various objectives we have in mind are empirically compatible; it is perfectly rational to pursue a multiplicity of competing objectives, since time and other resources are finite, yet all human beings place value on a variety of "goods". To deal rationally with this predicament, however, we must attempt to discover *the extent to which* the pursuit of any objective precludes the pursuit of others, and rank the objectives in order or priority'(Faludi, 1986, p. 111).

However, for the sake of argument, I will still use Mannheim's and Weber's formulations to discuss the implications of rationality and planning.

²⁴ Camhis provides a very interesting insight in looking at how goals are imposed from the dominant class. He says,

"The fact that so-called societal goals are the imposed goals of the dominant class is observed through various tricks:

- (a) The goals of society are presented as the outcome of a 'natural' process, the market mechanism.
- (b) The goals of society expressed in terms of some

extent that the "best" means is formulated and that this particular means is derived from certain rules and involves the application of specialist knowledge to individual or organization-institutional ends.

However, when discussing formal and substantial rationality, Weber was aware that the former may be achieved only at the expense of the latter. Thus, he identified three conditions where conflicts between the two might arise:

- "(1) market competition sponsors formally rational behaviour, which itself determines commodity price rather than consumer preference or needs.
- (2) the goals of economic organizations are enormously simplified, so that market freedom, efficiency and control are maximized, often to the detriment of health, safety, and well-being of workers and consumers.
- (3) free enterprise can increase inequalities within society, because the processes of a competitive market economy may widen income differentials in ways that are contrary to social values and the criteria of substantive rationality"(Darke, 1985, p. 19).

Others have also paid attention to the limitations in applying formal rationality in deciding the "best" means. Scholffer(1954) conceded that the exhaustive demands of rationality were impossible to satisfy by definition. Simon(1957) pointed out that no real decision-making model could meet the requirements of formal rationality: complete information

abstract ideas are universally accepted. Since they are universal (and self-evident) they are also unquestionable.

- (c) Through a 'scientific' procedure it is proved that the goals followed are the only 'rational' ones, i.e. unquestionable.
- (d) By using the analogy between man and society, the idea of the rational man who pursues his interest is transformed into the idea of the 'public interest', allegedly the interest of the whole society"(Camhis, 1979, p. 24).

and the simultaneous consideration of all possible alternatives. Charles Lindblom used a similar approach to attack the rational decision-making model and proposed "disjointed incrementalism"(Alexander, 1984, p. 63). Darke(1983) concludes that while formal rationality employs technical domination of policy making with the emergence of powerful professional and scientific elites, it can also be "portrayed as a threat to the majority of people who ... become subjugated within an unequal but 'rational' social order"(Darke, 1983, p. 18). Davidoff also attempted to attack functional rationality by saying that "appropriate planning action cannot be prescribed from a position of value neutrality (i.e. substantial rationality), for prescriptions are based on desired objective (i.e. end-oriented). One conclusion drawn from this assertion is that values are inescapable elements of any rational decision-making process and that values held by planners should be made clear"(Davidoff, 1965, p. 331). Hence, what constitutes planning is a process for determining appropriate future action through a sequence of choices; therefore, planning is a social process.

Even though planners currently acknowledge the value-laden nature of planning and somehow, reject the notion of "scientific objectivity" and political neutrality implicit in rational comprehensive planning, they still attach and commit themselves to the ideals of functional rationality and comprehensiveness. As George Hemmes says, "... the ruling planning theory is the rational planning model, or rational action model, (which) remains in force because no competitive set of ideas has attracted sufficient support to supplant it. (Thus), we continue to teach the rational model to new entrants to the planning field when asked what our 'theory' is, we are inclined to talk about the ... model"(Alexander, 1984, p. 62).

5.4 SCIENTIFIC AND NON-SCIENTIFIC PLANNING PROBLEMS

The discussion of the dual role of planning and its effects -- the difference in perceiving planning definitions, theories, and forms of planning and their reliance on the two rationalities, namely functional rationality and substantial rationality -- showed that planning has been and is at a 'crossroad' and does not know which road to follow -- a situation familiar to the profession since its beginning. Hence, a brief discussion into the nature of the contemporary planning problem is essential and critical as this might enable us to find a solution to the present dilemma.

Planning, as we have seen, has generally been faced with two types of problems. First, there are problems that are definable, and second, there are problems that are vaguely formulated and, therefore, not be easily definable and understood. The first type of planning problems can be identified with the problem that the cities faced at the turn of the century in the Post-Industrial era, i.e. poor living conditions, poor transportation system, lack of open space, and so on, in which the problem was specific and remedial in nature and was easily identified and could, therefore, be addressed or solved, at least theoretically. The solutions were guided by the principles of efficiency, order and functionality -- the so called City Efficient. The objective of this was derived from classical economics which emphasized "the lowest possible input of resources and the highest output of products". Thus, the City Efficient approach of planning slowly expanded to encompass other urban planning issues such as land uses, transportation, infrastructure, and so on, and developed what eventually became the

'raison d'être' of planning discourse, the rational comprehensive planning approach.

However, with the growing complexity of the social structure, planners attempted more complex problems,²⁵ problems that involve value-judgement, norms and moral questions. As well, these complexities lead to greater interconnectedness of issues causing a complex and thus extremely difficult to resolve if attempted on purely rational or positivist basis. The central difficulty perhaps is that planning is consistently looking at causes, the "why" of the problem, while paying little attention to the "what" of the problem. There is a marked difference between scientific problem and planning problems.

Albrecht, using Rittel and Webber as a reference, presents several reasons for the difference between planning problems and scientific problems:

- "(1) For any scientific problem, an extensive formulation with all the formation necessary for understanding and solving the problem can be provided. In the case of a planning problem, the information required for understanding the problem depends on the idea of solving it. Problem understanding and problem resolution are, therefore, simultaneous processes. In other words, one cannot comprehend the problem without knowing its context, which also is the context of the solution, and one cannot gain useful information without the guidance of a solution.
- (2) There are no definitive criteria in planning for knowing precisely when a solution has been found. Planning terminates the search for the 'right' solution quite often because of limited resources and time; the criterion of a 'good-enough' solution is then applied.

²⁵ Another way of looking at this is that planning may only treat the symptoms, instead of the causes, of the urban problems.

- (3) No immediate and ultimate tests are available for a planning solution, as is the case with a scientific solution. Planning solutions have the tendency to generate consequences over a prolonged time period and are, in addition, very often detrimental to other problem areas. There are no dry runs for learning by trail and error.
- (4) Every planning problem is essentially unique; that is, despite similarities between a current and previous problem, important differences inevitably exist. There are no classes of problems in the sense that solutions could be applied that fit every instance in a class. In the present complex societal context, every problem is likely to be unique.
- (5) It is a principle of science that solutions to problems are only hypothesis which are open for refutation. As a result, scientific operations concentrate on possible refutations. The more a hypothesis withstands various attempts of refutation, the more plausible is its confirmation; in contrast, the approach in planning is constructive in the sense that refutations of solutions are not the aim. The goal is to find a 'workable' solution for the problem at hand"(Albrecht, 1985, pp. 37 - 38).

In short, modern planners should pay more attention to distinguishing between scientific and planning problems. It is no doubt that some planning problems are scientific in nature and therefore possess easily definable and attainable solutions. However, because most contemporary planning problems do not have definite solutions and must be dealt with continuous efforts, acceptable solutions have to be an on-going process which require value-judgements on the part of planners.

Chapter VI

POSITIVISM AND PLANNING: WHERE DO WE GO FROM HERE?

Practice, knowledge, again practice, and again knowledge. This form repeats itself in endless cycle; and with each cycle the content of practice and knowledge rises to a higher level(Mao Tse-tung, 1965, p. 308).

6.1 PLANNING AS INHERITED: A SYNOPSIS

Under the positivistic influence, the central feature of the concept of planning is as a "plan" consisting of goal statements based on some identified needs and/or problems which are then formulated into various solutions/alternatives and selection of proposal, the so called "best" alternative. It is conceived of as "blue-print planning", or the production of a master plan and identifying the process, the plan and the means of implementation generally in form of capital improvement programs. This blue-print approach is a result of the dominance of the field in the early days by architects and engineers when the problems with which they were facing were perceived to be relatively simple in nature. Solutions to such problems were seen in a direct one-to-one relationship. Eventually,

techniques of the planning profession - including the master plan, technical standards, and land use regulations -- came into existence. It was largely through such methods that the large-scale planning problems of the nineteenth century were solved. This same image of a direct relationship between problem and solution was extended to other urban problems, leading to the belief that solutions through "empirical" investigations into the real world could result in implications for better living conditions. Such an attitude, while augmented by social scientists when they entered into the planning arena, brought into the planning profession the concern for a social agenda. This led to the extension of planning beyond the physical dimension, resulting in an image of it as being more "comprehensive".

In attempting to deal with the diversity of the human community and its various values, objectives, and interests, the rational comprehensive planning process is perceived as a means to select the appropriate course of action reasonably, as addressing a single public interest, and, thus, is viewed as a logical decision-making process. The planning process is then, essentially composed of two processes: the "normative" process of determining needs and objectives essentially a value statement and the "technical" process of studying the community and producing the plan essentially a factual statement. In these processes, the community must be perceived not only as a physical entity but also as one composed of individual persons and groups interacting with each other; but it is the permanence of the physical structures which make the planner's choices long-range and thus comprehensive in nature. This view of planning as decision-making has spread through the profession in the last thirty years

through a concern with the procedures of the planning process. This resulted in a new ideal of rationality based on the positivistic/scientific knowledge and method, replacing the older one of beauty and order. Thus, by identifying technical knowledge with rationality and using it as a way to reduce planning to a set of procedures, the means are separated from the ends, and facts from values.

All these were resulted from the adoption of the doctrine of positivism/scientism which were passed down from the great giants of Science like Descartes, Galileo, Newton, and so on, who argued that by reason alone it was possible to create and advance knowledge. Logic and reason were the dogma. Planners, influenced by positivist thought also believed that nature was an ordered system, man was part of nature, and therefore man was also an ordered system that could also be experimentally investigated, understood, and manipulated. In addition, based on logico-mathematical concepts, logical positivism -- based on the famous verifiability principle -- proposed that all assertions are meaningless if there is no possibility of verifying them in experience. Thus, the study of man or nature in the scientific and positivistic manner demanded that the whole be broken down into component parts and then analyzed.

6.2 CRISIS IN PLANNING

De Neufville(1987) states that the positivistic/scientific approach to planning has failed planners in its not being able to link knowledge to action. Planning, as a product of the Industrial Revolution, has been shaped and moulded by the dogmatic thinking of the scientific era, which is characterized as the attachment to the scientific method, scientific analysis, and a commitment to rationality, factual knowledge, objectivity, and value-free neutrality. As a result to these commitments to rationality and scientific methods, the processes of creating and advancing knowledge and making decisions are separated. This is evident in the fact that planning is prone to be reactive and administrative in nature, rather than proactive advancing a cause or social purpose, such as equity, fairness or justice in allocation and distribution of resources.

Furthermore, the belief that knowledge can be quantified and is analyzable and testable and replicable has further exacerbated planning process and activity. Planning problems are not scientific problems and cannot easily be subjected to scientific canons without losing the meaning or distorting the very nature of the problems or abstracting it from the real world situation. Thus, de Neufville says, "Simplified, reduced variables, looked at under hypothetical controlled conditions, are the essence of this kind of knowledge, but these bare little resemblance to the experiential world"(de Neufville, 1987, p. 87).

John Friedmann, in *Planning in the Public Domain*, concludes that mainstream planning is in crisis. Similar to de Neufville, Friedmann says

that "Knowledge and action have come apart. The link (between theory and action) is broken"(Friedmann, 1987, p. 311). Friedmann then gives three reasons to account for the current crisis in planning. The first is a *crisis of knowing*: "the theories about how we obtain valid knowledge about society are being radically revamped"(Friedmann, 1987, p. 13). In other words, knowledge about knowledge-formation, about society, about reality, and the ways thing should be, suddenly loses its ground because the certainties of positivism, rationalism, and scientific methods no longer provide sufficient evidence and become undone. The second is the *accelerated pace of historical events*: "the sheer pace of historical events seems to outpace our abilities to harness the forces of change to a social purpose"(Friedmann, 1987, p. 13). In a sense, the traditional methods of plan-making and analysis are no longer appropriate or are obsolete before their implementation. And the third reason is the *unprecedented nature of the events we face*: "the kind of problems we face and their magnitude render historically derived knowledge of little use in attempting to solve them"(Friedmann, 1987, p. 13).

This crisis in planning, however, can be described by using Thomas Kuhn's discussion of progress and paradigm change in the Scientific world. T. Galloway and R. Mahayni have summarized the process of paradigm change into five phases.²⁶ Modern planning, during its entire life span, has

²⁶ The following is the process of paradigm change described by Galloway and Mahayni:

- (1) The pre-paradigm period of a scientific community, in which there is no consensus within the community on a central paradigm and, therefore, the field consists largely of competing schools of thought.
- (2) The period of paradigm development, in which the paradigm is 'sufficiently unprecedented to attract an

undergone this process of paradigm change. As E. Alexander says, "That is the story of planning; planning had such a paradigm, but does no longer"(Alexander, 1984, p. 62). It is anomalous that the theories of planning are disjointed from experience and they do not seem relevant or helpful in practicing these theories. What should be the response and reaction to these anomalies: "It is time", says de Neufville, "for a revolution in planning thought. It is time to develop a new way of seeing the problems and task of planning"(de Neufville, 1983, p. 6).

6.2.1 A Challenge to Planning

If the present crisis is to be overcome at the root and not merely in its manifestations, then the fundamental role of planning has to be re-examined. The term crisis has two implications here. Firstly, it implies a sense of change in its definition. According to *Webster's New Collegiate*

enduring group of adherents within the community away from the competing modes of scientific activity'; this paradigm begin 'sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve'.

- (3) The period of paradigm articulation in which the parameters of research and problem solving are determined by the paradigm itself.
- (4) The extension of the post-paradigm period, in which anomaly occurs and is reflected in 'nature's violation of the paradigm', the scientific community attempts to modify the paradigm in order to explain or 'make law-like' the anomalies.
- (5) The period of crises, which is penetrated when the existing paradigm cannot accommodate the anomaly, the paradigm is intensely scrutinized and the parameters of research are broadened leading eventually to paradigm substitution(Galloway and Mahayni, 1977, p. 64).

Dictionary, the word crisis means:

- "(1) the turning point for better or worse in an acute disease or fever;
- (2) the decisive moment; and
- (3) an unstable or crucial time or state of affairs whose outcome will make a decisive difference for better or for worse"(*Webster's New Collegiate Dictionary*, 1986, p. 267).

However, for the Chinese the term crisis, or wei-ji(危機), is "composed of the characters of 'danger' and 'opportunity'"(Capra, 1983, p. 26). These definitions indicate that there is a profound connection between crisis and change. Secondly, a sense of "challenge and response" is generated while undergoing the existing crisis. In times of danger or crisis, "a challenge from the natural or social environment provokes a creative response in a society, or a social group, which induces that society to enter the process of civilization"(Capra, 1983, p. 27).

It is essential and necessary to understand what constitutes positivistic knowledge and how this positivistic approach fails planners in linking theory to practice. There are several key factors in the development of Western Civilization, among them were the Scientific Revolution, the Enlightenment, and the Industrial Revolution. This development generated a belief system which includes:

- "(1) the belief in the scientific method as the only valid approach to knowledge;
- (2) the view of the universe as a mechanical system composed of elementary material building blocks;

- (3) the view of life in the society as a competitive struggle for existence;
and
(4) the belief in unlimited material progress to be achieved through economic and technological growth"(Capra, 1983, p. 31).

In order to understand "the belief in the scientific method as the only valid approach to knowledge", the very basis of the Cartesian philosophy has to be examined. Rene Descartes(1596 - 1650) proposes four laws of research in his *A Discourse on Method* that:

"The first was never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgement than what was presented to my mind as clearly and distinctly as to exclude all ground of doubt.

The second, to divide each of the difficulties under examination into many parts as possible, and as might be necessary for its adequate solution.

The third, to conduct my thoughts in such order that, by commencing with objects the simplest and easiest to know, I might ascend by little and little, and as it were, step by step, to the knowledge of the more complex; assigning in thought a certain order even to those objects which in their own nature do not stand in a relation of antecedence and sequence.

And the last, in every case to make enumerations so complete, and reviews so general, that I might be assured that nothing was omitted"(Descartes, 1912, pp. 15 - 16).

The most important and influential aspect of these laws of research is the "method of radical doubt"²⁷ "(Capra, 1983, p. 59). Descartes' famous statement "'*Cogito, ergo sum*' or 'I think, therefore I exist'"(Capra, 1983, p. 59) is a product of this skepticism towards any possible knowledge.

²⁷ — — — — —
Capra renounces that "he doubts everything he can manage to doubt ... until he reaches one thing he cannot doubt, the existence of himself as a thinker"(Capra, 1983, p. 59).

Secondly, his method is analytic in nature. It consists "in breaking up thoughts and problems into pieces and in arranging these in their logical order"²⁸ "(Capra, 1983, p. 59). Thirdly, the Cartesian division between "mind" and "matter" led to the subsequent view of the material universe as a machine.²⁹ In turn, everything is considered as a machine and can be examined as sample and/or experimental objects. Thus, the world can be understood as being composed of matter and motion, to use the Newtonian terms: in terms of matter, it means those things with volume, mass, boundary, and in general, experientials; and in terms of motion, it refers to everything which can be perfectly detectable and measurable. This view of the universe as a machine, which is detectable and measurable, has led to the proclamation of the "true" goal of science: "the aim of science was the domination and control of nature, affirming that scientific knowledge could

²⁸ This method of reasoning has led to the fragmentation of thinking and the subsequent attitude of 'reductionism' -- the belief that all aspect of complex phenomena can be understood by reducing them to their constituent parts, and therefore, if man follows the meticulous thinking process, he would never fail to solve any problem he discovered.

²⁹ Because Descartes pays significant attention on mind in the process of knowing, matter, body, or nature, thus, conceived as a machine receiving commands from the mind and is therefore having no purpose, life, or spirituality inherent in it which contradicts the earlier organic world view. The organic world view of the Middle Ages had implied a value system conducive to ecological behaviour. In the words of Carolyn Merchant:

"The image of the earth as a living organism and nurturing mother served as a cultural constraint restricting the actions of human beings. One does not readily slay a mother, dig into her entrails for gold, or mutilate her body ... As long as the earth was considered to be alive and sensitive, it could be considered a breach of human ethical behaviour to carry out destructive acts against it"(Merchant, 1980, p.3).

Nature, in this view, works only according to mechanical laws and behaves like a clock. In order to understand nature, one must alienate oneself from nature as a spectator. As Descartes describes "during the nine subsequent years, I did nothing but roam from one place to

be used to 'render ourselves the master and possessors of nature'"(Capra, 1983, p. 61).

This also signifies the divorce of objective and subjective perception³⁰ of the world and divides the objective world into different spheres of investigation, such as physics, chemistry, biology, and sociology -- to use Comte's hierarchy of science. However, this scientific view has powerful implications for social action by suggesting that human society is knowable and can be controlled, and thus be designed. It is a strong belief that a new and better world could be created, where the suffering, superstition, and subservience of the old world could be swept away. This was a major element in the idea of planning which still holds some validity today.

The Cartesian method has influenced the study of society as well. Because of the characteristic of fragmentation, individuals in society are seen as parts of social elements -- each with his own intrinsic properties -- creating social interaction as individuals interact in space. If one wants to understand society, one must therefore understand the properties of the

another, desirous of being a spectator rather than an actor in the plays exhibited on the theater of the world"(Descartes, 1912, p. 23).

³⁰ Indeed, an objective, value-neutral perspective of viewing the world as a perfect machine (consisting of separate objects/parts which can be explained and examined according to the mechanical and mathematical laws) emerged. Furthermore, this mechanical and mathematical perspective requires that the world be broken down into pieces in order to be fully investigated and understood. As a result, "one of the most highly developed skills in contemporary Western civilization is dissection: the split-up of problems into their smallest possible components", says Alvin Toffler with a word of warning that follows, "we are so good at it. So good, we forget to put the pieces back together again"(Toffler, 1982, p. xi).

individual that make it up. Society as a phenomenon is thus seen as the outcome of the individual actions of individual human beings upon other elements such as physical space, building, and so on. It is suggested that through this method of investigation: a commitment to how things really are, a better society could be resulted through proper prediction and control.

However, the scientific sanction for the manipulation and exploitation of nature failed the society and environment of today, as indicated by the United Nation's statistics:

"Some 18.5 million people were affected by drought annually in the 1960s, 24.4 million in the 1970s. There were 5.2 million flood victims yearly in the 1960s, 15.4 million in the 1970s. Numbers of victims of cyclones and earthquakes also shot up as growing numbers of poor people built unsafe houses on dangerous ground. The result is not in for the 1980s. But we have seen 35 million afflicted by drought in Africa alone and tens of millions affected by the better managed and thus less-publicized Indian drought. Floods have poured off the deforested Andes and Himalayas with increasing force. The 1980s seem destined to sweep this dire trend on into a crisis-filled 1990s" (*Our Common Future*, 1987, p. 7).

Suddenly, the knowledge gained/advanced is insufficient for prediction and control and the specialists no longer hold the key to the future. Slowly problems of the scientific/positivistic methods of investigation begin to appear because subjective values were separated from knowledge: "the division of reality into a sphere of matter and a sphere of mind provided a very powerful methodology for the study of one and a very inadequate methodology for the study of the other ... Our power to manipulate and control the 'outside' world -- matter and energy -- advanced greatly, but we made no advances in the understanding of our own behaviour and our inner

experience"(Leshan and Margenau, 1982, p. 31). Or, as the twentieth century poet T. S. Eliot states, "Where is the Life we have lost in living? Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?"(Skolimowski, 1982, p. 22).

In fact, this missing link between theory and practice can be logically summarized as two aspects of the same process, as expressed by Skolimowski: "the intense exploration of the physical world on the one hand and the slow disappearance of intrinsic human value on the other"(Skolimowski, 1982, p. 1).

As mentioned earlier, it is generally accepted that the goal of scientific inquiry is the domination and control of nature; it then introduces the concepts of cause and effect: "All events have causes, and these existed before the event"(Leshan and Margenau, 1982, p. 5). There is, therefore, no such thing as uncaused event, and causes come first in time followed by the event. A clear implication of this assumption that the past causes the present is that of predictability. If one knows enough about the present, one could predict what will happen next. Since it is believed that cause and effect rule supreme and govern completely all events, everything could be predicted in advance detail and precisely if one had sufficient knowledge. Thus, the future can be identified, as Friedmann says "as something distinct and separate from us that is to be subdued, managed, and made to serve our needs"(Friedmann, 1973, p. 118).

However, difficulties in accepting this view emerged when new

doubt and uncertainty arose.³¹ This concept³² when applied to the planning discourse can be described in a sense that the past was determined and the future is free. As deJouvenal(1967) says, "there is a difference between the nature of the past and that of the future. The past is known fact; it can be asserted, contradicted, proven, refuted. The future is open and uncertain"(Bolan, 1974, p. 16). Also Burmbargh says,"there are no past possibilities; and there are no future facts. In the future, alternative possibilities are always available ... Many events of the past may foreclose or rule out some future possibilities, but man's stance with respect to the future is assumed here to be open and subject to his design"(Bolan, 1974, p. 16).

³¹ A condition in which the only thing that appears to be certain is that our understanding of the universe, and of our place in it, is necessarily limited, such as the discovery of quantum physics. We have reached a point that the world as discovered by science is not the world as it really is. Science can, of course, tell us a great deal about the world, but it cannot give us the whole truth.

³² Among the most significant was the "principle of uncertainty", put forward by Werner Heisenberg in 1929. This principle expresses the limitations of the concepts of classical physics, that in the minute world of elementary particles, it seems that events do not always follow the strict causal sequence of what the laws of classical physics would have predicted or experienced(Richards, 1983 p. 4). As Heisenberg says, "We can either obtain a precise knowledge about the particle's position and remain completely ignorant about its momentum, or vice versa"(Liu, 1990, p. 8).

6.3 REDISCOVERING PLANNING

It is important to return to an earlier theme that planning has borrowed theories and methods from various fields of social sciences. Since the Cartesian model of science was developed, not only has it influenced the domain of natural science, but also it has enormous consequences upon the social sciences. In fact, the orientation of contemporary social scientists is that the positivistic/scientific method is the only correct way of perceiving and responding to reality. Social scientists generally believe in the single rationality governing the entire universe and this belief is similar to the rules that apply to the social world.

There are, at least, two difficulties in perceiving and applying this concept to the study of human activities. Firstly, the difficulty of the mechanization of living creatures must be examined. The machine concept, when extended to the living creatures (animals and human alike) considers that animal and human behaviour can be explained in the same terms and dealt with in the same manner since animals and humans have the same experiences, the same characteristics, and behave in the same way for the same reasons. Social scientists, therefore, can mechanize living creatures. However, social scientists now know that this mechanistic view of explaining and understanding human behaviour is inadequate to account for the innermost experiences of a human -- for instance, creativity, courage and devotion to humanity.

Secondly, the difficulty of the unity in the method of study should be considered. The machine model of the universe requires that all sciences

should apply the same method of investigation since everything could, and must, be explained in the same sense. However, as indicated earlier, this is not the case for human activities because the mechanistic conception of the world cannot be applied to the human sphere of activities.

"Once it has been admitted that human behaviour has its mechanical aspects, then it ought to be obvious that these are the aspects that the methods appropriate to the study of mechanism will reveal. If you study man by the method of chemistry, or even if you study him in the light of what you have learned about rats and dogs, it is certainly to be expected that what you discover will be what chemistry and animal behaviour have to teach. But it is also not surprising or even significant if by such methods you fail to discover anything else"(Leshan and Margenau, 1983, p. 146).

In addition, over the years, the Logical Positivists have attempted a mission of creating a language that would provide a foundation for all the sciences and reflect "truth" and "reality". They believe that there is only one single language and a unique model for all real sciences and that -- when they have described it -- they would verify all sciences. And, ultimately, it would verify all experiences. However, for more than half a century, this effort of unifying sciences has revealed that no one language can do this. Not only are different methods necessary to describe and investigate different systems, but often different languages are needed to describe experiences in different systems. Therefore, it is necessary for the social scientists, if they want to make progress, "to dismiss the mechanist's *a priori* assumption that only a certain kind of evidence, collected by certain arbitrarily restricted method, is really valid"(Leshan and Margenau, 1983, p. 147).

These difficulties show that the positivistic approach to social explanation is no longer valid, as Leshan and Margenau state, "the greatest discovery of the twentieth century seems to be that it (positivism) can't (because it is merely one tool we can use in attaining objective knowledge)"(Leshan and Margenau, 1983, p. 149). In fact, Heisenberg had this in mind when he said, "... From the very start we are involved in the argument between nature and man in which science plays only a part, so that the common division of the world into subject and object, inner world and outer world, body and soul, is no longer adequate and leads us into difficulties. Thus, even in science the object of research is no longer nature in itself, but man's investigation of nature"(Richards, 1983, p. 75).

It is time, perhaps, to ask the question: Is planning possible? In order to answer this question, one must not try to evade, but acknowledge, the problems raised in the previous discussions.

Planners have to acknowledge that they are dealing with the social world which involves human experiences and activities. Central to the human experience is the sense of "purpose" of actions: of what one wants for the future determining what one feels and does now. In another sense, determination of present states by future states is known as action of purpose. Purpose, as was refuted by the "verifiability principle", therefore, does not exist in the positivistic science. It cannot become a factor which determines what will happen next. On the contrary, purpose plays an important role in social science because what one does now is affecting what will happen in the future; at the same time, what is going to happen in the

future is moulding and reinforcing the actions one is taking at the present. Indeed, the belief that there is a "goal" which influences human behaviour is detrimental in planning. Ignoring the fact that a human action has a goal -- and that this purpose is one of the factors in determining his action -- would be ignoring an important aspect of his action.

The fact that purpose or goal exist in planning calls for a significant difference in the nature of investigating its subjects matter: human experiences and activities. From these, value is not instrumental value, knowledge is not objective knowledge, future is not an object out there and most important of all, human action has an inherent meaning in it. The task set forth by planners is to integrate intrinsic human value with knowledge that is not derived from the dissecting whole, but the whole as one, and examine the purpose and meaning of human activities. Complexity of subject matter, is, no doubt, a problem, for there are many interrelated phenomena and it is difficult to establish any clear understanding, and thus, explanation or projection. However, it is in this extreme form that every social event is unique. It is in this sense that planners have to be careful in making predictions. Prediction is no longer absolute, but probable. It is invalid to predict the occurrence of a specific event; only the chance of its occurring is greater in some circumstances than in other circumstances.

Planning must reconsider its standing with respect to the above characteristics. Planning has developed a scientific outlook and, therefore, planners are seen as technocrats who are experts in solving societal

problems. In this regard, even though planning is always asking the question of the relation of theory to practice, the separation of value and facts, and a focus only on objective knowledge, planners are forced to look at society as a machine. It is not that there is no relation between theory and practice, but that the knowledge generated is only justified in the world created by the planners per se. As Arthur Eddington(1822 - 1944) says,

"We have found that where science has progressed the farthest, the mind has but regained from nature that which the mind has put into nature. We have found a strange footprint on the shores of the unknown. We have devised profound theories, one after another, to account for its origins. At last, we have succeeded in reconstructing the creature that made the footprint. And Lo! it is our own"(Richards, 1983, p. 76).

It is in this same sense that planning is facing a dilemma created by planners themselves. Planning has, over the years, turned knowledge into information, values into instrumental economic values, and planners into experts. As Skolimowski indicates, "the mania for continuous economic growth (mistakenly identified with Progress), the enshrined mode of thinking called cost-benefit analysis (mistakenly identified as the most valid methodology), strenuous attempts to operationalize all aspects of human existence (mistakenly called the 'rationalization' of life) are all part and parcel of the same philosophy"(Skolimowski, 1981, p. 11).

One might ask "What is the next step?". As the discussion goes, an alternative should be proposed which not only requires a different way of practicing, but also a different way of acquiring knowledge. New planners must facilitate the remarriage of value and knowledge, the subjective and the objective, man and his environment; which will help develop an

understanding of the existing social relations. Such an alternative must signify not only changes in the planner's conception of the world, but also the world's conception of itself.

"The integration of knowledge with values; it is a demonstration that knowledge is not a futile store of information but a vital force that sustains life at all levels of human existence; it is a resurrection of the universal property of knowledge, the unity of life and knowledge"(Skolimowski, 1981, p. 17).

After all, a planner should acquire his knowledge from both the societal and physical context in which human experiences and activities take place; knowing that each action has a purpose and goal which will in turn influences his course of action; and aware that the entire process depends solely on the interactions between him and his clients and that both parties should learn from and reinforce each other during the entire procedure.

6.4 WHERE DO WE GO FROM HERE?

Planning is now at a turning point in which society is conceived as a "harmonious indivisible whole, and a network of dynamic relationships that include the human observer and his or her consciousness in an essential way"(Capra, 1983, p. 47). If planning is said to be activities concerning and directing the future, it is, in a sense, a process which can be described as societal guidance. Recent theories in planning argue for a planning approach which is more "equitable" in nature and focuses on the quality of life. The question thus arises of what a planner should do to guide society.

6.4.1 Re-education of the Planner

An important insight is the recognition that planning activity is an essential aspect of the society and that the knowledge acquired by planners are closely related to two kinds of knowledge, or modes of consciousness. They are the intuitive and the rational, usually associated throughout the ages with religion and science. The rational and the intuitive are complementary modes of the human mind. Rational thinking is linear, focused, and analytic, being suited to discriminating, measuring, and categorizing; hence, rational knowledge is thus fragmented. Intuitive knowledge, on the other hand, is based on the experience of reality and tends to be synthesizing, holistic, and nonlinear.

It is easy to see that much greater emphasis is placed on rational knowledge than on intuitive wisdom, science than on religion, competition than on cooperation -- because of the belief in empiricism, observation, and pragmatism that true fact can be seen and can be analyzed. If planners are the guardians of society and leaders of the societal change (in which the final goal is to improve the quality of life of the commonwealth), then planners should not be reactive in responding to the societal problems. This has a significant implication: a planner should be ahead of everybody else. This reconstruction of society must begin with an education process, starting with the planners themselves and then society as a whole. This education process focuses on a concept which is based on a moral concept and a value-system that positivism has abandoned. Friedmann uses the term "mutual learning" to describe this process. By mutual learning, he

means "a process in which the *processed knowledge* of the planning expert is related to the *personal knowledge* of his client in the joint exploration of problems and possible solutions to them"(Friedmann, 1973, p. 245).

6.4.2 What Is to Be Done?

Charles Dickens in his novel, *A Tale of Two Cities*, describes what is a Time of Crisis. He says;

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way -- in short, the period was so far like the present period ..."(Dickens, 1983, p. 1).

Now, at the dawn of the twenty-first century, is such a time.

It is a time for planners to rethink their role in the transformation of society. It is time, perhaps to ask the question "why planning?". It is, thus, a valid question too late to ask. However, if one looks deeply at the content of the current situation and the nature of the question, its real meaning reveals itself and requires a philosophical investigation into the question itself. It is not the purpose of this thesis to indulge in such an investigation; however, two points are raised for future research.

First, should the whole idea of planning be focused on "planning for the unexpected?"; and second, should planning, instead of planning for the ideal -- "the" plan -- shift its ideology to "planning for the worst?". It is

easy for planners to set a desired course of action and state the ideal state for a society. But most of the times, it does not work out as planned. It is often these times of turbulence that challenge planners and, often, planners become stuck and are getting nowhere. However, if planners have prepared for the worst to come, there should be no problems that cannot be solved, at least theoretically.

Finally, it appears to the author that central to any planning discourse and practice, a planner should possess the following characteristics in order to be called a true planner:

- (1) Right Knowledge -- the integration of the objective and subjective knowledge supplies planners with the tools necessary for the guidance of the society.
- (2) Wisdom -- to assure planners that they are using the accumulated knowledge of the past in a manner that will best serve the discovery and guide the course and transformation of the society. It is necessary to distinguish between knowledge and wisdom: wisdom is not the accumulation of facts and knowledge, but the application of the right knowledge accumulated.
- (3) Harmony -- to ensure planners be able to accept the natural flow of the society and appreciate its nature.
- (4) Creativity -- to help planners to realize and recognize new alternatives and uncharted paths along the way.
- (5) Strength -- to help stand up against fear and move forward in spite of uncertainty.

- (6) Peace, Joy, and Love -- to help planners better understand the harmonious state of society and provide a continual guide towards the highest level of consciousness of which man is capable.
- (7) Unity -- this will bring everybody back to the starting point, the place where everything is one, the whole is one, and the one is whole.

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