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► **To cite this version:**

Simin Davoudi. The legacy of positivism and the emergence of interpretive tradition in spatial planning. *Regional Studies*, 2011, pp.1. 10.1080/00343404.2011.618120 . hal-00749640

HAL Id: hal-00749640

<https://hal.science/hal-00749640>

Submitted on 8 Nov 2012

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|------------------|---|
| Journal: | <i>Regional Studies</i> |
| Manuscript ID: | CRES-2009-0273.R2 |
| Manuscript Type: | Special Issue Paper |
| JEL codes: | P11 - Planning, Coordination, and Reform < P1 - Capitalist Systems < P - Economic Systems, Q48 - Government Policy < Q4 - Energy < Q - Agricultural and Natural Resource Economics, R52 - Land Use and Other Regulations < R5 - Regional Government Analysis < R - Urban, Rural, and Regional Economics |
| Keywords: | Positivist planning, interpretive planning, space and place, time and future, evidence-based policy, scalar order |
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3 The legacy of positivism and the emergence of interpretive tradition in spatial
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23
24 Abstract

25 This paper draws on positivist and interpretive conceptualisation of space, place and
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27 time to present a framework for exploring how spatiality and temporality is articulated
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29 and represented in spatial planning. It focuses on five aspects of planning: conception
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31 of spatiality, spatial and scalar structuring, treatment of time and future, use of
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33 evidence in plan making, and representation and visualisation. How the two traditions
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35 have influenced planning, particularly in the UK, is discussed and illustrated by
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37 historical and contemporary examples. The paper concludes that while an interpretive
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39 approach is emerging in some areas of planning, positivism has retained its
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41 dominating influence.
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50 Key words:

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52 Positivist planning; interpretive planning; relational space; nested scale; time and
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54 future; cartographical representation; evidence-based policy
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JEL codes: Z, Y, R

1. Introduction

In the early 2000s, a major programme of reform was introduced by the British government which aimed to widen the scope of the planning system “beyond traditional land use planning” (ODPM, 2004a: 12), and towards what is known as ‘spatial planning’. Spatial planning has been defined in different ways but often with reference to a type of planning which acts as a coordinator of other policy sectors and integrator of policy and investment priorities (Nadin, 2007). Whatever the definition, the spatial turn in planning was a belated response to the renewed enthusiasm for spatiality in other policy areas as well as in other disciplines. By the end of the millennium, there was a growing recognition that space and place mattered in the social and economic fortunes of localities (Amin and Thrift, 1995) and in the coordination strategies of governance. As Brenner (2000:373) suggests, “space is becoming a central object of political struggle in the contemporary world; it is no longer merely the ‘medium’ or ‘theatre’ of socio-political conflicts but one of their constitutive dimensions”.

While the debate on the meaning of spatial planning is ongoing and the gap between rhetoric and reality remains wide, planners’ attempt to implement it is undisputed. What is less clear is the type of spatiality that was conveyed by the emerging plans. Within the social sciences there are two distinct ways of conceptualising space and place: the positivist and the interpretive traditions. In section two the paper draws on these two perspectives to present a conceptual framework for exploring how spatiality is articulated, represented and visualised in planning. Emphasis is placed on five key aspects of planning: conception of spatiality, spatial and scalar structuring, treatment

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of time and future, use of evidence in plan making processes, and representation and
visualisation. The ways in which the positivist and the interpretive traditions have
influenced planning, particularly in the UK, will be discussed and illustrated by
historical and contemporary examples. The paper concludes, in section three, that
while some of the contemporary planning practices are moving towards an
interpretive approach, positivism has remained highly influential in planning.

2. Positivist and interpretive traditions

Positivism refers to an empiricist approach to scientific knowledge which starts from
the senses and particulars and gradually rises up to the most general axioms. It is
based on Francis Bacon's second way of discovering truth, and rests on observation as
the moment of truth when hypotheses are tested against the facts of the world. For
empiricists, knowledge is a matter of bottom-up experience (*a posteriori*). This is
what distinguishes them from rationalists for whom knowledge is a matter of top-
down underlying theories and laws (*a priori*)¹. Both, however, belong to the naturalist
tradition of enquiry. Both consider nature as independent, reason as unprejudiced, and
a unitary scientific method as the appropriate way of explaining causal relations in
both natural and social phenomena (Hollis, 2003). Within the social sciences,
positivism refers to the approaches which apply scientific methods to human and
social affairs; conceived as belonging to a natural order that is open to objective
enquiry. Its most extreme version, the 1930s' Logical Positivism of the Vienna Circle,
denied the existence of anything beyond observable experience. This extreme view
was best captured in David Hume's assertion that there is a sharp distinction between
"matters of fact" and "relations of ideas" (quoted in Hollis 2003:42).

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5 One of the most radical challenges to positivism has come from the interpretive or
6
7 hermeneutics² tradition which has offered an alternative to the naturalist view of the
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9 world; one which considers knowledge to be a matter of *understanding* rather than
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11 explanation. Social phenomena are seen as distinguishable from natural ones because
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13 they depend on the meaningful actions of individuals; they are intentional. This means
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15 that in the social domain instead of seeking to explain the causes of behaviour one is
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17 to seek the *meaning of action* (Hollis, 2003). Meaning refers to what is consciously
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19 and individually intended as well as what is commonly and often unintentionally
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21 significant. Within the social sciences the interpretive tradition has been associated
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23 with post-modernism and its objection to the grand narratives of social theories
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25 offered by naturalist approaches.
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32 Whilst positivism has a long history in planning, the interpretive perspective is
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34 relatively new to it. For some commentators its emergence has raised questions about
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36 whether planning as a modernist project could operate in a postmodern time
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38 (Allmendinger, 1998). The following section will discuss how these two different
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40 perspectives lead to radically different conceptualisation of the five key aspects of
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42 planning mentioned above, and how these varying conceptualisations have shaped the
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44 evolving planning thoughts and practices, particularly in the UK. Historical and
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46 contemporary examples are drawn upon to illustrate the points made.
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52 2.1 Conception of spatiality

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54 Positivism portrays an absolute view of space which is rooted in Euclidean geometry.
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56 Euclid's three-dimensional geometry enjoyed uninterrupted sovereignty until it was
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3 challenged in the late 19th century. His ideas were accepted for a long time because “it
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5 had been covertly built into Newtonian physics” (Scruton, 1996:361). The picture
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7 given by Isaac Newton was of space as an infinite container; “an entity in itself
8
9 independent of whatever objects and events occupy it” (Agnew, 2005:83). For a
10
11 positivist planning, space is a neutral container which can be understood through
12
13 positivist science. Place is considered as objective, bounded, self-contained and
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15 measurable.
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20 The interpretive tradition considers space as relational; a view which is often
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22 associated with Einstein’s space-time concept (Agnew, 2005). However, the idea that
23
24 space is relative and not absolute is far older and goes back to Leibnitz’s philosophy.
25
26 He suggested that, “spatial properties are relational, and the position of any object is
27
28 to be given in terms of its relation to any other objects” (Scruton 1996:362). In the
29
30 Leibnizian view space is relational in the sense that it does not exist independent of
31
32 objects and events and is constructed from the relations between them. It is dependent
33
34 on the social and cultural processes and substances that make it up (Lefebvre, 1991).
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36 In the words of David Harvey (1996:53 original emphasis), “Processes do not operate
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38 *in* but *actively construct* space and time and in so doing define distinctive scales for
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40 their development”.
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48 An important feature of the distinction between the positivist and the interpretive
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50 approach to spatiality is the way in which they conceptualise place. The former
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52 considers space and place as either synonymous or binaries, while the latter
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54 understands them as dialectically related (Lefebvre, 1991; Harvey, 1989; Soja, 1989).
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56 The interpretive tradition, as manifested particularly in postmodern geography,
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3 attempts to expose the contingent nature of space and place and puts the emphasis on
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5 “fluidity, reflexivity, contingency, connectivity, multiplicity and polyvocality”
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7 (Davoudi & Strange, 2009:37). Place is defined subjectively with people living not
8
9 “in a framework of geometric relationships but a world of meaning’ (Hubbard *et al*
10
11 2004). Space and place are seen as socially and culturally produced, or as Doreen
12
13 Massey (2005: 61) puts it, as “simultaneity of multiple trajectories”.

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18 An early example of a positivist view of spatiality is the highly influential Charter of
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20 Athens (CoA, 1933). Published in 1933, it became a modernist manifesto for
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22 transformation of urban areas into functional cities. It was the brain child of a group
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24 of avant-garde architects and intellectuals who founded Congrès Internationaux
25
26 d’Architecture Moderne (CIAM). Its portrayal of the city as the embodiment of four
27
28 functions had a profound influence on the architecture and planning practices of post-
29
30 war Europe and left its mark on numerous cities around the world (Davoudi &
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32 Madanipour, 2012f). The ‘CIAM city’ (Dear, 1995) was to be built from scratch on a
33
34 blank canvas and then filled with human activity. Le Corbusier (1929:232 original
35
36 emphasis), the renowned exponent of CIAM principles, was of the view that “WE
37
38 MUST BUILD ON A CLEAR SITE!” He advocated that, “The city of today is dying
39
40 because it is not constructed geometrically”. The solution would be offered by
41
42 physical design. For example, “rational determination of street dimensions” was the
43
44 solution for congestions; zoning and slum clearance was the solution for “irrational
45
46 location” and overcrowding (CoA, 1933: no page number).

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49 Like CIAM, the founding members of the planning movement in Britain were also
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51 looking for planning solutions to urban problems. They, however, were social
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3 visionaries rather than architects or planners. They considered planning as an ‘art’
4 rather than a ‘science’. Nevertheless, like CIAM their urban solutions were
5 physically-deterministic and utopian; and were considered to provide “a peaceful path
6 to reform”³. Ebenezer Howard’s Garden City had to have a “fixed limit of ...32,000
7 people, living on 1,000 acres of land...It would be surrounded by a ... permanent
8 green belt” (Hall 2002:93) which would neatly separate it from the surrounding
9 countryside. When the Garden City reached its planned limit, another one would be
10 started. This tightly-planned, neatly-structured and linearly-phased socio-spatial
11 engineering project would then create a polycentric agglomeration which Howard
12 called the Social City (Howard 1902). Contemporary spatial planning in the UK does
13 not use a physically-deterministic language but, the spatiality of the planned-
14 territories is still constructed largely through quantification and factualisation.
15 Quantitative indicators and physical attributes of the built and natural environment are
16 often the dominant narratives that are drawn upon to signify a sense of place and a
17 distinct place identity (see for example the Yorkshire and Humber Plan, 2006). What
18 is less common is a social and cultural construction of spatiality around values,
19 norms, beliefs, aspirations and memories.

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43 A prominent feature of the ‘spatial turn’ in planning, and one which is particularly
44 relevant to how spatiality is conceived, is its emphasis on distinctiveness in terms of
45 both the distinctiveness of the localities and the distinctive approach to plan making⁴.
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The latter is frequently hampered by rigid, top-down procedural rules. In the interest
of conformity these rules often squeeze out any attempts to originality. The former
has been embraced as part of the plan making process. Local distinctiveness is seen as
providing potential comparative advantage in an increasingly globalised world. Many

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3 local planning authorities have produced ‘characterisation studies’ of their localities
4 as part of the evidential support for their plan making (DCLG, 2007). Typically, they
5 present detailed descriptions of the physical aspects of the areas. A particularly
6 elaborate example has been produced by London Borough of Barnet (Barnet, 2009).
7 Its “overarching aim ... is to analyse and map the physical character of the Borough to
8 inform the Council’s planning policies” (ibid:4). It defines the meaning of “urban
9 character” as “the individual aspects of a place that when combined ... make the place
10 distinct from anywhere else” (ibid:8). It then emphasises that, “Factors that can
11 influence and define place identity... typically include the following: Scale and grain;
12 Land use; Network characteristics; Density; Street width; Building type, Height and
13 massing; Architectural style; Vegetation, landscape and public realm treatment; and
14 Topography” (ibid:8). The emphasis is clearly on physical attributes. The outcome
15 portrays a ‘distinct’ character which is based on absolute and physical space,
16 constructed by methods that are not dissimilar to the descriptive physical surveys of
17 the traditional master plans. The social space and its cultural distinctiveness are
18 reduced to a collection of statistical data on: car ownership, unemployment, index of
19 deprivation and housing tenure (ibid).

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43 An interpretive approach to planning complements these physical readings of space
44 with social and cultural meanings. It combines the understanding of spatiality as
45 ‘matters of facts’ with its understanding as ‘matters of concern’ (following Latour,
46 1993 & 2005). This means paying attention to the objective and physical matters of
47 space and place as well as the subjective and social concerns *about* space and place.
48 Spatiality will then emerge, and continue to evolve, from the interrelationships
49 between natural and physical characteristics, social expectations, cultural norms,
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3 power dynamics, and political bargaining. Spatiality would be subject to multiple
4 interpretations and always in the process of being made. For the interpretive approach
5 technical rationality of indicators and assessment methods are just one among
6 multiple (and often competing) rationalities (Watson, 2003) which together shape a
7 continuous process of becoming. Interpretive planners value the encounters between
8 these (Healey, 2007) rather than shying away from the complexities that arise from
9 them. Local distinctiveness is seen as a factor that evolves from such interactions as
10 the plan making process unfolds.
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20 21 22 23 2.2 Spatial and scalar order

24 A key feature of positivist planning is the aspiration to tame space and create order.
25 This 'will to order' (Jensen and Richardson, 2004) has its origin in modernity and its
26 eighteenth century Enlightenment project. It is based on the then dominant intellectual
27 view of the world that considered universe as mechanically ordered, its parts
28 susceptible to scientific discovery, and its malaise amenable to scientific solutions
29 (Davoudi, 2012f); that science could conquer nature by discovering all its secrets,
30 including those related to humanity (Hollis, 2002). Some commentators argue that
31 this 'quest to control' relates to the real and perceived fears and anxieties about
32 complexity and uncertainty (Schumaker, 1978). Yet, they add that, it not only
33 circumvents politics and democracy, it may also mask the existence of the complexity
34 itself. The desire to tame space has been inseparable from the search for "generating
35 truth about the city" (Osbourne and Rose, 1999: 73), constructing 'spatial laws', and
36 identifying spatial organising principles. Examples of the latter include: distance-
37 decay effects, adjacency and proximity, and nested scalar hierarchies. As Foucault
38 suggests, the demarcation of territory and the taming of space are part of 'planning
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3 technologies'. They are "the precise means by which [government] rationalities can
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5 be implemented in practice" (Murdoch, 2006:44).
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10 In the interpretive planning the positivist tendencies of the 'will to order' would be
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12 replaced with the 'will to connect' (Hagens, 2010) multiple overlapping networks
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14 with continuous flows of people, resources and knowledges. Rather than controlling
15
16 socio-spatial complexities, the emphasis would be on recognising them and seeking
17
18 opportunities which may arise from them. An attitude of adventure would replace the
19
20 attitude of fear (ibid). In interpretive planning spatial scales are not seen as
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22 hierarchical (global, national, local) but as "nodes in relational settings" where "the
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24 significance and composition of the relations defines the significance of scale"
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26 (Murdoch, 2006:21). Scale, like space, is conceived as socially constructed with
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28 contingent boundaries which are constantly territorialized and open to political
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30 contestation. While contemporary planning practices have begun to articulate the
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32 complex spatial and scalar relations through, for example, notions of network city or
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34 the use of 'fuzzy maps', as discussed below, they continue to be influenced by
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36 positivist principles. Three in particular have proved to be indispensable in planning
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38 and its quest for control. These are: spatial equilibrium, nested hierarchies and
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40 systems control, and will be elaborated in turn.
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47 2.2.1 Spatial equilibrium

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49 Among the early examples of the will to order space the Charter of Athens, mentioned
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51 above, is the most explicit one. It considered cities as being in a state of "chaos"
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53 because of "the uncontrolled and disorderly development of the Machine Age" (CoA,
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55 1933, no page). It warned that the development of cities "suffers from absence of
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3 control” (ibid). Order and neatly classified and separated functions underpinned its
4 urban solutions. CIAM’s utopian vision of a ‘good city’ was one in which there was
5 “a state of equilibrium among all its respective functions” (ibid). This was to be
6 achieved by the power of plan as epitomised in Le Corbusier’s dictum: ‘The plan
7 must rule’ (1933:7). The quest for spatial equilibrium was later given an egalitarian
8 dimension by the redistribution-based regional policy of the 1960s. Although the
9 redistributive element of the balanced development policy has been increasingly
10 undermined, its use as a spatial ordering principle has remained attractive. In
11 contemporary plans the use of balanced development has in fact been heightened after
12 the publication of the European Spatial Development Perspective (ESDP, 1999) and
13 its promotion of polycentric development. The underlying assumption is that
14 spatially-balanced (and ordered) territories are socially more equitable. While policy
15 objectives such as ‘spreading prosperity’ (as in the Welsh Spatial Plan, 2004) or
16 ‘spreading urban-centred development opportunities’ (as in the National Planning
17 Framework for Scotland, 2004) may be considered as publically justified collective
18 goals (Healey, 1997), the means by which they are to be achieved have remained
19 physically deterministic and based on “stylised spatial options along a concentration-
20 dispersal continuum” (Murray, 2009:129). Emphasis is put on: improving physical
21 accessibility, developing complementary functions between geographically-proximate
22 places, and privileging nearby relations over distant networks.

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2.2.2 Nested hierarchies

The idea of ordering space through scalar hierarchies goes back to the 1930s’
Christaller’s Central Place Theory. This was a highly influential spatial organising
principal which assumed that the complex dynamics of urban growth could be ordered

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3 in a nested hierarchy of settlements based on the uniform distribution of service
4 centres in hexagonal arrangements. In some countries, such as Germany, the principle
5 is still explicitly adopted in the spatial planning frameworks (BBR, 2001). In the UK,
6 while Christaller is rarely mentioned in the plans, his idea of nested spatial hierarchy
7 is frequently used to order spatial relations. The hierarchies are constructed through
8 statistical analysis of functional interactions. The approach can potentially articulate
9 the dynamics of the relational space but, its use in the contemporary plans is often
10 highly instrumental aimed at sub-dividing space into smaller units and allocating pre-
11 defined functions to each. The analyses are often based on reductionist measures, such
12 as travel to work journeys, and relate to past and present functions. The outcome is
13 used to designate some places as, for example, 'prime focus' for jobs, houses and
14 services, others as 'local focus', and the rest as 'hinterlands'. Even less imaginatively,
15 the planned-territories are sub-divided into: 'high', 'medium', and 'low growth' areas
16 (as in Regional Development Strategy for Northern Ireland, 2001). The problem with
17 this positivist approach is that firstly, the static nature of these spatial orders does not
18 match the dynamic reality of the social and spatial interdependencies. Secondly, these
19 allocations inevitably lead to some places gaining priority for future development and
20 investment. However, the political nature of these allocations and their social
21 implications are often masked by perceiving the process as a technical exercise.
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47 An exception to this hierarchical approach in the contemporary planning practices is
48 the articulation of the concept of network city and its associated terms such as hubs,
49 gateways, nodes, etc. (see for example the Welsh Spatial Plan, 2004). The network
50 city appears to have captured the relational understanding of space and offered a way
51 of grappling with complex socio-spatial interactions. This is probably because the
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3 concept has double functions. On the one hand, it portrays relational complexities. On
4
5 the other hand, it reconfigures these complexities into a more malleable form.
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7 Therefore, a “network city is simultaneously unpredictable and organized”
8
9 (Beauregard, 2005:30). The concept allows planners to embrace complexity while at
10
11 the same time avoiding its incapacitating tendencies. Notwithstanding these emerging
12
13 relational understanding, physical geographies of proximity continue to be privileged
14
15 over relational geographies of connectivity. This is particularly the case in terms of
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17 the limited attention given to the global positioning of the planned territory.
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19 Globalisation, when is mentioned, is often seen as benign; as a one-way force of
20
21 change which the localities passively receive rather than actively shape (see for
22
23 example the London Plan, 2004). The global socio-economic and political relations
24
25 are often articulated by their association to physical infrastructure. Thus, territories
26
27 are presented as, for example, ‘a strategic transport cross-road’, or ‘on an axis’, or ‘as
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29 global gateway’, or ‘remote’ (see for example the Yorkshire and Humber Plan, 2006).
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31 Other economic, social and cultural ties hardly feature in plans. Neither do plans
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33 convey the implications of these global positioning for their localities. Globalisation is
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35 portrayed only as matters of facts and not as matters of concern.
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43 2.2.3 Systems control

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45 The introduction of the systems theory was the heyday of positivism in planning and a
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47 response to the search for ‘spatial laws’. Derived from the science of cybernetics⁵ and
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49 imported into planning through the work of Brian McLoughlin and George Chadwick
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51 in the late 1960s, systems theory conceptualised cities as complex systems whose
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53 parts could be unpicked and then monitored and controlled by planners. Spatial
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55 planning was considered to be a form of systems analysis and control (Taylor
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3 1998:62). Assisted by the quantitative revolution of the time (Barnes 2001), an
4
5 engineering-based spatial science emerged which aimed to develop spatial interaction
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7 models capable of measuring and predicting patterns of spatial change (Haggett,
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9 1965). Planners were urged to move away from the descriptive physical surveys of
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11 the earlier master plans and develop general hypothesis about spatial distributions that
12
13 could then be tested against the reality (Magee, 1973); the very essence of Popperian
14
15 scientific method. An early example of a rigorous attempt to develop a “science of
16
17 human settlement” is Doxiadis’ ‘Ekistics theory’ (Doxiadis, 1968:317). For him, as
18
19 for systems theorists, regular patterns were deemed to exist in the relationships
20
21 between objects which could be mapped, modelled, and used as the basis for
22
23 predicting future patterns. The complexity of “human settlements” was reduced to a
24
25 series of “orderly classifications” of size, location and function (ibid: 31-35). As a
26
27 result, and despite its name, his ‘ideal Dynapolis’ (the growing dynamic city) was
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29 prescribed to be “uni-directional” and “built on the basis of a rectangular grid network
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31 of roads” (ibid:365).
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The application of the systems approach through spatial interaction models spread
across the western world. In the UK it became the hallmark of sub-regional studies in
the 1960s and the 1970s. Sophisticated computer modelling techniques were used to
generate policy choices for the fast-growing metropolitan areas. While the systems
approach had developed partly in response to earlier criticisms of physical master
planning, the systems view itself was confronted with similar criticisms. It was argued
that many of the ‘system’ plans, including the structure plans of the 1970s which were
supported by detailed ‘reports of survey’, had “a distinctly blueprint hint” (Faludi,
1973:146); that they were entrenched in the same ‘fixities’ that they were trying to

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3 avoid. It became clear that the perceived scientific objectivity could not be applied to
4 socio-spatial systems irrespective of how sophisticated the methods or the models
5 were, as admitted by Britton Harris, one of the most celebrated of all systems planners
6 (Hall, 2002).
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14 The following decades saw a diminishing emphasis on lengthy and detailed data
15 collection and an undermining of systems theory. However, since the late 1990s and
16 with the growing concerns about climate change, the systems approach and its
17 engineering-based spatial science has been given an increasingly prominent place in
18 planning (see Davoudi, 2012f). Planners are encouraged to use modelling and
19 quantitative spatial analyses as the basis for determining ‘climate proof’ urban forms
20 (ODPM, 2004b). As Michael Batty points out, planners have begun to talk about “a
21 science of cities” again (*Planning*, 2009:23). This implies that positivist approaches
22 are gaining a renewed influence in shaping planners’ conception of spatiality. These
23 technically ‘conceived spaces’ (Lefebvre, 1991:38) may serve a useful analytical and
24 administrative purpose but, does little for creating a sense of place with which people
25 can identify. Too much emphasis on ‘conceived spaces’ of planners and systems
26 analysts would undermine the attempts to incorporate ‘lived spaces’ of imagination
27 and ‘perceived spaces’ of daily routines (ibid). The latter refers to people’s everyday
28 life experiences of engaging *in* and *with* space.
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49 Mirroring Lefebvre’s ‘trialectic of spatiality’⁶, interpretive planning considers space
50 as analytically conceived, physically lived, and culturally perceived. For interpretive
51 planning the normative dimension lies in shifting the balance away from the abstract
52 ‘conceived space’ to embrace the imaginative ‘lived space’ as a mechanism for
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3 enhancing its potential in re-orienting the 'perceived space' of everyday life (Davoudi
4 & Strange, 2009:38). This means drawing not just on the technical, but also the social
5 and cultural spatial imaginations for understanding spatiality. An example of the
6 attempts to move away from the physical arrangement of land uses and functions
7 (things) *in* space towards capturing spatial patterns of social interactions (but not the
8 embodied routine as suggested by Lefebvre) is the increasing use of the concept of
9 functional urban regions or city regions which has seen an upsurge in planning in
10 recent years. While this has enhanced the relational understanding of spatial
11 interactions, its focus has been limited to economic interactions. The difficulties of
12 quantifying and mapping social and cultural relations have led to their marginalisation
13 in plan making processes, as mentioned above.
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30 2.3 Time and future

31 One of the most profound legacies of positivism in spatial planning is the treatment of
32 time and future. The ability to conceptualise time is the outcome of a long
33 evolutionary path. As societies have grown in complexity, their temporal concepts
34 have become more abstract. The abstract time is seen as a linear time running from
35 past to future. Like the abstract space, time is seen as separate from its content and
36 from action; it is considered as a quantifiable entity. The concept of the future refers
37 to a dimension which is separate from the present and distinct from the past (Leccardi,
38 2008). In the positivist planning future is controllable and can be planned. The will to
39 order space is coupled with the desire to control the future.
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54 The idea that future can be planned also has its roots in the Enlightenment project
55 (Luhmann, 1982) and its aspiration to free the future from the constraints of divinity
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3 and nature and make it subject to human domination. The future is considered as an
4
5 'open future' (Leccardi, 2008) capable of being controlled through human choices and
6
7 decisions that are made at present. Planning movement in Britain was heavily
8
9 influenced by the optimism and utopianism of such modernist ideas and their linear
10
11 conception of history as progress and the ability of the Reason to guide it
12
13 (Madanipour, 1995:22). Planning of time is indeed an antidote to the uncertainties
14
15 generated by the future and a perceived insurance against its contingencies; it is the
16
17 desire to bridge the gap between what *happens* and what *can be done* (Bauman,
18
19 1995). The positivist view of linear time with a precise beginning and a fixed end is
20
21 still dominant in the contemporary plans. It is reflected in metaphoric expressions
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23 such as "a direction of travel" (as in the Welsh Spatial Plan, 2004), and in rhetorical
24
25 questions such as "where will we live, where will we work"? (as in the Regional
26
27 Development Strategy for Northern Ireland, 2001) The time frame is pitched at two
28
29 decades or so and like the boundaries of the planned areas remains fixed. Ordering
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31 time, therefore, is as much a feature of positivist planning as is ordering space. As
32
33 with spatial organising principles, planners draw on temporal organising concepts
34
35 such as phasing and programming to tame the time. These temporal toolkits are added
36
37 to planners' spatial toolkits to make up the 'planning technologies'. Quantitative
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39 forecasting of past trends is used to reduce future uncertainties. However, despite the
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41 efforts made to refine the methods even the most carefully calculated projections,
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43 such as housing need, tend to be challenged and revised several times during and after
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45 the plan preparation and not always because of access to better data or improved
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47 methods. In such a state of flux, it appears that "planning is condemned to solve
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49 yesterday's problems" (Tayler, 2005:157). None of this is to suggest that planners
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51 should abandon quantitative projections and forecasts. It is rather to highlight the
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3 limitations of positivist planning and its over-confidence in planners' ability to control
4 the future.
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9 For the interpretive planning, time is neither a biological nor a metaphysical given
10 (Elias, 1992); it is, instead, socially constructed and differs for different generations
11 and societies. For example, in the pre-industrial era the rhythm of nature and the
12 succession of seasons constructed time. Interpretive planning acknowledges the
13 existence of multiple times ranging from the rhythm of everyday life to the dynamics
14 of glacial changes. Time is seen as cyclical, with past, present and future being
15 interlinked. Interpretive planning acknowledges both the 'trialectic of spatiality',
16 suggested by Lefebvre, and what I call the trialectic of temporality. It attempts to
17 enhance the connection not only between intellectually conceived, physically lived
18 and culturally perceived spaces, but also between past memories, present experiences
19 and future expectations.
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36 In describing what would be an "appropriate time and space of non-Euclidian form of
37 planning", Friedmann (1993:482) suggests that, "the time of such planning is the *real*
38 *time* of everyday events rather than imagined future time", because "it is only in the
39 evanescent and still undecided present that planners can hope to be effective".
40 However, he then adds that planners' concern with everyday does not mean the
41 abandoning of concerns with an imagined future. Yet, for the interpretive planning the
42 notion of future time is characterised through the recognition of future uncertainty,
43 with action taking place in unexpected ways into unknown and disordered futures.
44 Unlike the modernist meaning of the future as open and subject to control, the
45 interpretive approach defines the future in terms of uncertainty and contingency. The
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3 image of the future as controllable is replaced with its image as indeterminate and
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5 indeterminable, riddled with unforeseeable possibilities as well as unpredictable risks.
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7 However, rather than putting too much emphasis on reducing uncertainties, the focus
8
9 is on identifying potential opportunities. This requires a shift in attitude away from the
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11 fear of unknown and the recourse to conformity, towards the exploration of unknown
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13 and the search for novelty. Following Unger (2007), in the interpretive planning the
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15 recognition of the ubiquity of change and its potential for novelty and surprise
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17 characterises the concept of future time.
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23 Positivist techniques of quantitative forecasting and projections would be
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25 complemented with qualitative foresights and scenario building. While the latter has
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27 been employed in plan making processes in recent years, the practice has not been
28
29 widespread. This is reflected in a government's commissioned study which calls for
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31 "more future-oriented 'scenario' work telling local authorities what is possible, as
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33 well as what is already present" (DCLG, 2007:7). Furthermore, the emphasis has
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35 remained on fast-forwarding the selected present (Murray, 2009). Therefore, the
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37 imagined future is often not a set of possible and contingent futures capable of
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39 unfolding in multiple ways, but a certain and known future whose challenges can be
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41 anticipated and responded to by present decisions and actions. Yet, as Beauregard
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43 (1996:192) argues, "the text of a postmodern planner, in fact, should be consciously
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45 fragmented and contingent, non linear, without aspiration to comprehensiveness,
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47 singularity or even compelling authority".
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2.4 The planning process and the use of 'evidence'

Positivism considers planning as a rational decision making process in which value-free experts rely on evidence to solve well defined and neatly structured planning problems. Evidence is understood as synonymous with facts, and credible evidence is interpreted as quantitative, measurable, and capable of establishing a clear cause and effect relations through scientific methods. The process is seen as linear in which the data collection and analysis un-problematically lead to planning and formulation of policy solutions. Although this approach reached its height in the rational planning of the 1960s and 1970s, some of its characteristics can be traced back to an earlier time. This is when the desire to order space became entwined with "generating truths about the city" by employing "mundane techniques of gathering, organising, classification and publication" (Osbourne and Rose 1999:73). A pioneering example is Patrick Geddes's famous dictum of: 'Survey before Plan'. Although it was assumed that "the survey naturally leads to the plan" (Abercrombie 1933:132) - much as it is now assumed that the evidence naturally leads to policy- in practice a *creative* leap was taken from the analysis of the survey to the making of plan. In other words, positivist methodology was combined with rationalist intuitions, or rather with simplistic aesthetic assumptions about urban form and layout (Taylor, 1998); an approach which was criticised by Jane Jacobs as "the pseudo-science of city planning and its companion, the art of civic design" (Jacobs 1961:16).

In the 1960s and with the rise of scientism in planning the creative leap was squeezed out of the process in favour of further objectivity, which was to be achieved by applying scientific methods not only to spatial analysis *in* the plan, but also *to* the plan making itself (Taylor, 1998). The change marked the birth of the rational planning

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3 process which considered decision making as a cycle of logical steps. The physical
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5 survey of the earlier time was extended to include the collection of socio-economic
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7 data in detailed 'Reports of Survey' which were to provide the evidence-base or
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9 reasoned-justification (as was then known) for the plans' policies. The rational
10
11 planning model has had a pervasive influence on planning and on policy making in
12
13 general. Its assumptions have been carried through in the *instrumental* approach to
14
15 evidence-based planning⁷ (see Cabinet Office, 1999a). Both underestimate the
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17 'disjointed' and 'incremental' nature of the real world decision making (Lindblom,
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19 1959) and the mismatch between "how the policy process should work and its actual
20
21 messy, uncertain, unstable and essentially political realities' (Young *et al* 2002: 218).
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23 The emphasis on evidence-based planning was founded on the argument that, prior to
24
25 the 2004 planning reform⁸, "the preparation of local plans has undervalued an
26
27 understanding of spatial development patterns and trends, and the generation of
28
29 strategic options that might flow from that understanding" (DCLG, 2007). To change
30
31 the practice, planners have been urged to "gather evidence about their area ... at the
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33 earliest stage in the preparation of the development plan" (ODPM, 2004a:32); a
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35 process called 'front-loading'. Plans are, therefore, considered 'sound' if they "are
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37 founded on a robust and credible evidence base" (ibid:39-40). If they fail this 'test of
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39 soundness', which is conducted by an independent panel, they will be taken back to
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41 the drawing board to be supported by "better evidence and reasoning" (ibid). While
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43 the attempts to provide better grounding for planning policies is justified, the
44
45 underlying assumptions of the evidence-based planning are flawed. Indeed, the
46
47 chosen terminologies are indicative of the enduring legacy of positivism in planning
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49 which considers an *instrumental* place for evidence in planning process. Its ethos is
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51 Popperian, portraying an epistemic view of knowledge which claims that, "one has
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3 knowledge only when one has a true belief based on very strong evidence” (Audi,
4 1996:252). Notions such as ‘front-loading’ are symptomatic of conceiving plan
5 making as a linear process in which evidence for well-defined planning problems or
6 goals are gathered first before planning solutions are formulated. It mirrors the
7 positivist assumptions about the linear process of plan making in which “the
8 collection of evidence takes place in self-contained, pre-production stage of plan
9 making”; as one reading of the UK national policy would suggest (DCLG, 2007:5).
10 However, despite the rhetoric of evidence-based policy, the way evidence is used in
11 planning is inseparable from the social and political processes in which planners are
12 engaged. As Hoch (1994:105) suggests: “Planners do not uncover facts like geologists
13 do, but rather, like lawyers, they organise facts as evidence within different arguments
14 ... all engage in persuasive rational arguments ... focused and attached to value
15 objectives”.

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34 Interpretive planning does not consider evidence as the only contender in the making
35 of planning policies. It stresses that often practical, institutional, ideological and
36 political factors play a major part. Indeed, these factors may lead to what Carol Weiss
37 (1975) calls the “problem of little effect”, referring to a great deal of research that
38 tends to sit on the shelf unnoticed. An audit of the UK government departments has
39 shown the patchy role that evidence plays in day-to-day policymaking. It concludes
40 that “little of the research commissioned by departments or other academic research
41 was used by policy-makers.” (Cabinet Office, 1999b: 36)

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54 In the interpretive approach, planning process is seen as iterative rather than linear.
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3 of space through discursive deliberations (Innes, 1996). Interpretive planning
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5 considers places as created through imaginative visioning, learning and storytelling
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7 (Sandercock, 2003). Methods such as these are seen as a way of expressing identity
8
9 and belonging. Interpretive planning advocates that in order to understand a specific
10
11 spatial practice, its historical emergence needs to be reconstructed and situated in the
12
13 complex web of social and political life. The professional knowledge of planners
14
15 would be one set of knowledge resources nestling amongst others. Such multiple
16
17 sources of knowledge emerge from objective analysis as well as subjective
18
19 experiences. In the interpretive planning, knowledge is seen as explicit and
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21 systematised as well as tacit and non-codified with no sharp distinction between
22
23 ‘expert’ and ‘lay’ knowledge. Evidence, or indeed the ensemble of different
24
25 knowledges, would play an *enlightening* rather than *determining* role in the process of
26
27 plan making. Policy is considered to be *informed by* rather than *based on* evidence.
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29 Furthermore, the emphasis would be on evidence as contributing to wider public
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31 debate rather than merely the narrow domain of policy. Emphasis would, therefore, be
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33 on evidence-*informed society* (Davoudi, 2006: 22 emphasis added, following Smith,
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35 1996).

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43 There are already signs of this broader view of knowledge in the contemporary plan
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45 making practices in the UK. A notable example is how the evidence-based approach
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47 to planning has actually been interpreted by planners. The findings from a study
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49 commissioned by the UK government on the post-2004 planning practice shows that
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51 there is a “tendency for different types of material to be included in the meaning of
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53 ‘evidence’. For instance many (planners) referred to the responses from community
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55 involvement and stakeholder events as ‘evidence’” (DCLG, 2007:5). It then adds that
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3 “it is entirely appropriate to use this type of material in developing, evaluating and
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5 justifying choices that are made, and it does represent an important source of
6
7 information representing views of those individuals and organisations” (ibid). The
8
9 report also shows the existence of “a wide range of collaborative activity to gather and
10
11 interpret evidence” (ibid). Some of the concerns raised by the report are, however,
12
13 similar to the criticisms of the perceived gap between ‘survey’ and ‘plan’ in
14
15 Geddesian teaching. For example, the report states that “while many ... authorities
16
17 have been able to demonstrate that appropriate evidence is being used...the rationale
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19 for the choices made may not be entirely clear...” (DCLG, 2007:5). From a positivist
20
21 point of view this may be considered as a shortcoming in the objectivity of the
22
23 decision making processes. From an interpretive point of view, however, the
24
25 perceived gap indicates the limitations of the rational perspective itself on the decision
26
27 making processes. The seemingly opaque nature of the link between evidence and
28
29 options may well be due to the influence of the cognitive, social and institutional
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31 environment in which decisions, or more precisely practical judgments, are made. It
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33 would be unrealistic (and undesirable) to think that such influences can be removed
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35 from the process by employing more ‘objective’ methods.
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43 In addition to the emergence of a broader meaning of evidence, contemporary
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45 planning practice also shows awareness of the iterative nature of the plan making
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47 processes. Contrary to the notion of ‘front loading’ which implies a recognisable
48
49 moment (the front) in the process being filled in (loaded) by evidence, there seems to
50
51 be a widespread recognition that “the use of evidence is an integral and ongoing part
52
53 of preparing a local development framework” and that “evidence gathering is not a
54
55 self-contained stage” (DCLG, 2007:19). The government’s commissioned study (ibid)
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3 shows that planners' approach to what counts as legitimate sources of knowledge and
4
5 how evidence is used in planning is much broader than what is centrally prescribed.
6
7 However, it also shows that the range of evidence used in the planning process has
8
9 remained limited. These mainly cover "standard topic studies dealing with ...
10
11 housing, employment and retail" (ibid: 7). "Studies on wider quality-of-life themes
12
13 such as culture, green space and health are rarely conducted" (ibid: 5). The problem
14
15 with the dominance of topic-based technical information is that it can perpetuate the
16
17 understanding of space as 'matters of fact' (such as housing and employment
18
19 numbers) and sideline its understanding as 'matters of concern' (such as concerns
20
21 about place-quality and lived spaces of everyday life). As mentioned earlier, such
22
23 matters of concern do not feature in the 'characterisation studies', either.
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30 2.5 Representation and Visualisation

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32 "All forms of representation are abstraction from reality which bring some aspects
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34 forward to the attention and leave some in background or eliminate them completely"
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36 (Peattie, 1987:112).
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41 The term representation differs from a positivist understanding of visualisation as a
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43 communication system. It emphasises the interdependence between "the symbolic
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45 structure that frame what is being said, written and shown during planning processes
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47 and the political structures that frame interactions during those processes" (Fischler,
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49 1995: 23). While acknowledging the significance of the plan's text, metaphors and
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51 concepts in spatial representations, the main emphasis here is on the visual aspects of
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53 representation in the form of cartographical maps.
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3 The most dominant form of representing and visualising spatiality in positivist
4 planning is static, Cartesian maps (Duhr, 2007). As Joyce (2003:52) suggests, the
5 introduction of the Ordnance Survey maps in the 18th century- (initially for military
6 purposes) led to new ways of visualising cities on a “microscopic scale” and from the
7 “omniscient view of the surveyor”. It resulted in displaying land uses and data on
8 skilfully crafted two-dimensional maps. Cartesian maps have remained a major part of
9 spatial representations in the contemporary plans. In Latourian terms they continue to
10 serve “as an immutable mobile”; as inscription that translate space into diagrammatic
11 form, thereby reducing spatial relations to a single sheet of paper” (Murdoch
12 2006:134). Furthermore, in the process of making the city ‘legible’ by clear
13 delineation a particular spatial image emerges which “hold some things constant
14 (notably, buildings and streets) and remove others from view (notably, the movement
15 and fluidity of urban social interactions)” (ibid). The fixed lines and colours of the
16 map becomes the dominant spatial imaginary. For positivist planning, map-making,
17 like other aspects of plan making, is seen as “scientific and untainted by social
18 factors” (Harley 1992: 234). For the interpretive planning, maps have ‘agency’. They
19 serve as a powerful mechanism for including or excluding not only matters of
20 concern, but also matters of fact. Cartography follows not just technical, but also
21 social and cultural rules that govern the production of maps. As Harley suggests, “all
22 maps are rhetorical” (ibid: 242) and work “in society as a form of power-knowledge”
23 (ibid: 243).

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52 In contemporary plans, while some maps continue to depict a positivist view of space
53 as absolute and fixed, a new practice has emerged which uses what may be called
54 ‘fuzzy maps’. Instead of the geometric accuracy of traditional maps which depict
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3 spatiality as a mosaic of land uses, criss-crossed with roads and rail lines, the fuzzy
4
5 maps blur the administrative and physical boundaries to represent ambiguous ‘soft
6
7 spaces’ (Allmendinger & Haughton, 2009). Although the boundaries are blurred, the
8
9 extent of soft spaces is determined through the analyses that are based on
10
11 quantitatively-identified functional reach of the ‘core’ cities. Fuzzy maps have been
12
13 tactically used in several spatial strategies of the early 2000s to create new scales of
14
15 working which do not necessarily match the hierarchical scales of the UK’s formal
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17 planning system. As such, they have provided a way of visualising a dynamic and
18
19 relational understanding of space. It is argued that the emergent of these new “soft
20
21 spaces” has helped planners to break “away from the rigidities associated with the
22
23 formal scales of statutory plan-making. (ibid:619) and represent the multi-scalar and
24
25 overlapping geography of spatial relations. Besides scenario building, fuzzy maps
26
27 can provide a useful way of representing and visualising networks and showing the
28
29 untidy and complicated flows. However, like other forms of representations they
30
31 inherently simplify reality and by doing that they amplify some aspects and
32
33 marginalise others. As James Scott (1998:303) points out, such “simplifications...strip
34
35 down reality to the bare bones so that the rules will in fact explain more of the
36
37 situation”. Like traditional maps, fuzzy maps also have agency and “fuse polity and
38
39 territory” (Harley, 1988: 281). The ambiguity of fuzzy boundaries can, for example,
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41 can be tactically used to depoliticise the potential inter-administrative political
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43 tensions as fuzzy maps appear to be more schematic and suggestive than precise and
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45 prescriptive.
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3. Summary and conclusion

The legacy of Euclid, reinforced by a Newtonian view of spatiality, dominated planning ideas and practices in the UK in the first half of the twentieth century. It conceptualised space as an absolute, empty vessel *filled with* activities and objects. It treated place as objective, bounded and scientifically measurable. Seen in this way, space, scale, and time were to be ordered to create neatly separated categories, represented on two-dimensional, Cartesian maps to perform the conceived spaces of planners. The process was seen as linear and rational in which technical evidence, produced by experts, had an instrumental place.

Much has been written about the intellectual shortcomings and the practical limitations of the positivist approach to planning. The most radical critique has come from the interpretive tradition which conceptualises space as relational and dependent on the social and cultural process and substances that produce it. Place, in this approach, is defined subjectively by people's daily experience of engaging with it; by the perceived spaces of everyday life. Understanding of spatiality as matters of fact is combined with its understanding as matters of concern. Fluidity, contingency, dynamism and simultaneity are key characteristics of the interpretive planning. The desire to connect, rather than to control, spaces and times is what drives interpretive planners. The purpose of the interpretive planning is then two-fold. Firstly, to draw on intellectually conceived and culturally perceived spaces to shape physically lived spaces. Secondly, to draw on past memories and present experiences to shape future expectations. Acknowledging the complexities, uncertainties and contingencies of

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3 these connections, the emphasis of interpretive planning is not on reducing these but
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5 on seeking opportunities and expanding the space for novelty and adventure.
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10 The discussion presented in this paper shows that although positivism has retained its
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12 powerful influence on planners' conception of spatiality, an interpretive approach has
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14 emerged in some aspects of contemporary planning practices in the UK. This is
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16 manifested in for example: the network city approach to spatial relations which
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18 challenges the traditional hierarchical way of organising space and scale; the attempts
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20 to challenge the fixed administrative boundaries by focusing on functional
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22 interrelationships; the use of fuzzy maps to visualise the un-bounded nature of flows;
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24 the articulation of uncertainties and contingencies through qualitative scenario
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26 buildings; and, the use of experiential knowledge in plan making processes in a non-
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28 linear way. However, these developments are taking place in parallel with pressures
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30 which tend to strengthen positivism in planning. The rhetoric of evidence-based
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32 policy is one such pressure. Although it has been interpreted in much broader way
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34 than was intended initially, it continues to push planning practices towards the out-
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36 dated technical rational approaches of the mid-twentieth century. Another pressure
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38 comes from the rise of systems approach in planning with a claim to reduce the
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40 uncertainties in climate change and its impacts.
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48 The exploratory nature of the discussion presented in this paper does not lend itself to
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50 a decisive conclusion. However, it is possible to speculate that the interpretive
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52 approach will find it difficult to offer planners alternative ways of articulating
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54 spatiality in the face of the renewed influence of positivism. As suggested by Pagden,
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56 it seems that, "as we move into a new century with its own share of conflicts ... the
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3 fascination with ... Post-modernism is fading. In its place a new scientificism is on the
4 rise" (2005:17). The warning is not about the escalating scientific and technological
5 advances which are to be celebrated. It is rather about the over-emphasis on
6 rationality and objectivity, and the over-confidence in the power of Reason to control
7 time and space. For planning this is particularly alarming given its depth of affiliation
8 with positivism, as reflected in Friedmann's (1993:482) remark that, "The
9 conventional concept of planning is so deeply linked to the Euclidian mode that it is
10 tempting to argue that if traditional model has to go, then the very idea of planning
11 must be abandoned".
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25 This indicates the enormity of the challenge for planning discipline and profession to
26 embrace the interpretive approach to spatial thinking. Translating a new relational
27 understanding of space and time into the realm of planning practice requires a
28 'paradigm' leap with implications that are more far-reaching than the 1960s'
29 introduction of systems theory which changed planning from a design-based to a
30 social science-based activity. There are some encouraging signs, as pointed out
31 earlier, but for a shift to happen a more concerted action by planning academics and
32 practitioners is needed.
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45 Acknowledgment

46
47 This paper draws on the contributions to the edited book: Davoudi, S. and Strange, I.
48 (eds) *Conceptions of space and place in strategic spatial planning*, London:
49 Routledge. My thanks to: Nick Bailey, Gordon Dabinett, Neil Harris, Greg Lloyd,
50 Michael Murray, Graeme Purves, Huw Thomas, Ian Strange, and Jim Walsh for their
51 contributions to the book which in turn provided this paper with the insights into
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3 contemporary plan making practices. I would also like to thank the anonymous
4
5 referees for their constructive comments on an earlier version of the paper.
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58 ¹ Based on Francis Bacon's *first way* of discovering truth

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4 ² From the Greek word *hermeneus*, an interpreter

5 ³ This was the sub-title of the Ebenezer Howard's book as published in 1898. It was
6 later republished under the most commonly known title of: *Garden Cities of*
7 *Tomorrow* (Howard 1902)

8 ⁴ See for example Plymouth Local Development Framework website
9 <http://www.pas.gov.uk/pas/core/page.do?pageId=110212#contents-1> , accessed
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11 ⁵ This was developed by Norbert Wiener in 1948

12 ⁶ Or triple dialectic, meaning a three way interactions between these spaces

13 ⁷ For the distinction between the instrumental and the enlightenment models of
14 evidence-policy interface see Davoudi (2006)

15 ⁸ Through the Planning and Compulsory Purchase Act, 2004
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