



Article

Clarifying Theoretical and Applied Land-Use Planning Concepts

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Abstract: Land-use planning is currently characterised by three weaknesses: a relative lack of systematic analysis of the theoretical and technical aspects of planning, a neglect of methodology and a lack of interest in clarifying key concepts. The present paper attempts to address these issues in a systematic manner on the basis of an explicit epistemological background. The strategy adopted is to focus on ten critical concepts covering the key areas of the field of land-use planning theory. The discussion is organised into two main sections, one on theory and one on methodology, which are examined both in their general sense and specifically as they apply to planning theory. Through an analytical discussion of each of the ten concepts and a critique of previous approaches, the paper proposes a new kind of land-use planning theory, spatiology, considered as a prerequisite for applied land-use planning, and a new view on the structuring of land-use planning methodology. The final aim of the paper is not simply to list the concepts, but to formulate an organised conceptual whole resulting from their interrelation which can provide a solid foundation for planning theory.

Keywords: land-use theory; land-use planning methodology; typology of land-use theories; design; epistemology; normativity; axiology

1. Introduction

It is common knowledge among both theorists and practitioners of land-use planning that there has been an impressive proliferation of land-use planning theory during the last three decades—see, for example, Allmendinger [1] (pp. 36–38), [2] (pp. 625, 629). These theories were founded on imports from ecology (sustainability), the social sciences (for example, collaborative planning and the neo-liberal approach), or philosophy (for example, pragmatic planning and the postmodern approaches), while there is also a tendency to ground land-use planning in geospatial technologies (see, for example, [3] (pp. 763, 764). Leaving aside this last tendency, with its overemphasis on the technical level, three major weaknesses characterise the above theories of land-use planning. The first is too much focus on the presentation of the imported theory/theories at the expense of the systematic analysis of the theoretical and technical aspects of planning. The second is a neglect of methodology, through adherence to the postmodern concept of “small narratives” as against a “grand narrative”—on these concepts, see [4] (mainly sections 10 and 14)—as is the case, for example, with collaborative planning. The third weakness is a lack of interest in clarifying key concepts related to land-use planning, resulting in theoretical gaps and misunderstandings due to the fuzzy use of concepts.

There are several reasons for the present lack of interest in conceptual clarification. One is a genuine interest in another sort of land-use planning which, however, tends to be limited to innovative but broad ideas. Another is the postmodern hostility against theory (which is itself based on a heavy one-sided theoretical arsenal), and a third is the pressure of academic competition, encouraging

a quest for quick recognition through the repetition of fashionable positions or the formulation of bold but sketchy ideas. To these factors, we should add the fact that both old and new concepts are often empirical, a position to be expected from practitioners but frequently encountered also among theorists. However, the importance of conceptual clarification is justly pointed out by Nigel Taylor, who criticises the “imprecise, vague, ambiguous, and opaque nature” of major complex and normative concepts used in urban planning theory and practice. Quite justifiably, Taylor argues that a clear distinction between concepts is not only a theoretical matter, but also a prerequisite for clarifying alternatives of action [5] (pp. 92, 94, 97 n. 2). In accordance with this view, I propose to identify and critically examine the fundamental concepts used in land-use planning theory.

The term “planning concepts” in this paper is not to be understood empirically as referring to objects of the physical world, such as actual land uses, landscape features, or ecological areas, employed with the aim to define physical patterns and use them for descriptive and possibly normative reasons. On the contrary, the term here refers to an abstract level on which the reference is not to objects, but to ideas.

The approach proposed is the result of the combination of a bottom-up and a top-down procedure. Let us start with the first. In any planning study, after the decision to intervene is made, the planner starts by surveying the situation existing in the study area. This process is manifestly not normative, in the sense of defining the aims of the intervention, but analytical, aimed at the comprehension of the existing structure of the area and its tendencies. It implies, then, first the definition of the elements that are useful and necessary for this comprehension, and second a way to relate them. This can, of course, be done empirically, but such a procedure is open to ambiguities: its rationale is implicit and thus incomplete, and may lead to incoherency. Indeed, the issues encountered by planners during survey were, not to say still are, better tackled by human geographers. Human geography has a long tradition of specific and advanced knowledge in spatial analysis, including specific techniques and modelling. Human geography, however, is not a *technical* activity like planning, but an *analytical* one, and its function as a *scientific* field is not to make proposals about the area it studies, but to reveal its existing spatial structure.

The interests of human geography are wider than the needs of the planning survey, because the focus of the urban and regional planner, that is, land uses, are just a part of the geographer’s object, which also includes other objects. We realise, then, first that the planner’s work, while *applied* and *technical*, also embraces an analytical, *scientific* part, and second that the latter should be further elaborated in accordance with the pursuits of the planner.

I shall now pass to the top-down procedure. A theory in the full sense is constituted by four consecutive levels, each inferior level flexibly deriving from its superior one. These levels are as follows: a) the epistemological level, to which corresponds the foundational perspective establishing the field of relevance of the theory; b) the theoretical level, consisting in the formulation of the interrelated principles of the theory and their derivatives; c) the methodological level, offering the instrument for channelling theory to its application, in the sense of concrete operations concerning the targeted object; and d) the technical level, allowing the realisation of these operations, without which the theory cannot be applied. There is no effective theory without methodology and techniques, a fact too easily forgotten by most of the land-use theories current today.

The result of the combination of the bottom-up and the top-down procedure is reflected in the division of my paper into two general parts: on the one hand, “epistemology and land-use theory”, and on the other “land-use planning methodology”. The first part discusses a possible analytical land-use theory and corresponds to the two first levels of theory-building mentioned above, the epistemological and the theoretical levels. Since we do not seem to dispose of an analytical theory for the analysis of land uses, there is a need to formulate such a theory, and the first step of the paper is to investigate the prerequisites for such an enterprise (Concept 1: “Theory”). Within the context of the existing tendencies in the domain of the theories of knowledge or epistemology, I attempt to define the character of science—since what we are looking for is a scientific field—with reference to

the polarisation between absolute objectivity and absolute subjectivity. Next, I discuss the need to define an analytical field according to one specific perspective, which I argue is that of an analytical urban and regional land-use theory.

To substantiate this proposal, it is necessary to define the object of land-use planning, theoretically as well as in direct link to practice. This is attempted with the following Concept 2: “Land-use planning”. After a consecutive differentiation, first between non-spatial and spatial planning, and then internally within spatial planning, I propose that the object of an analytical theory of planning should be urban and regional *uses*.

In the context of Concept 3: “Classification of land-use theories”, this new analytical theory is called “*spatiology*”. It leads to a new classification of land-use theories, of which certain approaches of special interest are discussed. My proposal, which is presented as a systematic classification, starts from the major division between scientific land-use theories, including as central theory *spatiology*, and technical land-use planning theories, with as central theory the current conception of planning theory.

In Concept 4: “Analytical land-use theory”, my aim is to present previous approaches that revolve around a similar problematic. The very nature of analytical land-use theory is founded on the concept of land use, and, as I argue, more broadly on that of *urban and regional use*. Since the latter is the proposed theoretical nucleus of this field, its expansion should proceed from the further elaboration of the implications of this concept. I try to demonstrate this very briefly at the end of the presentation of this concept.

The second part of the paper, “Land-use planning methodology”, corresponds to the third level constituting a theory, methodology, and concerns the procedure of applied planning. It seems clear to me that this procedure presupposes the background of analytical planning theory: in simple terms, the focus of the analysis of the survey are uses and the proposal also focuses on uses; without the guidance of a theory of uses, what else could offer a solid ground for the proposal?

Since methodology is now the core issue, Concept 5: “Methodology” aims at being an introduction to it. Relating to a discussion that started on the occasion of Concept 3, I emphasise the difference between technical and axiological normativity, the first referring to values (such as planning goals), while the second to formal rational operations, which are the ones guiding the applied planning process. If theory offers the main content running through the whole planning operation, methodology offers the form, the structure, on the basis of which this operation should successfully take place. The following four concepts aim at analysing this structure from the general to the specific.

Within this context, in the discussion of Concept 6: “The structure and nature of land-use planning”, I first defend the specificity of the different types of planning (for example, economic or environmental planning), including also land-use planning, against the holistic view that the latter also implies simultaneously the full realisation of other forms of planning. On the other hand, it is common knowledge that the planning of uses cannot be completed without the contribution of data coming from other fields. With my “axis–framework model”, I try to address this problem of the reconciliation of the specificity of land-use planning (and of any other type of planning) on the one hand, and on the other the integration of data foreign to this specificity (which is also the case for all other types of planning).

The above model renders the general picture of land-use planning, by explaining the mode through which data heterogeneous to the uses are, or at least should be, transformed into data homogeneous to them. Concept 7: “The general structuring of land-use planning methodology” turns to the next and more specific level concerning the components which structure the planning process. There are several planning approaches to this matter and I take as examples two that are considered to be in radical opposition: J. Brian McLoughlin’s systemic planning and Patsy Healey’s collaborative planning. My conclusion is that McLoughlin’s proposal offers the standard set of the planning components structuring land-use planning methodology.

Concept 7 introduces the difference between the level on which the components are elaborated and a “context”. The object of Concept 8 is the explanation of this context. While the manipulation of

the components is a technical work undertaken by the planner, the context offers axiological input to this work from the outside. Components and context have distinct functions which are clearly differentiated though not compartmentalised.

The last step in my argumentation is represented by Concept 9: “The specific structuring of land-use planning methodology”, which penetrates deeper into the relationship between the planning components. A differentiation was made in the discussion of Concept 2 between non-spatial and spatial planning, with land-use planning belonging to this latter category. In its case, as in all cases of spatial planning, a major shift takes place internal to the planning operation: planning passes from the written text to mapping, through the medium of *design*, a process having its own logic.

I hope it has become clear that in the following I will not focus on a single theory, but discuss and compare different approaches to land uses in order to identify the fundamental land-use concepts, both in isolation and according to the relationship between them. As we shall see, the above four-level grid assures the coherence of this attempt.

2. Epistemology and Land-Use Theory

2.1. Concept 1. Theory

As currently used, the term “land-use theory” refers to two distinct types of theories: theories approaching land uses and land-use planning through an *analytical* perspective, and theories dealing with the process of land-use planning itself. We do not have today a “pure”, analytical land-use theory. A prerequisite for the discussion of the nature of a possible theory of this kind is the epistemological delimitation of the general nature of theory itself, because, once this is defined, it offers the guidelines for the constitution of any particular theory.

We may distinguish two broad categories of epistemological positions, to which realist and anti-realist theories correspond. According to realist theories, it is possible to know the essence of the world. Scientific theories are considered to be true, at least approximately, in the sense that they correspond to an external reality; they are theories-reflection and their truth is truth-correspondence. Contrary to realist theories, anti-realist theories exclude truth-correspondence. They exhibit two major tendencies. The first is mild anti-realism, for which, while reality cannot be directly re-presented, it nevertheless exerts pressures on the content of theories and thus the latter cannot be arbitrary. The other tendency is radical conventionalism, an extreme relativism that holds that science is purely and solely a construction, totally disconnected from reality; thus, observations do not pose any constraints on the researcher and in theory-building he/she is completely free [6] (pp. 43, 109–118, 126). We recognise in this last tendency the position of postmodernism.

I do not doubt the value-laden nature of theory. We need not go back as far as Marx and his social constraints on knowledge; Michel Foucault’s concept of *épistémè* is convincing enough on the matter: each historical period is marked by this unconscious epistemological order that defines the very preconditions of knowledge [7] (pp. 11–14, 384, 385). However, we should understand *épistémè* as guiding knowledge only in the final instance. Theory as a whole, in spite of the value elements that it involves, cannot be simply identified with values; it is a language game with its own specificity. Science is different from other mental activities. Every science is oriented towards an in-depth analytical knowledge of its object, and implies the marginalisation of the value factor as far as this is possible.

The constitution of any theoretical field is founded on an initial epistemological decision. This decision implies the use of the “law of relevance” (*loi de la pertinence*). The rationale on which this law is founded is that no science is in a position to exhaust the description of any empirical object—and this is even more obvious when the object in question is a city or region. Each science has to choose only *one* of the possible perspectives through which an empirical object can be approached, and this is the criterion of “scientificity”: among the numerous possible features of an object, only those necessary and sufficient to exhaust its targeted analytical description should be included. The requirements for a scientific description are, in order of importance, that it be free of contradiction (coherent),

exhaustive, and as simple as possible; from these requirements follows the procedure governing scientific description [8] (p. 23), [9] (pp. 10, 11, 18), [10] (Description, Opération, Pertinence, Procédure). A similar epistemological position is adopted by Davoudi and Pendlebury, with the difference that they refer generally to disciplines of any sort. They conceive of a discipline on the epistemological level as having a particular (not necessarily exclusive) object of enquiry, theories and concepts to organise knowledge, and specific research methods. I would call this aspect of a discipline its structural dimension. To this dimension, the authors add a functional one. They broaden the prerequisites for the constitution of a discipline beyond epistemology to what they consider its social dimension, referring to a common language and circle, individual identities and careers, on the one hand, and to its academic, professional and scientific (journals and conferences) institutionalisation, on the other [2] (pp. 616, 617).

I would argue that it is not conceivable to practice land-use planning without a *land-use theory*: not an economic, or an environmental, or any other kind of theory, but a purely “functional” theory. That is, we need to develop an analytical land-use theory, but, to substantiate this proposal, we first need to define the object of land-use planning, theoretically as well as in direct link to practice. This is what will be attempted with the following concept.

2.2. Concept 2. Land-Use Planning

There is unanimous agreement among specialists that the object of urban and regional planning is the geographical location and arrangement of land uses. When we put this view in context, we realise that this kind of planning belongs to a much wider public planning family. Obviously, any government agency or service does some type of planning, though all these types are not necessarily spatial, or if spatial, concerned with land uses. From our perspective, we may group them into two categories: non-spatial and spatial planning.

Undoubtedly, all types of planning are ultimately spatial, since planning always refers to a specific geographical entity, whatever its scale. The qualification “non-spatial”, however, indicates that some types of planning refer to this entity as a *whole*, and only marginally, if at all, to its internal geographical *distributions*. This is the case, for example, with a national currency or tax policy, or national sports planning. Spatial planning, on the other hand, aims at giving a desired pattern to these distributions. Non-spatial planning is just *planning* and is completed on written paper, while spatial planning presupposes planning *and* a specific kind of *design*. This kind of planning is exhibited, for example, by ecological planning or spatial economic planning. Land-use planning is different from urban and architectural design, and is delivered both on paper and on maps (with very few exceptions, such as certain upper-scale plans or the old British structure plans [11] (p. 54) which, however, still refer to spatial distributions). We may consider land-use planning as the outstanding form of spatial planning, because it is the only type of planning that directly concerns physical space. There is a neo-liberal theory of no-plans, but this is also a theory of no-planning, allowing exceptions only for plans of limited public areas (see, for example [12]); this approach is, in any case, far from being representative of land-use practice.

Thus, the nature of land-use planning indicates that the object of an analytical theory of planning should be *land uses*. The general lines of such a theory are indicated in the discussion of Concept 4. On the other hand, unlike land-use theory, land-use planning is an applied field, drawing on several different sources of information and not only land uses. As an applied process with the stated aim of planned *intervention*, land-use planning is primarily a *methodology* and will be discussed in the second half of this paper, in the section on methodology.

2.3. Concept 3. Classification of Land-Use Theories

Since land uses are the starting point for the existence of land-use planning, when seeking to define an analytical land-use theory we should logically turn to urban (and regional) uses to establish the appropriate perspective on the empirical world and define the epistemological object of enquiry of

such a theory. This is, in fact, the typical perspective used by planners during the analysis stage of a plan, though it is used in an ad hoc and empirical manner, devoid of a coherent theory. We could call this emerging field “spatiology”; it would include an “urbanology” and a “regionology”.

We accept as a normal fact, and rightly, that, for example, behind economic planning, spatial or not, lies (analytical) economic theory and behind environmental planning, the science of ecology. There is no theoretical reason why, in the field of land-use planning, no analytical land-use theory has been formulated; indeed, this lack is rather surprising. Not only is there an object of scientific study, but also (as we saw above) an epistemological framework into which to insert this object. Of course, no practice follows directly from the exclusive use of a corresponding theory, because, as we saw, every theory is constituted as an abstraction from the empirical world, while practice takes place in the middle of it and must thus be much wider in its scope than theory (on this matter, see below the axis–framework concept).

In order to situate spatiology within the constellation of *land-use theories*, it is useful to recall Andreas Faludi’s distinction between procedural theories and substantive theories. Procedural theories are theories *of* planning, which according to Faludi concern the form of the planning process and the operations of the planner, or otherwise the organisational forms of planning procedures, and should be the object of planning theory. Substantive theories are theories *in* planning, which refer to the content of planning and the fields that are of interest to the planner. He also makes a parallel distinction between normative planning theory (comparable to political theory) referring to the rational process of planners, and empirical planning theory (comparable to political science), the knowledge of the organisation and procedures of planning. Planning theory is, for Faludi, normative and focuses on the way the planning process should proceed rationally [13] (pp. 1–4), [14] (pp. 3–8), [15] (Preface). To bring these two classifications together, we should consider the procedural theories *of* planning as identical to *normative* planning theory, and the substantive theories *in* planning and empirical planning theory as two different domains of scientific, *analytical* knowledge: the first domain provides the foundation for planning methodology and the second the context of planning theory and practice. Thus, Faludi makes a clear distinction between normative, in the sense of rational, technical process, and analytical. In spite of the centrality of process in planning for Faludi, he emphasises his preoccupation with spatial analysis, which he marginalises in the name of process, without, however, denying the importance of analytical knowledge for planning.

An argument against the procedural–substantive distinction was put forward by Allmendinger, who, based on a post-positivist rationale, takes the position that theory is a discourse, dependent on socio-historical conditions and to a greater or lesser degree normative, whence he concludes that substance and procedure cannot be distinguished. He argues that the normative dimension involves values, aims at defining the way things *ought* to be, and offers the means to achieve the desired situation. He concludes that, if the procedural–substantive distinction were preserved, theories of planning would be part of normative theories. Allmendinger thus implies a close connection between procedural and normative, in the sense of value-laden, but adds that both the procedural and the substantive approaches include both normative and analytical elements. Allmendinger also adopts a distinction between two forms of rationality: the formal rationality of means, such as the use of formal procedures to achieve defined ends, and substantive rationality, including values and morals about these ends, which relates values to the substantive dimension; and criticises the overemphasis of planning on the first form [1] (pp. 2, 12–18, 32, 33, 38, 39, 41, 42, 210). This last distinction is of crucial importance. Faludi refers to normativity in its *technical* aspect, while Allmendinger mainly thinks of values, that is, he approaches normativity through its *axiological* (value-laden) aspect. I shall come back to this point later.

Allmendinger’s view on planning normativity follows from his idea on the value-laden nature of theory. I agree that theory is socio-historically bounded and value-laden (I already referred to its flexible relationship with *épistémè*). We adopt two different epistemological viewpoints: Allmendinger tends to radical conventionalism, while I opt for mild anti-realism. However, Allmendinger’s position

is contradictory, because on the one hand he emphasises the “normative” nature of theory, while on the other he accepts the existence of analytical—manifestly in the sense of value-free—elements.

In this context, it is important to distinguish between analytical theories and applied, technical fields. Unlike science, an applied field such as land-use planning is value-guided and frequently politically so. The two spheres, (scientific) theory and (applied) practice, are of an almost radically different nature, because in the first case, values are only a point of departure, though an inescapable one, to obtain a knowledge as far as possible analytical, while in the second values are the regulatory factor for the operations taking place: science is analytical and describes and explains what is, planning practice, on the other hand, is value-laden and proposes what ought to be.

Of course, no absolute distinction can be made, because there is a certain overlapping between the two spheres. There are also intermediary positions. Thus, between the analytical and the axiological, I would place, in addition to technical normativity which is strongly related to the analytical, the axiological extension of analytical theories, as well as critical theories. However, the general orientations of the analytical and the axiological are strongly divergent. Without this distinction, we cannot understand the distance between science and planning, nor the integration of planning within a sphere different from the scientific one, namely that of empirical practice. To put it in the simplest possible way, this distinction in land-use planning amounts to the distance between the descriptive statement “this is a compact city” and the axiological, prescriptive statement “we must build compact cities”.

Such prescriptions cannot have any straightforward theoretical justification. We may have recourse to a great number of analytically founded rationales, among which one based on the rational agent of economics, another borrowed from the idea of carrying capacity in ecology, and so on, or such choices may be purely subjective. However, the final choice of one or some among the above is analytically undecidable, and two proposals for the same area within different planning contexts (Right-wing or Left-wing mayor?) may opt for the selection of different goals. In the same vein, Heather Campbell [16] conceives of the integration of the (analytical) “is” within the (synthetical) normative/axiological and uncertain “ought”; the result, as she points out, is a planning which cannot go beyond the “better”, but which allows for action.

The substantive dimension of land-use planning includes both the analytical-scientific and the axiological dimensions. The latter is, as we saw, pointed out by Allmendinger, but is not explicitly included by Faludi in his typology. Thus, Faludi’s distinction between scientific and normative could be considered deficient, but not for the reasons given by Allmendinger, that is, the rejection of the procedural–substantive distinction.

Allmendinger advances a typology of land-use planning theories and formulates a framework, of a post-positivist nature as he sees it, identifying the theoretical influences on planning theories, which he also links to their socio-historical situations. He defines five categories of theory involved in land-use planning [17] (pp. 89–95), [1] (pp. 41–46):

a) *Framing theories*. These are comparable to a paradigm or an epistemology and cover planning “doctrine”. Allmendinger considers the modern and postmodern perspectives as the most abstract forms of framing.

b) *Exogenous theories*. These are “meso-level” theories, that is, not general theories of society, but focused on a particular aspect of it; they are not specifically concerned with planning, but are relevant to it. However, his reference to the superior-level cognitive psychology and to the very narrow example of the relationship between car usage and the decline of town centres blurs the theoretical status of this level.

c) *Social theories*. These aim at a general understanding of society.

d) *Social scientific philosophical understanding*. This indicates broad approaches, such as positivism, Marxism, idealism, or phenomenology, seen by Allmendinger as underlying different social theories.

e) *Indigenous planning theories*. These are planning-specific, derive from the above forms of theory and are politically and generally socially situated.

In other words, Allmendinger proposes two groups of theories, one sociological and philosophical, (b), (c) and (d)—oddly, he does not include environmental–ecological concerns—and another that is planning-oriented, (a) and (e); (a) includes the foundational perspectives of land-use planning and regulates indigenous (or rather endogenous) theory.

Allmendinger’s attempt at typology is dynamic, context-sensitive and thus interesting, although it focuses on land-use planning theory itself and the theories integrated within it. From this point of view, it is poorer than Faludi’s approach, which also takes into account analytical perspectives on land-use planning (see Table 1). What is missing from both typologies is an analytical theory of land uses *as such*, what I have called spatiology.

A typology of land-use theories should concern not only *planning* theories. We need to formulate a complete initial typology, before any kind of elaboration such as the one proposed by Allmendinger. The theoretical foundation for a typology covering all the theories relating to land uses and land-use planning should develop in two steps.

First, by distinguishing between, on the one hand, analytical theories concerning land uses (scientific land-use theories) and land-use planning, and on the other technical theories of land-use planning. Among analytical theories, we should differentiate between the theory of land uses specifically, spatiology the analytical theory *par excellence* of land uses (which presents a certain analogy to Michael Neuman’s “functional urban theory” that follows Kevin Lynch), and two other types of analytical theories relating to a) land uses, such as certain theories derived from human geography, and b) land-use planning, such as Faludi’s empirical planning theory, the approaches dealing with the analysis of land-use planning proposals and with planning performance measurements, the justificatory approaches to planning, or the Marxist approach to land-use planning as social practice.

In the case of land-use planning theories, the differentiation is between normative theories in the axiological sense and in the technical sense. We encounter two types of the former: a) theories offering “idea” land-use organisations (Neuman’s “normative urban theory”, that also follows Lynch) and b) theories referring to the ideal aims of land-use planning, such as ethics and social justice (Neuman’s “normative city planning theory”). The normative theories in the technical sense coincide with planning methodology (Neuman’s “functional urban planning theory”, that still follows Lynch—[18] (pp. 135–137). The latter is the focus of land-use planning (Table 1).

There are also other typologies of this kind, of less interest for land-use theories. For example, John Friedmann distinguishes between theories *in* planning, specific to its different specialisations (such as land-use, transport, or environmental planning), theories *of* planning, referring to the common elements of the theories above, and theories *about* planning, which he equates with critical planning, such as the Marxist approach [19] (pp. 7, 8). As we can see, the first two types concern not only land uses, but all types of spatial planning, while only the third, corresponding to the analytical theories relating to land-use planning, is specific to land uses. Criticizing Friedmann, Ernest R. Alexander [20] rejects as ideology the possibility of general theories *of* planning, believing that theories depend on contingent contexts. However, he is then inconsistent in accepting theories *in* planning, because they also concern different social contexts, and in considering that theories *about* planning should also be contingent, a view disproved by the Marxist case.

Table 1. Typology of land-use theories.

Land-use theories	scientific land-use theories	analytical land-use theory(spatiology) analytical theories relating to: a) land uses b) land-use planning
	land-use planning theories	normative (value-laden) theories: a) of land uses b) of land-use planning aims normative (technical) land-use planning theories (methodologies)

We understand now the position of spatiology within the constellation of land-use theories. It is, in my opinion, the most important of the scientific land-use theories and the one of most interest as a background for applied urban planning, that is, for normative land-use planning theory, which is, in turn, the major approach for operational urban planning. The Marxist approach, for example, among the scientific land-use theories, is of high interest for the understanding of the function of planning within the capitalist system, but offers no clues for operational urban planning. Below, I shall refer to certain approaches related to spatiology and briefly discuss some of the major issues of a theory of spatiology.

2.4. Concept 4. Analytical Land-Use Theory

Spatiology, while theoretically obvious, has been almost invisible in land-use approaches. However, it is by no means a new invention, but comes from a tradition in human geography dating from the period 1930–1960 and is excellently represented in an article by Allen K. Philbrick [21]. In planning, it was advanced and elaborated statistically in Greece, a country with a poor tradition in the field; however, it was developed by an internationally known institution, the Athens Center of Ekistics led by Constantinos A. Doxiadis [22] and, still in the Greek context, was given a structuralist form by Alexandros P. Lagopoulos [23]. We find a recent reminder of the existence of such a theory in Neuman's above-mentioned functional urban theory, concerning "city structure and function".

A striking attempt to define an analytical land-use theory is illustrated by J. Brian McLoughlin's systemic approach. It is to the credit of McLoughlin that he conceived the need for, and to a certain extent used, a scientific land-use theory. This orientation is first manifest in the four general systemic elements of space that he orders into two pairs: the pair of components, namely activities (land uses) and the spaces in which they are located (their physical counterpart), and the pair of their connections, namely human communications (between activities) and their channels (their physical counterpart). The four elements of his system are thus founded on a theoretical conception of activities, on the basis of which he arrives at a theory of land uses. His orientation toward such a theory is apparent in his interest in a typology of land uses, since he agrees with the view that this typology "should deal with *activities only*—a 'pure line' classification" [24]. He gives a few ad hoc examples of typology taken from professional practice and proposes the Standard Industrial Classification as a guide for land-use typology—[24] (pp. 34, 77–79, 129–133, see also [25] (p. 323). However, it is only possible to achieve such a task, and in general to establish clearly the contents of the elements of the system, by previously systematically posing the theoretical basis of a land-use theory, without subjugating it to the empirical modes of planning.

I would like to outline here some of the major issues of a theory of spatiology. Its theoretical constitution implies the definition of elementary urban and regional uses. In this paper, I generally use the term "land use", because this is the traditional term we use in planning. Actually, this term is a shortcut, due to the usual mapping procedure during both analysis and the formulation of a planning proposal. While this term is literal in the case of regional space, in urban space, though practical reasons lead to a focus on rather general categories of *land* uses, that is, a two-dimensional representation of space, this is a simplified representation, because urban space is three-dimensional and thus *urban uses* develop on many levels. The implication is that a theory of uses cannot have as its starting point the condensed projection of uses in plan, but must conceive of uses as analytical (sociological) constructs and in a more detailed manner, *before* their projection onto geographical space. On the basis of elementary uses, it is possible to identify more complex groups of uses, as well as the relationships between the different hierarchical levels of uses. McLoughlin's typology is an instance of the search for a classification of such uses and also of the elementary units themselves. They are not obvious. For example, spatial "functions" also exist in architecture (such as living rooms, hospital rooms, restaurant kitchens), but in architecture these are units in the internal structuring of a larger unit, which itself is an elementary urban unit. Urban and regional units are different from architectural units. On the other hand, the perspective which is relevant for urban and regional units cannot,

by definition, simply coincide with the economic perspective, whatever their relationship, and so units such as those provided by the Standard Industrial Classification and comparable classifications are at the very least only a rough approximation.

Theoretical work is needed in order to define the specificity of the nature of urban and regional uses as products of specific social spatial practices. The elementary urban unit cannot be defined on the basis of its spatial location, a current conception which obstinately marks the urban planning legislation of all countries. On the contrary, it must be defined (socio)logically by its nature as a product of the above practices. In order to understand the futility of trying to define the units as a function of their location, we have only to think of the non-sense of trying to define social classes on the basis of their location in space, instead of starting from a solid sociological theory.

In practice, these units are defined in an empirical and ad hoc manner, which regularly results, both in more theoretical approaches and in legislation, in a simple linear enumeration. This is far from a systematic classification of uses (McLoughlin's preoccupation), which is the sine qua non condition for a concise theoretical approach to the issue and a useful guide to practice. The basic typological matrix must not be linear or nearly linear, that is, consist of only one or two levels, but must be hierarchical and multi-layered. This implies the continuous integration of the groupings of units of each lower level of the matrix into the immediately higher level, finally arriving at the most general categories of uses or, in the opposite direction, starting from the most general category of uses and by continuous decomposition creating each time smaller homogeneous groups down to the unitary uses. Operations of this kind imply explicit and relevant criteria of grouping, and the partial criteria used in each case must both be logically interrelated and compose a logical whole [26]. Thus, for example, retail trade may be divided into General Retail Trade and Retail Trade in Services, and the former may be divided into Daily, Occasional and Infrequent according to the criterion of frequency of visits by customers, and so on.

A series of concepts is articulated around the concept of the unitary urban use. The theoretical matrix outlined above classifies the urban uses themselves, not their location, another crucial concept. Location is the social projection of parts of the matrix in geographical space, and thus it is a secondary phenomenon in respect to the primary one of classification. Thus, each urban use occupies a usually fixed location, depending on its nature, as recorded in the matrix. When manifested in space, it belongs to a double physical vehicle, built space (which presents a series of attributes, such as height and volume), and its lot; it has size, and the latter is measured by the relevant theoretical units (surface, number of people of different kinds); it is characterised by a dynamic function, its relationships (both theoretical and in actual space) to other uses; it creates a specific catch area.

Elementary units are grouped into spatial clusters of similar and/or different units, and there is a continuous development of these clusters, from the block to urban areas of a nodal character, such as the city centre, or a specific nature, such as residential areas or industrial zones. On this level, new concepts emerge, such as homogeneous and polarised areas. Different quantitative indices follow from the relationships between units of urban measurement, such as density, useful for analysis but also for planning. By organising the above field of more specific concepts, it is possible to construct a spatiology.

This concept closes the discussion of analytical land-use theory, which corresponds to the two first levels constituting a theory, the epistemological and the theoretical levels. The following second part corresponds to the third level, methodology, which concerns the procedure of *applied* planning.

3. Land-Use Planning Methodology

3.1. Concept 5. Methodology

After epistemology and theory, methodology is the third level of our four-level grid. There are two principal differences between the methodology of a science and that of an applied field. First, the former follows directly and internally from the level of theory, but in the case of the latter

the existence of external factors, due to its composite nature, requires a different, technical approach. Second, while in science methodology is secondary to theory, the opposite holds for applied fields: land-use planning methodology is the focus of planning theory, because the latter is heavily concerned with procedural considerations.

The primacy of methodology was recognised in his own way by Faludi when in 1986 he came to advocate the replacement of “planning theory” by “planning methodology”, which he compared to scientific methodology. What I call “methodology” he calls “method”, while by methodology he refers to the specific operation of the critical justification of alternatives and their consequences (cf. McLoughlin’s stages, see below), which he conceives of as the core of planning theory, amounting to a rational decision-making process subject to Popperian rationality as a methodological principle. Faludi connects methodology and method by writing that the former is the theory of and influences the latter [15] (pp. 12, 19, 23, 84, 115).

Proof of this importance of methodology is the generalised use of the term “normative” to characterise planning theory. To an important extent, this is due to an empirical understanding of its methodological, procedural nature. A close kinship is thus assumed between methodology and normativity, where normativity is understood as referring to a value system.

However, as we saw, the term “normative” has two meanings: one technical, referring to formal rational operations more analytical than value-laden (for example, the technical operations along a Fordist production line cannot be considered as axiological except in the last instance), the other referring to values. Faludi is right in maintaining that methodology in an applied field is not different in its premises from methodology in scientific fields.

Methodology does not propose values. It aims at efficiency and establishes a set of rules allowing theory to take an instrumental, operational form. The confusion between methodological normativity and values is due to confusion between the structured *process* and the substantive *content* of methodology. It is only the latter that is normative in the axiological sense, continuously flowing through the structural elements of methodology, guiding the whole process towards the “ought to be”, whence the impression that the process itself is exclusively axiological. This axiological dimension, as is well known and as Taylor reminds us, is in urban planning closely linked to politics [11] (pp. 77, 82, 83, 158, 167).

The differentiation between methodological, technical normativity and axiology is reflected in Table 1 and is essential for the understanding of the (relative) objectivity of the framework of the planning process. In the case of sciences, methodology follows directly from theory, but in the technical fields it is adapted to operational imperatives and follows from operational theories that provide its form, its *structure*. This is also the case of land-use planning. On the other hand, land-use theory provides the *content* to which most of the planning actions refer. This structure will be analysed below with the help of the next four concepts. They represent four aspects of this structure, from the general to the specific.

3.2. Concept 6. The Structure and Nature of Land-Use Planning

Land-use planning presupposes the integration of a wider set of sciences and applied fields and thus has a composite nature. This broad and composite nature of planning may give the impression—which is not infrequent among planners—that, in the context of land-use planning, other forms of planning are also completely elaborated. This view of a holistic land-use planning is not new. John Ratcliffe, for example, considers that physical planning integrates both social and economic planning [27] (pp. 8–11) and the British structure plans were intended to combine economic and social with physical planning [11] (p. 63).

However, other writers emphasise the specific character of the different forms of planning, as in the book edited by Michael J. Bruton [28], where there are separate chapters on physical, economic, social and transport planning, or the paper by Paul Davidoff, who proposes the institution of a “city planner” to coordinate the separate physical, social and economic forms of planning [29] (pp. 293,

294). This latter understanding is equally alive today. To give an example, Scott Campbell observes that there are different types of planning and selects three of them as having strategic importance: economic development planning, environmental planning and “equity”, i.e., social planning. However, he considers this division of planning labour as a “fragmentation of professional practice” and argues, similarly to Davidoff, for their integration into a sustainable development planning undertaken by the land-use planner acting as a ‘translator’ who assists each group to understand the other groups [30] (for example, pp. 436–438, 449, 451, 452).

The holistic planning view of land-use planning, in which the latter absorbs into itself other forms of planning, is theoretically imperialistic and disregards the specific nature of the different types of planning which follows structurally from their different objects. A unified type of super-planning is a utopia. Land-use planning is *not a framework* absorbing other types of planning, but on the contrary an *axis*, receiving inputs from a framework consisting of the other types and in its turn guiding more detailed types of planning, such as water supply or sewerage planning. This position manifestly does not imply that land-use planning should be isolated from other fields of planning, but that it is articulated with them in a manner that allows it to retain its particular character. The framework is not the same in every case of concrete land-use planning, because it is activated each time to deal with specific practical issues. However, the types of frameworks are limited, with a statistical preponderance of traffic planning (closely related to land uses), as well as economic, environmental (in the sense of ecological), demographic, and ideally social planning, originating in their respective analytical fields.

The framework of land-use planning does not involve the pure or the complete planning product of these other types of planning, but only their planning elements that are operationally useful for land-use planning. All land-use planners know from experience that they cannot let the economists, for example, follow their routine way of operating, which is focused on their own object and answers their own problematic, but must orient the economists towards the relevance of the planner’s object. The operational usefulness of other types of planning for land-use planning implies an *articulation* of these types, as framework, with the axis of land-use planning. This articulation, that is, the *transformation*—metaphorically the “translation”—of the concepts coming from the framework into terms operational (relevant) for the axis, i.e., land-use terms, is a major concern, without of course forgetting the importance of mediation between the different types of planning of the framework. Thus, for example, indicators such as invested capital or turnover coming from economics are not transformable into land-use terms, while employment, if multiplied by some value of the standard “floor space per employee”, delivers the total floor space occupied by land uses, an indicator definitely useful for the land-use planner (see also [25] (p. 313)). To take another example, ecology, as every science, includes a long series of concepts, such as food chain and biomass, which are not relevant to land-use planning. Land-use planning instead focuses on ecological areas that, for instance, should be protected from urbanisation. In theoretical terms, by choosing to refer to *areas*, we effect the transformation I just described: the translation of the information from the ecological framework into terms relevant for the land-use axis.

The same pattern and operational requirements hold for all types of planning: each of them defines the position of its own axis and is framed by other types of planning. Each planning axis has its irreducible specificity and each type has its own structure. What is framework in one case may become axis in another. Certain types of planning in the frameworks of different axes may coincide, but only as types, since each time the specific demands of articulation with the axis orient them towards different directions. The axis–framework pattern does not necessarily imply that the axis is determinant for the proposal, because determination may lie with planning elements originating in the framework; but its own axis remains the main concern of every field. It goes without saying that this pattern does not exclude an attempt to coordinate different types of planning—something that was unfortunately revealed to be very difficult in practice.

As already mentioned, the specificity of the different types of planning is evident in Bruton’s 1974 book. Each type of planning is given a separate chapter, but the contributors emphasise

the overlaps between them and the need for coordination. In the chapter on economic planning, James T. Hughes [31] considers economic planning as one of the forms of economic policy. He states that there is a need for a close relationship between economic planning and other types of planning, since otherwise there is a danger that the economic planning and evaluation of alternative scenarios might ignore wider costs and benefits. Hughes also criticises land-use planners on the grounds that they overestimate their ability to control land uses. In the chapter on social planning, Graham M. Lomas [32] understands social planning in the same way as I conceive of land-use planning as integrating both scientific and applied fields. Lomas states that it is difficult to distinguish between social, economic, and land-use planning, but nevertheless accepts their differentiation. He believes that social planning does not have priority over economic or land-use planning and there is in practice no progression between the different types of planning. Referring to social and land-use planning, Lomas identifies a connection between them, namely that land-use planning has social aims also and should take into account social planning. Bruton himself, who writes the chapter on transport planning [33] (pp.169–204), proposes a model based on existing land-use data and the future plan(s) for land uses, demographic and other data. According to him, transport planning and land-use planning are two parallel types of planning and the end output of the latter is the main input for the former.

These approaches can be understood on the basis of the axis–framework model and show its relevance for planning practice. If, in the name of the composite nature of all types of planning, no discrimination was made between them, we would always have only one and the same type of planning, holistic planning, which is obviously not the case in practice. With the axis–framework model, we can also understand the serious conceptual and practical problems that emerge with the use of certain alternative concepts, most commonly “spatial” and “environmental” planning, instead of land-use planning. These alternative terms have the advantage of distancing themselves from “physical planning”, the traditional architectural conception of planning revolving around design and the static blueprint Master Plan, abandoned by planners more than half a century ago, but they obscure the specificity of land-use planning.

I already observed that spatial planning is too wide a concept, since it also includes types of planning other than land-use planning. The concept of “environmental planning”, on the other hand, may involve the same fallacy as the umbrella use of the concept of “sustainable development”. Taylor has argued that the wide use of this concept is inappropriate to describe the different—social, economic, political, etc.—aspects to which it has been applied, that these need to be conceptually distinguished and that the concept of sustainable development should be limited to the natural environment [5] (pp. 97–99). Environmental planning in this literal sense, however important, is part of the framework and not the axis of land-use planning. The fact that environmental planning acquired a special importance in the 1990s does not alter the structural need of land-use planning to revolve around its own axis; when the economic factor acquires a dominant position, as happens at the regional scale, we do not suddenly label regional planning “economic planning”. In a similar manner, Davoudi and Pendlebury argue that the emphasis on the environment “could also be seen as undermining the spatial dimension of planning which was more prominent in the notions such as town and country, urban and regional, etc.” [2] (pp. 629, 630).

If the separate use of the above two concepts creates serious confusion as to the structuring and task of land-use planning, their combined use multiplies the problem. We find such a use in Patsy Healey’s collaborative planning. According to Healey, the issues to be discussed in the planning arena concern spatial *and* environmental planning, applied to neighbourhoods, towns, urban regions and regions. This double vagueness is also evident in the fact that she defines planning as directly interrelating economic, social and environmental issues [34] (for example, pp. 5, 28, 57, 58, 61, 69, 82, 83, 235, 236). This is a version of holistic planning.

I believe it is clear from the preceding argumentation that holistic planning is a utopia and in planning practice there actually exists a whole set of different types of planning. One might object that there is no one case in which the “purity” of the planning object is preserved, but in all cases data of

a nature foreign to it intrude, whether economic elements or ecological units. I argue that the proposed “axis–framework” approach provides a theoretical model, with direct reflection in practice, that allows us to homogenise the heterogeneous data as a function of the primary aim of planning, and that this is valid for any type of planning. I shall now turn to the next and more specific level, which concerns the structure of the planning process on the level of planning components.

3.3. Concept 7. The General Structuring of Land-Use Planning Methodology

Land-use planning consists of a set of interrelated operations, which constitute its axis. There are different views on the nature and interrelation between these operations. Here, I shall mention the two extreme views. The one is exemplified by comprehensive planning, in the context of which clear “stages” of the planning process are identified—see [24] (pp. 92–296). Close to the other extreme is the action-planning model of Friedmann, who, while not denying the existence of different intellectual tasks in planning, considers them as indistinguishable from and absorbed by the activity of implementation. This model, in its pure form, is represented by the view that practical action implies the rejection of planning policy and plans and the exclusive focusing on action, with the result that there is no path from policy to implementation and thus the latter cannot be considered as putting policy into effect [35] (pp. 359, 368). This last tendency is convincingly refuted by Taylor, who, although critical of the linearity involved in the concept of “stages”, considers as vital the preservation of “the conceptual distinction between different components” in the formulation of plans and argues that even when policy is influenced by implementation: “implementation involves, unavoidably, putting policy . . . into effect” [11] (pp. 113–122).

McLoughlin [24] (pp. 92–296) formulated the most systematic view on the components of planning methodology, which he calls stages (or actions). Although they are well known, I shall mention them briefly, because they are necessary for the comparison with collaborative planning that follows (Figure 1):

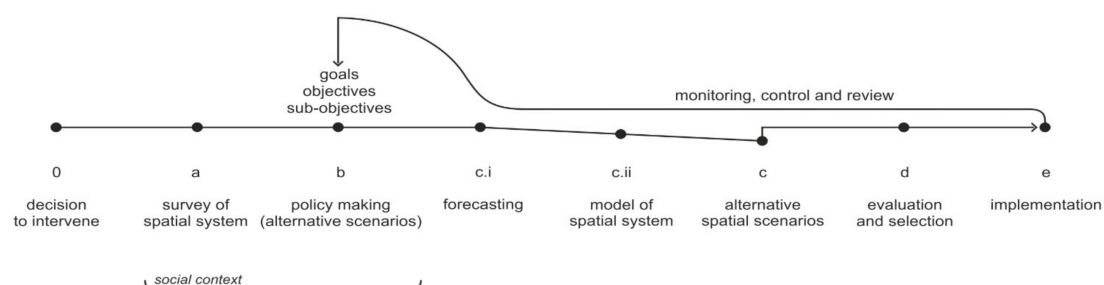


Figure 1. The components of McLoughlin’s planning model in diagrammatic form. On the axis: the model’s components. Dark circles on the axis: the components. Below the axis: contextual factor.

Stage 0: Decision to intervene. This stage is not identified clearly by McLoughlin, but it refers to the intentions of the agency commissioning a plan.

Stage a: Scanning of the environment. This refers to the planning survey and aims at the description of the four planning systemic elements. Also at this stage, individual or group needs and wants are identified through public participation.

Stage b: Formulation of the aims of the intervention. This stage involves the opinion of formal and informal groups and the public at large, as well as information from the mass media and public statements of representative groups, but the essential dialogue takes place between the planner and the client politicians. The aims are organised in hierarchical order, from the wide goals to more specific objectives to precise programmes of action.

Stage c: Formulation of possible courses of action. With reference to the planning horizons defined, the systemic elements are projected separately into the future (c.i), and then, the projection of the whole system (the elements and their interrelations) is achieved on the basis of a comprehensive model (c.ii).

Stage d: Comparison and evaluation of alternatives. These two operations refer to the alternative land-use plans obtained through the previous stage.

Stage e: Taking of action. This stage follows the selection of the final plan and is identified with implementation. There follow the monitoring, control and review of the plan; this last process is a feedback process, leading to a reformulation of the aims of stage b.

Since McLoughlin formulated his systemic and comprehensive planning model, it has been subject to much criticism. One weak point of the model is the idea of stages, which gives the impression of a purely linear process; it is better to conceive of them as interacting components of a dynamic process. Generally, however, I believe that the criticisms directed at the model are excessive. It is empirically evident that the methods used by most planners in practice follow this model in a stricter or looser form. The general validity of the model also becomes clear when we compare it to what is often considered as its diametrical opposite, Patsy Healey's collaborative planning.

Trying to avoid the linearity of the systemic model and the term "methodology", Healey states that planning revolves around a set of "questions" to be answered [34] (pp. 268–282, 310, 320), [36] (pp. 242–253). I present below (somewhat rearranged) the issues attached to these questions (Figure 2):

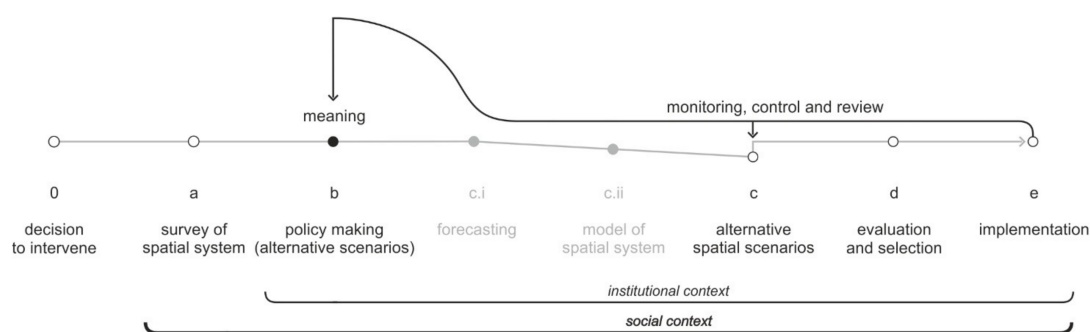


Figure 2. The components of collaborative planning in diagrammatic form on the background of the systemic model. White circles: components of McLoughlin's model used by the collaborative model. Gray circles: McLoughlin's components not used by the collaborative model. Dark circle: the central component. Below the axis: contextual factors.

Question 0. Opening of the strategy-making process. This is done by initiators/activators currently belonging to the institutional level and is considered by Healey as the first step, which she integrates into the following question as the next step.

Question a. Constitution of the arena. The major task of the initiators is, according to Healey, to pose two issues: which is the community of stakeholders and in which arenas will the public discussion take place. The community of stakeholders is composed of different discourse communities and extends, for Healey, beyond the interested spatial community to all people concerned with the issues to be discussed.

Question b. Definition of the context and style of discourse. According to Healey, this sub-process is the necessary condition for policy-making and the rest of the planning process. It corresponds to the issues of what will be discussed and how. As concerns the manner of discussion, she refers to the style, process and spatial organisation of the discussion, the need for the different "languages" (i.e., frames of thought) to be comprehensible, and the need to maintain respect for both present and absent people.

Question c. Sorting and organisation of the arguments. This takes place by encouraging the participants to investigate in depth the meaning of the issues discussed and to express their values. This role is

undertaken by the experts, the “facilitators”, and is added to their role as participants with a point of view, leading to the provision of expert facilitation that reveals common lines of thought. In fact, question (c) is composed of two parts: (c.i) overlapping with (b) and (c.ii) the further development of the issues through the facilitators.

Question d. Creation of a policy discourse. This discourse, interrelated with the previous process, is a new system of meaning, resulting from the elaboration of all the discourses heard in the arena, which gives meaning to problems and actions, and is embodied within a strategy for action. In another variant, Healey incorporates (c) into (d), but there is logically a development from (c.i) to (c.ii) to (d). The discourse aims at the achievement of a strategic consensus about the major planning issues and takes the form of a “storyline”, which was gradually selected from among a set of storylines about possible alternative actions developed in the course of the discursive collaborative process.

Question e. Criticism and maintenance of consensus. Criticism may take the form of the right to challenge the consensus and, according to Healey, the formal terms for that must be determined. Due to actual changes and inevitable reinterpretations of the meaning of policy, the agreed policy must be the object of continuous “reflexive critique”. This reflexive critique goes beyond the assessment of the implications for the policy of changes in the context and the expected achievement of specific policy objectives, to take into account also whether the policy discourse still makes sense or a new storyline has emerged.

It is clear that Healey transposes the terminology of planning to a semiotic register: the planning process is identified with a “discourse”, in which “discourse communities” participate; it implies different “languages”; the participants investigate the “meaning” of the issues discussed and express their “values”; policy becomes a ‘policy discourse’ as a new “system of meaning” identified with a “storyline”, and the control of the course of implementation is a “reflexive critique”. Thus, planning is seen from a different position and with a different terminology than those of the systemic model. However, despite Healey’s rhetoric about the divergence of collaborative planning from McLoughlin’s systemic approach, there is a close connection between the two models.

In spite of her opposition, Healey states that “There are many aspects of the model that any alternative ideas . . . would do well to safeguard”. She then accepts that collaborative planning “in some respects . . . re-visits aspects of the well-known rational planning process” and she refers to the survey (her question (b), McLoughlin’s stage (a), which in her case is a metaphor, because the survey is primarily a technical operation of gathering data and not the product of public discussions), the choice of policy—her question (d)—the evaluation process (question c), and the monitoring and review, the “new storyline”, of the planning process, belonging to her question (e)—[34] (pp. 251, 252, 282).

Healey rightly criticises the linearity of the systemic model, writing that the sub-processes she proposes must be considered “interactively, often in parallel rather than sequentially” [33] (p. 282); in fact, there are, in practice, continuous feedbacks between components. On the other hand, in spite of this dynamics, there is unavoidably a general linear development of the planning process. Proof of that is that her components are also in the final instance linearly connected, though in a rather complex manner.

Thus, if we represent by bold letters Healey’s questions, and within brackets in the first position in italics the actual steps of the process proposed by Healey and in the second in plain letters McLoughlin’s stages, we arrive at the following formulation:

$$(0 [1, 0] < \mathbf{a} [2, \text{context}]) - \mathbf{b} [3a, a]/\mathbf{c.i} [3b, b] - (\mathbf{c.i} \rightarrow \mathbf{c.ii} [4, b+c+d] \leftrightarrow \mathbf{d} [5, d]) - \mathbf{e} [6, \text{monitoring and review}] \quad (1)$$

that is, (a) is the next step after (0), but also integrates it; (c.i) as the next step after (b) is also integrated with it; (c) is a further advancement in the process and may be incorporated into (d); and there seems to be a feedback between (c.ii) and (d) that is not discussed in any detail. We see that the final result is an implicit linear progression from (0) to (e).

Both the correspondences given above between the two models and the comparison of the two Figures 1 and 2 reveal striking similarities. All the components of the systemic model, with the exception of (c.i) and (c.ii), are in fact activated by the collaborative model. One component which is privileged in the collaborative model—what Healey calls the policy discourse—is also central to the systemic model.

It is these components that, through their continuous feedback, constitute the finally more or less linear *structuring* of land-use planning methodology. There may be methodological affinities, even very close, between land-use planning and other types of planning. The components are operations, sub-processes of a more or less closed set. In fact, all land-use planning methodologies use a greater or lesser number of components (labelling and describing them in various ways), but all of these components are members of the same set, the one formulated by McLoughlin (though McLoughlin does not pay enough attention to the feedback between them).

There is no space here to discuss all planning theories from the point of view of the basic components on which they found their proposals, but a comparison shows that very few among them are as rich in the number of their components as is McLoughlin, and most are poorer or much poorer in this respect; of course, the specific content of the components may vary according to the theory, as the case of Healey also indicates.

In the figures above, the planning components are represented on an axis and below the axis appears the concept of “context”. This concept is discussed below.

3.4. Concept 8. The Context of Land-Use Planning Methodology

This structural set of components is not used in a vacuum, but within the complex environment referred to above, which constitutes its *context*. For example, the planning survey or the formulation of alternative plans is a structural component subject to technical operations by the planning team. On the other hand, the factors interfering with planning, whether they are the market, planning institutions, or participation arenas, do not belong to the same register as the structural components, but are contextual factors which provide inputs, more or less important according to the case, to the components in the form of restrictions or guidance. The components/structuring and factors/context of methodology have different functions, but should be treated in conjunction by any land-use planning theory. Any approach isolating only one component or factor, or focusing eclectically only on some of them, is thus incomplete. As is the case with the framework of land-use planning, inputs from this context need to be transformed into land-use concepts.

On the basis of this clarification, we understand that the planning operation consists of two registers, which interact closely but nevertheless are structurally and functionally different: the axis of the figures, that is, the level of the components, and the factors beneath them, which correspond to the context. They should both be taken into account during planning, but they must not be confused. The manipulation of the components is a *technical* matter, taking place *inside* the four walls of the planning office, while the context offers it *axiological* inputs from the *outside*, without, of course, any impermeability between the two. Their confusion leads to proposals such as those by Healey, who, instead of respecting this permeable partition, eliminates the planning office by making it function as an appendix of the arenas.

The next and final step of my argumentation, Concept 9: “The specific structuring of land-use planning methodology”, penetrates deeper into the relationship between the planning components to identify a major shift which follows from the articulation between the verbal part and the design part of planning.

3.5. Concept 9. The Specific Structuring of Land-Use Planning Methodology

I shall end with a look at the internal articulation of the level of the components. Its crucial component is undoubtedly the formulation of planning goals. However, then follows the major task of

giving them physical expression. This will produce the actual setting where people will live, whence its importance. This task is, as we shall see, the moment of a significant articulation.

After the formulation of goals, comprehensive planning poses the formulation of possible courses of action. This is the formulation of alternative scenarios of land-use plans to be examined [24] (pp. 87, 88, 99, 108, 166, 174, 211–216, 220, 221, 231, 291, 292). I argued above that the specificity of spatial planning, in general, is that it consists of two parts: a planning part on paper and a design part on the map. It thus presupposes the articulation of the first part with the second. At this point, we encounter a terminological problem and a theoretical issue.

The terminological problem is that we have only one term for two different objects. The planning part of spatial planning is manifestly “planning”, as distinguished from the other part, “design”. So, “planning” (let us use a lower-case p) is only one part of the whole process. However, “Planning” (with a capital P) is also the term for the whole process, incorporating both planning and design.

The theoretical issue is exemplified by comprehensive planning. The formulation of possible courses of action is a nodal point, which however passes unnoticed due to the compactness of this model. It is *nodal* because this is where the shift takes place from written text to map and from policy (the completion of planning with a lower-case p) to physical expression in geographical space. This spatial projection of policy is far from unidirectional, because it involves many possible spatial combinations. The shift effected by the nodal point is a shift from a planning logic to a design logic, which requires a different type of theory and methodology. Though there may well be feedback from the design process to the planning process, this is the point where planning as such ends, and another process begins.

The design part of land-use planning is radically different from that of architectural and urban design. In both of these, the morphology of space is of central interest and their plans tend towards a severe Euclidean geometry, including the third dimension. On the contrary, urban and regional plans are two-dimensional and their geometry is loose and diagrammatic, based on points, axes, micro- and macro-zones, and networks.

4. Concluding Remarks

The above attempt to identify and clarify the fundamental concepts concerning land uses as part of a coherent theoretical whole required us to start from the high level of epistemological considerations and revealed certain important dimensions that are not obvious to an empirical approach. My final aim was not a simple list of such concepts, but a logical conceptual whole, organised in steps of a continuous argumentation, which can provide a foundation for planning theory and is meant as a contribution to land-use theory, planning methodology and planning practice.

On the level of theory, I have tried to point out the necessity for a scientific land-use theory, spatiology, and give an outline of it. Concerning methodology, I paid special attention to the structure of land-use planning as belonging to a general planning model according to which the specificity of each type of planning is defined by its specific object as axis, and the other types of planning necessary for the planning output are articulated with this axis as its framework. It is not only this framework that influences planning, but also the larger physical, economic, social, institutional, and natural environment, which constitutes its *context*.

Examining the concept of methodology, it became clear that it has a normative nature, but also that normativity may be understood in two very different senses: a technical and an axiological one. The role of analytical land-use theory is to offer clear concepts, not only necessary for the analytical part of planning, but also inescapable as background for axiological reasoning. It is very difficult to have a “right” practice without “good” analytical theory and “good” methodology. However, neither good theory and methodology nor right practice can produce “good” plans and a “good” or “just” city. They may be the condition *sine qua non* as vehicles of the planning operation, but the “good” city follows from axiological choices.

I hope that the concepts I examined may act as a trigger for the further clarification of a constellation of concepts connected to the whole extent of the theory and practice of land-use planning. Among them, those referring to spatiology need to be the object of thorough investigation, while, on the other hand, the technical level of land-use planning should be revisited with the use of the key concepts derived from analytical land-use theory and land-use methodology.

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