The Architecture of Community: Some New Proposals on the Social Consequences of Architectural and Planning Decisions

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Summary

"Territorial" theories argue that spatial design can only play an important role in society by virtue of there being a "correspondence" between spatial zones and social identities. In this paper it is argued that "structured non-correspondence" can also play a positive social role, with quite different consequences for spatial design. To the extent that a system works on non-correspondences it functions more probabilistically. It relies on numbers and frequencies of events which take place to reproduce a statistically stable global system, rather than on the formal clarity of its structure. This gives non-correspondence systems a robustness which highly structured systems do not possess. They can thus tolerate much more local disorder and yet be reproducible.

Résumé

Les théories "territoriales" prétendent que la planification spatiale ne peut jouer un rôle important dans la société que lorsqu'il y a une "correspondance" entre les zones spatiales et les identités sociales. Dans cet article, on démontre que la "non-correspondance structurée" peut aussi jouer un rôle social positif qui a des répercussions inattendues pour la planification. Dans la mesure où un système est fait de non-correspondances, il fonctionne de façon plus probabiliste. Il s'appuie sur le nombre et la fréquence des événements qui ont lieu pour reproduire un système global statistiquement stable, plutôt que sur la clarté formelle de sa structure. Ceci donne une assise aux systèmes de non-correspondance que les systèmes fortement structurés n'ont pas. Ils peuvent ainsi tolérer beaucoup de désordre local et néanmoins se reproduire.

1. Introduction

The relationship between architecture and behaviour exists within the broader framework of the relation between society and its spatial form. Design strategies within the former tend to be strongly influenced by changing ideas in the latter. However, in recent years two dominant but quite different views have crystallized about the relationship of society to space. One is derived from ethology, and more recently from socio-biology, and finds its expression most clearly among designers who claim that our socio-spatial environment is deficient in that the heterogeneous urban environment of today does not properly reflect the *territorial* nature of man and his various kinds of social groupings. The aim of design must be to correct this, by adopting the territorial perspective in design, and consequently organising space in such a way as to *correspond to*, and reflect, the various levels of human grouping (Alexander, *et al.*, 1977; Lynch, 1981; Newman, 1980). This view emphasizes that space is important to man, but that present practices have led to a territorially heterogeneous, and therefore dysfunctional, environment.

The alternative view also begins by noting the urban phenomenon of heterogeneity, or *non-correspondence* between social groupings and territorial demarcations, but draws instead the conclusion that because heterogeneity is a fact, then this indicates that space is unimportant. Social groupings exist *independently* of space, and do not require spatial reorganisation to make them better. This view originates more in sociological studies, and tends to be held more by planners and others concerned with social and economic processes, rather than with detailed physical arrangements of space through architecture (Pahl, 1970; Weber, 1964). Admittedly, some allowance is made for the marginal effects that proximity and spatial arrangements might have upon the social fabric in the long term, but, by and large, architectural preoccupations with spatial design as a means to ensuring "community" are treated with amused reserve [1].

However, in spite of their apparently polar differences, these two points of view share one assumption in common: that if space is to have any importance whatsoever for society, then it can *only* be by virtue of there being a *correspondence* between social groupings and spatial demarcations. The fact of heterogeneity, of non-reflectance of social structure in spatial organisation, that is, of *non-correspondence*, is automatically taken by both schools of thought as evidence that there is not a *working relation* between social and spatial form - either because none is necessary, or because it is the wrong relation.

Against both of these trends, there has been a third, the attempts to build a *spatial theory of heterogeneity and non-correspondence*: that is, a theory which at once accepts the fact of heterogeneity and, at the same time, shows how space plays a positive role in generating and controlling this heterogeneity. Jane Jacobs, for example, in her classic descriptions of the street life of New York, tried to show in vivid detail how the spatial structure of the neighbourhood created the safe heterogeneous urbanity which was imperiled by planning practices (Jacobs, 1961). More recently, interest has been shown in developing non-territorial analyses of urban space, which capture something of the liveliness and diversity described by Jacobs. But these studies tend to stress the complexity of the problem, rather than to offer a theoretical solution, or one which could be applied in design (Anderson, 1978; Appleyard, 1981).

With the rise of the social sciences in architecture, these non-correspondence views have tended to disappear, because, it seems, they are incapable of rigorous and theoretical formulation. Territory theory is simple, allegedly universal, and can be clearly defined by graphic and spatial techniques. It is, above all, intelligible, and can be presented with an aura of mathematical simplicity [2]. Theories of heterogeneity or non-correspondence, on the other hand, appear woolly and romantic, and, because incapable of rigorous expression, tend to be dismissed as hankering after an imaginary past; the more so since territory theory has reinforced its diagnosis of the present by writing an, albeit schematic, history of human territoriality (Alexander, 1979; Coleman, 1986; GLC, 1978; McClusky, 1979; Newman, 1972; Rapoport, 1980). At present, territory theory has become almost the means by which we think about space. To deny it appears to be a denial of space itself.

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[1] This concern by planners to achieve heterogeneity has been, on the whole, through "social engineering" rather than through the manipulation of specific spatial forms.

[2] Just how simple some of these ideas are in essence, and how erroneous when compared to the way in which cities work, and have worked historically, Alexander has powerfully demonstrated in "A City is not a Tree" (1966). The ideas set out in that paper have, however, remained ideas in principle. They do not appear to have influenced Alexander's work on the design of urban space to any great extent.

The aim of this paper is to sketch out a possible theory of *structured non-correspondence* of spatial organisation and social groups, and to show how it can be used to analyse and interpret cases where territory theory does not provide an adequate account of the phenomena. It begins by spelling out the nature of current "territorial" assumptions about the relation between architecture and behaviour, and considers one or two well-known cases of sociological interest which, it seems, pose problems for territorial theory (Young & Wilmott, 1962; Gans, 1962). It will be argued that the attempt to interpret the spatial aspects of these studies either territorially, or as cases where space is unimportant, would be a fundamental mistake. The order present is one of "structured non-correspondence", so much so that the restructuring of the local urban environment in a more territorial direction can "fracture and fragment delicate social networks", rather than offer the supportive framework for the regeneration of community life which it was hoped to achieve through design (Winkel, 1978).

Against this background, we will then sketch out a simple theoretical model for conceiving of correspondence and non-correspondence systems as the two ends of a bi-polar continuum, with the non-correspondence case being at least as important in producing social stability, *and* itself requiring certain forms of spatial organisation: in other words, to build a *spatial theory* of *both* homogeneity and heterogeneity and to suggest the conditions under which they occur. This new framework will then be used to review an example from the anthropological record, which seems to capture what it is about non-correspondence systems that we need to understand, if we are to understand them as *spatial* systems. Finally, the paper draws some preliminary conclusions about the principles by which societies appear to organize themselves spatially, and sketches out the spatial consequences of the new approach for contemporary urban design.

2. Territoriality and the Correspondence Model in the Practice of Architecture

Ideas in architecture today are usually prefaced by some general statement about basic human needs or values. One of the most widely accepted is that "man is, ecologically speaking, a territorial mammal" (Montifiore, 1979, 103). The argument runs more or less as follows; man, insofar as he is an individual, claims and defends a space against all comers. This behaviour is instinctive, "it is a basic behavioural system characteristic of living organisms including man" (Hall, 1969, 10), and it therefore operates as a fundamental part of the defence-aggression mechanisms which make up much of man's behavioural inheritance. Rapoport states this view categorically: "We may regard the territorial instinct, the need for identity and place, as constant and essential" (Rapoport, 1969, 79). Sommer goes further. Instead of attaching each individual to a portion of the earth's surface, he attaches a portion of space to each individual. He argues that each individual has a "portable territory", in the form of a "personal space" with invisible boundaries surrounding his body, into which intruders may not come (Sommer, 1969, 26). Lynch makes this distinction rather nicely: "Man is a territorial animal: he uses space to manage personal interchange, and asserts rights over territory to conserve resources. People exercise these controls over pieces of ground, and also over volumes that accompany the person" (Lynch, 1981, 205).

Both views identify the spatial, as well as the behavioural implications of the same basic concept which we may for convenience call *territory*. The former locates it firmly in the *environment*, the latter has it more firmly on the sides of the *organism* (Hillier & Leaman, 1973). But both theoretical stand-points, "territory" and "personal

space", agree that the relation between individual and territory is fundamental, supporting Newman's contention that "the territorial definition and symbolization of space" may be seen to operate as a general principle of human spatial behaviour (Newman, 1972, 16). It appears to be confirmed by a simple everyday notion, the need for *privacy*. Privacy appears to be the cultural interpretation of the elementary territorial instincts of animals, and as with animals, "privacy is most urgently needed and most critical in the place where people live, be it house, apartment, or any other dwelling" (Rapoport, 1969, 66).

However, insofar as man is a social being, he lives in collectivities which appear far more complex than those of any animal. The need for a sense of *community* seems to be at least as basic to human social behaviour as that of territoriality-privacy (Alexander, 1977, 81). "People are social animals: they must be able to belong to a community" (Montifiore), 1979, 103). It is therefore necessary to suggest how individual territorial instincts are modified and combined together to produce corporate patterns of behaviour at the higher levels of social group and society.

This, so the argument goes, is not as difficult as it seems. Privacy is what the individual needs and seeks, but it is also what the universal human group - the family - needs and seeks. The concept of territoriality-privacy is extended to the family, treated as an integrated and homogeneous unit. Thus, "the individual requires barriers against the sound and sight of innumerable visitors, including the disembodied visitor of the TV and radio, selected by one or another member of the family. The family must in turn protect itself against the claims of ever-increasing numbers of immediate neighbours ..." (Chermayeff and Alexander, 1966, 75). Once the principle of *group territory* is established it can then be extended, it seems, to any level of human grouping: local group of neighbours, neighbourhood, village, town and so on. In other words, the theory of individual territory becomes a *general theory* by a simple recursive application of the same organizing principle. The process of socio-spatial interaction may thus be extended from the individual "in an evolving hierarchy from level to level in the collective human habitat" (Newman, 1972, 9). Once this is done, it is fairly obvious what types of design must be applied, whether to house design, locality layout, or even urban form.

The paradigm is persuasive as well as simple in its lessons. However, if we express it a little more abstractly, then it becomes clear that it is at every level based on one very strong assumption, which we referred to before: that if space has any importance at all in the ordering of social relations, it can only be by virtue of a *correspondence* between segments of space and segments of society. Social and spatial order can only be described, analysed, and assessed in terms of a "fit" between bounded social groups and the tangible physical zones which contain them; such that "each zone, through its formal clarity and integrity induces, reflects and sustains the activity it has been designed to serve" (Chermayeff and Alexander, 1966, 118; Alexander, 1977, 79). This kind of thinking may be seen to lie at the heart of many of the forms of housing design guidance which many British architects currently use in practice (GLC, 1978; Essex County Council, 1973). As practising architects, territory theory, hierarchy, and correspondence have become concepts we think *with* rather than concepts we think *of*. They have become what Skaburskis (1974, 42) calls a "frame of reference" within which design takes place.

3. Community Studies and Community Design

However, there is also a substantial body of literature which has emerged from detailed empirical research in contemporary urban communities which brings the alleged universality of territory theory into question, by finding that, here at least, there is very little correspondence between identifiable spatial domains and bounded social groups. Bott, for example, makes the point that "in the literature on family sociology, there are frequent references to 'the family in the community' , with the implication that the community is an organized group within which the family is contained. Our data suggests that this usage is misleading. Of course, every family must live in some sort of local area, but few local areas can be called communities in the sense that they form cohesive social groups. The immediate social environment of urban families is best considered, not as the local area in which they live, but rather as the *network of actual social relationships* they maintain, *regardless of whether* these are confined to the local area or move beyond its boundaries" (Bott, 1957, 99; our emphasis). Elsewhere, Glass argues that "self-contained neighbourhoods do not exist. The boundaries of neighbourhood life vary for different activities ... there are also varied neighbourhood boundaries for members of different age groups" (Glass, 1966, 111). Wirth argues that "the intricate network of social interrelationships" does not conform to physical, administrative, or even natural boundaries "except by *accident* " (Wirth, 1966, 111; our emphasis). Gans goes so far as to *deny the empirical existence* of the concept of community "*in a combined social and spatial sense*, referring to an aggregate of people who occupy a common and bounded territory within which they establish and participate in common institutions" (Gans, 1962, 104; our emphasis [3]). It seems that what is always being questioned here is the fact of *correspondence* between social groups and spatial domains.

Indeed it is in the face of this difficulty in identifying any *correspondences* of this kind that the whole development of social network analysis is predicated. Barnes (1969, 54) argues that the concept of social network has been developed *specifically* to analyse and to describe the morphological properties of encounter patterns which do not have fixed social and spatial referents. Again, Mitchell (1969, 9) suggests that the very foundations of social network theory rest upon the failure of "structural" and "structural/functional" analyses to characterize social processes within contemporary urban communities, which are neither socially bounded nor spatially discrete. Likewise, Srivinas and Beteille (1964, 166) claim that the idea of social network is indispensable to a discussion of those situations where patterns of kinship, friendship and alliance "cut right across the boundaries of village, sub-cast and lineage". Indeed, the applicability of network theory to the detailed empirical description of urban mobile societies is such that Noble (1973, 8) actually complains that "very little work is being undertaken in non-urban and non-industrial areas".

When dealing with design issues in the urban milieu two conclusions seem to follow naturally from these observations. The first accepts the heterogeneous urban milieu as a *characteristic* feature of contemporary urban societies, and from this draws the conclusion that the detailed morphology of space at the local level is unimportant to community life. Weber (1964, 109) presents the classic statement of this view. He argues that it is only insofar as space features as a communication channel that the

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[3] Although Gans writes here of the advantages of heterogeneity in design, he is equally cogent on the values of homogeneity (Gans, 1967).

physical aspects of place enter into human social relations. Consequently, "as accessibility becomes freed from propinquity, *cohabitation of a territorial place* - whether it be a neighbourhood, a suburb, a metropolis, or a region or nation, is becoming less important to the maintenance of community relations" (our emphasis).

This view appears to inform some of the more recent writings of urban planners and sociologists. Pahl (1975, 189), for example, claims that "buildings and land use have very little effect on people's behaviour ... people's *social world* (his emphasis) is best conceived as a social network of linkages, which is not necessarily based on locality". Cubbit (1969, 70) suggests that it seems reasonable to expect that the layout of a neighbourhood might conceivably influence the density of encounters which take place there, but along with others (Carey & Mapes, 1976; Mayo, 1979) she makes the point that the *locational* aspects of space, such as geographical distance and social mobility, have far greater significance in determining an individual's network of social relationships than the physical aspects of *morphology* or place.

The alternative line of argument is to see the heterogeneity of urban localities as *pathological* rather than normal. Indeed, the first issue of this journal carried an article by Rapoport (1980) entitled "Neighbourhood Heterogeneity or Homogeneity", suggesting that planners have for too long been preoccupied with the idea of heterogeneous neighbourhoods. Rapoport takes issue with this trend. He accepts the prevalence of the homogeneous neighbourhood historically, and argues that the *design task* should be to provide a supportive physical milieu which is *congruent with* the shared attributes and images of the social group which lives there. He emphasizes such features as the design of the neighbourhood *boundary*, of the *scale* of spaces in relation to the groups who use them, and of the provision of culturally *neutral* spaces where interaction can take place between groups.

Rapoport is not alone in thinking in this way. An increasing number of authors are arguing that it is *because* modern architecture and planning have failed to recognize the proper way for man's fundamental human needs to be reproduced in space - through the construction of a clearly defined hierarchy of spatial domains, running from the individual territory, outwards through the neighbourhood territory towards the territory of the nation - that man is at odds with his urban environment. This type of spatial organisation, it is claimed, is present in all vernacular traditions of "architecture without architects" because it is in man's basic nature to build in this way (Chermayeff & Alexander, 1966; Alexander, 1979; Rapoport, 1969). It is only in contemporary industrial societies which have been consciously designed that this failure to reproduce the universal spatial forms of mankind have taken place. Where this has occurred, there are no longer sufficient "clues and cues", to "catalyse the natural impulses of residents" (Newman, 1972, 11). Newman, in particular, goes on to argue that, where space and society do not correspond, society begins to break down, crime replaces social integration, and a state of "territorial warfare" is produced. Architects and planners must therefore avert this danger by the reconstruction of a hierarchically ordered, clearly defined series of spaces corresponding to the levels of integration of the individual within the community (Newman, 1980).

3.1. Putting Heterogeneity in its Place

There are severe difficulties with both these lines of argument. The claim that, where segments of space do not correspond to forms of social grouping, space cannot

therefore feature *in any way* in the making of social relations is not supported by detailed ethnographic studies of urban communities.

We shall be looking at two such communities, Bethnal Green, in the East End of London, and the West End of the City of Boston. Both were, at the time of study, the 1950's, predominantly working class areas, with considerable local heterogeneity due to constant influxes of immigrants from Europe, as well as people who had lived locally in the neighbourhood for several generations. Both areas had a strong community life.

The Borough of Bethnal Green was, at the time of the study, made up of a dense network of small streets, alleys and courts, lined with terraces of two and three storey terraced houses, which were built in the latter half of the nineteenth century. The area supported a thriving and diversified local economy, which was conducted from small workshops and converted houses, scattered throughout the neighbourhood. Corner shops and pubs acted as local foci, and the area also had a number of street markets, and more intensively commercial roads, cross-cutting the quieter, more residential streets. The West End of Boston was built earlier, in the first half of the nineteenth century, and was at a more "urban" scale, with five storey walk-up apartment blocks, with small stores on the ground floor, and tenements above. Small manufacturing and wholesale establishments were scattered throughout the area. Gans describes the neighbourhood as having a "foreign and exotic flavour", more reminiscent of a European town than an American city.

Two points are of interest from the point of view of this paper. First, both areas were characterized by the lack of a clear *boundary* to the neighbourhood. Of course, different residents could say what, for them, counted as their "locality" but these descriptions varied from person to person, and did not refer to anything like a *physical boundary*. The areas did not turn in upon themselves, and turn their backs to the surrounding city in any way. Lynch (1960) *characterizes* the West End as possessing a "weak or absent boundary"; it merged with its surrounding neighbourhoods. The same is the case with Bethnal Green. The administrative boundary of the borough cut through streets, across back gardens, down the middle of roads. Walking about the area, it was not possible to differentiate Bethnal Green physically from its neighbours.

The second feature which these areas had in common, which makes them clearly "non-territorial" in the global organisation of space, is a lack of *internal hierarchy* from the most public thoroughfares, to the most residential streets. Both areas were *street systems*, in which a major street grid cross-cut the neighbourhood, but where there were also more secluded and quieter areas just a step away from the main theatres of life. Wherever you were in Bethnal Green, or the West End, you were always close to, or actually walking along, busy streets thronged with local people and strangers passing through the area. There was no attempt to define more local areas, and to keep strangers out, by clustering houses together round closed courtyards or dead-end streets. There was certainly no symbolic elaboration of the public space to encourage residents to identify with particular areas within the street system.

This does not mean that people in these communities were indifferent to their surroundings. Young and Willmott's study of family and kinship in East London (1962), for example, showed that space pervaded social life in Bethnal Green to an extraordinary extent. Firstly day to day relations with neighbours, many of whom were also kinsfolk, took place almost entirely in the streets of the borough: "we should make it clear that we are mainly talking about what happens *outside* (their emphasis) the home. Most people meet their acquaintances in the street, at the market, at the

pub or at work. They do not usually invite them into their own houses ... the majority neither had, not were, guests" (Young & Willmott, 1962, 107-108). Furthermore, these "neighbour" relations which formed the basic everyday level of an individual's network of social relations took place informally and apparently at random: "you can't hardly ever go outside without meeting someone you know". (Young and Willmott, 1962, 105).

The importance of an active street life to local community relations likewise features in Gan's account of the West End of Boston. As Michelson (1976, 68) observes, "the pattern of streets also helped maintain the lifestyle. From their window, people could easily view passers-by, and they were close enough to hail them if desired. Windows in one house were usually pretty close to those in others, so that conversations among the residents of adjacent building did not require arrangement in advance. Stores which the local residents patronised were scattered throughout the neighbourhood, so that even the pursuit of routine daily errands would bring people within range of the doors and windows of a wide number of potential contacts". It is this kind of feel of friendliness, activity and life which many architects have aimed to capture in modern designs: "finding the patterns that will enable people to live together" (Smithson, 1967).

However, if in the East End of London and the West End of Boston *common residence* and everyday propinquity were the basis of a *local*, and *locality-based*, system of social relations, in Bethnal Green at least, *kinship* afforded another more formal network of relationships which *spanned a wider spatial compass* to unite the people whose daily routine and patterns of movement about the locality did not normally bring into contact. Not only did kin meet each other, they also met their neighbours: kin acted as "go-between with other people in the district", and as "a springboard to new friends". Willmott and Young were struck by how this use of longer distance ties to spread networks across the neighbourhood as a whole helped the coherence of the wider community: "sometimes a person's relatives are in the same turning, more often in another nearby turning, and this helps to account for the attachment which people feel to the precinct [4] as distinct from the street in which they live" (Young & Willmott, 1962, 110-111).

It seems to have been a combination of this affinity with kin who were spatially dispersed throughout the borough - that is, *non-correspondence* of kin and space - *coupled to* the facility with which non-residents were drawn into the dense and informal street life of the locality - that is, *non-correspondence* of neighbours and space - which seems to have given this East End culture its global form. In the West End of Boston, something rather similar seems to have occurred, although here it was membership of *peer groups*, associations based on a combination of generation, sex, beliefs and affiliations, which might or might not have included kin, rather than kin per se, which carried a more intense social load across space to knit the whole community together. As Gans observes, most people belonged to more than one peer group, in an overlap-

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[4] It is important to mention that when Young and Willmott refer to apparently physical entities like streets, "precints" and even to Bethnal Green itself, they are not referring to clear and bounded areas of London, nor even to real "places". This study was not conducted on the basis of any particular street, or system of streets making up a continuous region of the borough, but rather by combining observations made throughout the borough into a corporate picture of what daily life in the area was like. The *correspondence* of groups to spaces was never investigated, although it tends now to be read as if this were the case, and interpreted as a case where space reflects the various levels of grouping from family to community.

ping network of social relations, which were formed "almost without reference to the spatial community of neighbourhood" (Gans, 1962, 104).

It seems that in both Bethnal Green and the West End of Boston, the actual structuring of physical space seemed to have played a vital part in generating and controlling some aspects of community life, whilst other aspects were curiously independent of space. Furthermore in both cases it is equally clear that the pattern was not one of clear spatial domains aggregated in a hierarchy from small to large, and corresponding to fixed social groupings. Even the families did not stand as fixed social groups, each identifiable by, and synonymous with, its spatial domain - the dwelling. Young and Willmott report the "mixing up of domestic arrangements" as so pervasive that it seemed necessary to reformulate the concept of the family. "These accounts put a new light on the ordinary idea of the household. People live together and eat together - they are considered to be part of the same household. But if they spend a good part of the day and eat (or at least drink tea) regularly in someone else's household? The households are then to some extent *merged* ... The daily lives of many women (and men and children) are not confined to the places where they sleep; they are spread over two or more households, in each of which they regularly spend part of their time ... The kind of 'family group' ... commonly consists of a small cluster of families, that is, the families of marriage of the daughters and their common family of origin, and it is made up in the main of three generations of grandparents, parents, and grandchildren ... Not all members of an extended family *necessarily live close together* " (Young & Willmott, 1962, 48, our emphasis). Gans reports the same kind of ambiguity about household formation and daily life in the West End. Yet in both cases, these practical arrangements are sustained *despite* a strong ideological belief that it is proper to have "a home of your own".

In both the cases we have looked at, space seems to be important to the making of social relations. In neither case can we point to anything like a correspondence model of socio-spatial order. Yet both communities managed to achieve a strong and stable form - they were not in the least sense *degenerate* forms of society in which the lack of "locational simplicity" was subjecting inhabitants to "confusion and stress". But what seems even more damaging for this argument - that conscious design has failed to reproduce man's basic need for "territorially" defined spaces - is that it was *precisely* when the Bethnal Greeners moved to a housing estate, Greenleigh, which appeared to *satisfy* the requirements of the "territorial" programme, that the society broke down. Far from helping to re-establish community life more quickly by providing a supportive milieu, the layout of Greenleigh seemed to be almost entirely divisive.

"Greenleigh" is the name which Willmott and Young gave to the low-density cottage *estate* built in open countryside on the outskirts of London, by the London County Council. "Built since the war, to a single plan, it is all of one piece. Though the council has mixed different types of houses, row upon row now look practically identical, each beside a concrete road, each enclosed by a fence, each with its little patch of flower garden at the front and larger patch of vegetable garden at the back, each with expansive front windows covered over with net curtains, all built, owned and guarded by a single responsible landlord" (Young & Willmott, 1962, 121).

Unlike our two previous cases, Greenleigh has a number of spatial features, which move it clearly in the direction of current "territorial thinking", of which the demarcation of a bounded open space at the front and the rear of each house is just the first and most obvious change from the morphology of old Bethnal Green. The most important morphological transformation is that it is only possible to go *to* Green-

leigh, but not *through* Greenleigh. The only thoroughfare passes to the side of the estate, and a number of winding roads lead away from this, into the heart of the estate. There is no way out of the estate, save to retrace one's steps to the same main road. Unlike Bethnal Green, Greenleigh is not well embedded into a more global system of space: rather, it is an enclave. This is not an artifact of its newness, and its location in a more open countryside. Along with this lack of global integration is found the definition of a strong and impermeable boundary to the edge of the estate. The houses turn their backs to the surrounding neighbourhood, and present a solid line of garden fences to the outside world. It is, in other words, a physically discrete, spatially identifiable neighbourhood. This pattern is repeated more locally. Groups of houses define small green areas, and cul-de-sac roads, which are clearly differentiated by small boundaries, and by bends and chicanes, from the main estate roads. In other words, Greenleigh is designed *hierarchically*, with segments of open space and public roadway more clearly related to clusters of dwellings. Finally, the estate as a whole has a "hollow heart". The pattern of built space takes the global form of a ring of blocks of houses surrounding a large green open space at the geometric centre of the estate. This has the practical effect of emphasizing the local areas of the estate, whilst giving it a more symbolic unity.

According to Young and Willmott, people at Greenleigh became much more "home centred" than before; the family was readily identifiable here, husband and wife spent more of their time together in the home, and lavished more care on its interior decoration and furnishings. Against this tendency to withdraw into the family the spatial hierarchy completely failed in its purpose of supporting social integration, despite the considerable efforts of the people themselves to make friends. Particularly for the women, the "busy social life" of the old street culture was "now a memory". The men still worked in Bethnal Green, and wherever possible, Young and Willmott report, "make a point ... of calling each week on their mothers, or they see their fathers and brothers at work or just 'bang into' uncles, aunts and cousins, on their walk from tube to work place, or in their dinner break" (Young & Willmott, 1962, 136). Yet despite the fact that a large percentage of both men and women had a high proportion of relatives on the estate, kin did not visit each other to the same extent as before, and no longer did these visits "serve as a bridge between the family and the community".

If kin ceased to play the vital role in *making relations carry across space*, which they seemed to have done in Bethnal Green, the *local neighbour network* which was so characteristic of the old way of life seemed to have disappeared entirely, despite the fact that potential friends in Greenleigh shared a common experience of close-knit encounter patterns from their previous experiences in the East End. In the new estate, there was little of the "mateyness" so characteristic of Bethnal Green. As Young and Willmott put it, "people do not treat each other either as enemies or friends. They are wary, though polite. They pass the time of day in the road. They have an occasional word over the fence or a chat at the garden gate. They nod to each other in the shops (they do not, however, meet each other at the local community centre as the planners intended)" (Young & Willmott, 1962, 149). People found this lack of friendliness "mysterious"; they expressed feelings of "loneliness" and "loss", even downright hostility. The investigators themselves were "surprised" that these feelings did not diminish with the passage of time - the estate was ten years old - and in the end they were forced to conclude that *the layout of the estate did not encourage sociability*. On the contrary, they argue, it seemed to engender a culture of suspicion. Furthermore,

the pattern of hostility was repeated at the level of integration of the estate into a wider community.

The case of Bethnal Green and its counterpart in Greenleigh are, of course, highly specific. It is an account of life in a working class area at a time when that way of life seemed to be under threat, and about to disappear, through the *manipulation of the environment itself*: that is, through the clearance of the nineteenth century street pattern and its redevelopment in the form of housing estates. The same is true of the West End of Boston. This, in itself, lends to the accounts of street life a poignancy which many are tempted to read as "nostalgic romanticism" (Gutman, 1978, 259). But, as Gutman also reminds us, this should not blind us to the fact that there are real lessons to be learned from studies of this type.

The case of Bethnal Green, for example, is of value because it is one of the few accounts which deals with the social effects of a *transformation* from one form of spatial milieu to another. It is, moreover, one of the few accounts with which practicing architects are familiar. It is about the kind of people for whom housing architects are often designing, and it represents the kind of community which they hope to induce and foster through design. This is why it is important to establish, not that we can *generalize* from the case of Bethnal Green, but simply that this study can be viewed and interpreted in more than one way: that is, *not* as a hierarchy of physically discrete spatial domains corresponding to distinct social groups, or as a case where space is unimportant or urban society is in a state of decay, but as a case where space seems to have a distinct role to play in both integrating people locally as neighbours, and in using the structure of kinship to create a wider system of spatial relations into other localities which are themselves locally mixed. This form of social integration did not seem to survive the move to a milieu where the spatial arrangement was "rectified" in the direction of visual clarity, hierarchy and separation into discrete spatial domains.

The case of the West End of Boston is important also, but for a rather different reason. People in the West End re-housed themselves in other, and on the whole broadly similar, areas of Boston after the area was cleared for re-development. We cannot therefore compare their case directly with that of the Bethnal Greeners. What is of interest here is the lesson which Gans draws for planning from his study of the West End. For despite his favourable comments on the *value* of heterogeneity and non-correspondence, he can only suggest a move in the direction of homogeneity and correspondence thinking, when he suggests what is to be done in re-housing people from similar areas in the future. He suggests that, where re-development is inevitable in such cases, ethnic groups should be allowed to move into a new area *as a group*, and that extended families should be housed *together* in separate, but adjacent, households. Yet, so far as the inhabitants of Greenleigh were concerned, territoriality seemed to have been more of a hindrance than a help in engendering a sense of community.

A number of studies of new housing estates have *failed* to detect any of the *supportive* influences of spatial correspondence to social grouping which the "territorial" view of man's spatial behaviour might predict. This seems to pose a severe difficulty for architects and planners who, like Gans, are using this framework in the hope that it will aid in *community formation*. Ravetz's account of Quarry Hill Estate, Leeds, (1974) is a powerful demonstration of the failure of architects and planners to produce a "community by design". Malpass's study of the Murrayfield Estate, West Lothian, is typical in reporting a lack of neighbourliness on the part of the people who lived there: "people tended to say that where they lived was the best part of the estate, not to mix with other people, and to blame an unspecified 'rough element' for the condition of the

place. There is little social cohesion on the estate, and no body organised to represent the interests of the tenants" (Malpass, 1974, 10). Moreover, the estate is stigmatised by outsiders.

In another type of study, Carey and Mapes (1976, 26) attempt to quantify the way in which friendship patterns develop among housewives on new housing estates. They failed to detect any clear correlation between the overall layout of the estate, its size, spacing and orientation of dwellings, and the emergent visiting "sociograms" ! Visiting relationships appeared, in all cases, to spread throughout the estate in a somewhat "arbitrary" pattern. Yet the estates chosen were such as to give "territorial" principles the *best chance* of revealing themselves: all were small in scale, with "clearly defined and universally understood boundaries" and layouts designed in such a way that the researchers anticipated that the residents would be able to "identify" readily with others on the estate.

In effect, as the number of studies which deal with the "natural history" of local communities has grown, the more difficult it has become to assemble the lines of evidence which they present into a coherent picture. However, three points can be made. Firstly, it does not seem to be the case that, where there is no clear correspondence between social and spatial groups, space can therefore be dismissed as unimportant, for if those who study traditional urban communities are to be believed, space plays a fundamental part in the ordering of social relations, although in ways which are not obvious, and can only be intuitively described. Secondly, where localities have been designed according to "territorial" principles, they do not always - and maybe never - perform the task of social integration which the territorial paradigm predicts. Finally it seems that built form and spatial organisation can, in certain cases, be an instrument for social divisiveness and alienation: that is, the relation of architecture and community can be shown to be a negative one more convincingly than a positive one. However, a negative relation is also a relation, and suggests that we do not yet know what we are looking for in studying the problem.

The common denominator of these observations is the failure of the "correspondence" approach to show precisely how space features in the making, or unmaking, of social relations in a reliable and predictive way. Yet when seemingly good questions fail to yield answers in spite of the efforts of ingeneous people, then it may well be time to change the framework and reformulate the question. In this case, this surely means changing the *most central assumption*: that the object of study, people's spatial bahaviour, can only constitute an important aspect of social behaviour by virtue of systematic correspondences between segments of space and segments of society. It is the object of the remainder of this paper to suggest such an alternative: not one which replaces the correspondence notion, but one which amplifies it or extends it, by showing that the relation between spatial groupings and spatial networks can be dealt with in an entirely new way - one which allows us to build a richer theory of the relation between architecture and behaviour.

4. Non-correspondence as a Socio-spatial Phenomenon

We must begin with fundamentals. Any discussion of the relationship between built form and social organisation necessarily involves formulations about two quite different kinds of *spatial* order. The first is the *arrangement of space by society*: The ways in which every culture transforms its environment by means of boundaries, solid objects and differentiated spaces, into the pattern of buildings and settlements which we

recognise as giving a society a distinct *architectural identity*. This form of spatial pat-
terning produces concrete results which are relatively easy to identify and talk about -
houses, special buildings, villages, towns, and the like - that are relatively durable so-
cial products which outlast individual intentions and crystallize society in a material
form (Lévi-Strauss, 1972; Mead, 1964).

The second form of spatial order is less easy to identify as a *pattern*. This is the
arrangement of society in space: The ways in which the members of a society are
themselves deployed in space, in both social groups and networks, to construct the
patterns of encounter and avoidance which are characteristic of that society. It is more
usual to see this kind of patterning as *purely* social. After all, people are freely mobile
individuals, whose activity and interrelationships are, compared to buildings, momen-
tary and transient. But it is important that they can, and must also be seen as *spatial*
phenomena. The living out of systems of kinship, clanship, club membership, work
and association produce *material spatial results*, in terms of who lives with whom,
who meets whom, and so on. Whilst a society is obviously not just these physical
interactions, it does take on a material form, and if we are to understand the *social na-
ture of space*, then we must also understand the *spatial nature of human society*.

Now the correspondence model *requires* the physical arrangement of space by so-
ciety - houses, neighbourhoods, towns - precisely to reflect the material physical
groupings - families, interest groups, communities - which result from forms of social
categorization, although, as Lévi-Strauss warns us, this is not always to be expected.
On the contrary, he argues that although in many parts of the world there is an obvi-
ous relationship between the social structure and the spatial structure of settlements,
villages and camps, as among the Plains Indians, or the Ge of eastern and central
Brazil, "these examples are not intended to prove that spatial configuration is the mir-
ror image of social organisation, but to call attention to the fact that, while among
numerous peoples it would be extremely difficult to discover any such relation, among
others (who must accordingly have something in common) the existence of a relation
is evident, though unclear, and in a third group spatial configuration seems to be al-
most a projective representation of the social structure" (Lévi-Strauss, 1972, 292).
Even here, he warns about assuming that correspondences between space and society
exist because they *seem* immediate and striking to the observer, for, in the case of the
Bororo, "spatial configuration reflects not the true, unconscious social organisation but
a model existing consciously in the native mind, though its nature is entirely illusory
and even contradictory to reality" (Lévi-Strauss, 1972, 292). This suggests that we
should at least *question* the assumption that, where space carries important social in-
formation, it should be by simply reflecting social groupings. It seems that space
may, under certain conditions *mask and disguise* and even contradict social relations.
But what is more important, if we make *assumptions* about the relationship between
space and society, it may actually get in the way of building a model of how societies
do work spatially.

Is such a model possible, given the variety of cases noted by Lévi-Strauss?
Again we must go back to basics. Every individual is, whatever his circumstances,
normally a member of two radically different forms of social grouping: the first we
might think of as *spatial* groupings of various kinds, of which he is a member purely
by virtue of proximity, and being in the same everyday encounter zone; the second is
of categoric or *transpatial* groupings of various kinds, which quite specifically unite
people independently of space. The term transpatial is important because it expresses
the fact that a category group is not simply non-spatial but rather one which *over-*

comes spatial separation, and conceptually unites people who are, more often than not, separated by distance. Most clubs, clans, associations and the like, are transpatial groupings. In our two urban communities, the *neighbouring* patterns were instances *of spatial* groupings and the system of *kinship*, and of *peer groups* were examples of *transpatial* groupings.

This duality can be found everywhere. A university lecturer, for example, is a member of both kinds of group: of the particular university in which he teaches, which is a spatially unified grouping, and of an academic discipline, which is a categoric grouping existing independently of space, and with a membership dispersed in many different spatial locations. Some of his activities and encounters will be to do with his membership of the spatial group, whilst others - on the whole fewer and more difficult to arrange - will be to do with his membership of the transpatial group. The different kinds of membership are, in effect, realized in rather different modes of encounter.

Now this duality, found everywhere in human society, permits two very different kinds of "socio-spatial possibility" to exist. If we take a simple system with two spatial groups and two *transpatial* groups - the As and the Bs, for simplicity - then logically we can arrange them in two ways. Either we can have all the As in one location and all the Bs in the other:
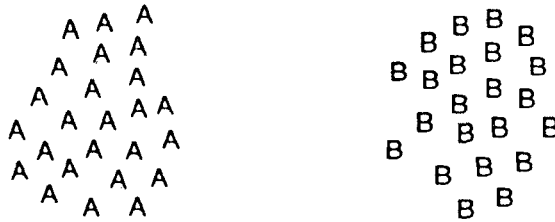

Fig. 1 In a simple system with two spatial groups and two transpatial groups (As and Bs) logically a first arrangement is to have all As in one location and all Bs in the other. In this case we have a correspondence between spatial and transpatial groups.

Fig. 1 Dans un système simple avec deux groupes spatiaux et deux groupes trans-spatiaux (les A et les B) un premier arrangement est logiquement d'avoir tous les A dans un groupe spatial et tous les B dans l'autre. Dans ce cas nous avons une correspondance entre groupes spatiaux et trans-spatiaux.

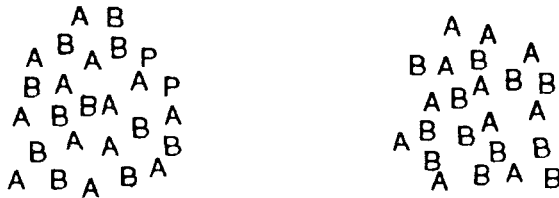or we can have a mix of As and Bs in each spatial group:

Fig. 2 In this simple system a second arrangement is to have a mix of As and Bs in each spatial group. We have a non-correspondence between spatial and transpatial groups.

Fig. 2 Dans ce système simple, un deuxième arrangement est d'avoir un mélange de A et de B dans chaque groupe spatial. Nous avons une non-correspondance entre groupes spatiaux et trans-spatiaux.

In the first case we have a *correspondence* between spatial and transpatial groups; in the second case we have a *non-correspondence*. In the first case, spatial location and label *reinforce* one another *locally*, to produce a *unified* picture of reality in which transpatial identities are also spatial identities. In the second case, space and category do not reinforce each other in this way: rather space and label are in a *warp and weft* relation. Space assembles the non-homogeneous and labels suggest analogies across space to knit together people in different locations. Thus in a non-correspondence system, individuals participate in two realities, not one. Each individual has spatial and transpatial identities which are distinct, and involve him or her in different modes of encounter.

On the basis of these simple models, it is easy to see how it comes about that the correspondence view of society holds that, if built form and architectural organisation are to play a significant role in culture, then it should be by reflecting in space transpatial groupings in a hierarchy of discrete spatial domains. This might indeed be an appropriate architecture for a society where this is the dominant form of social structure. But what about those societies where "warp and weft" relations are important? Does this mean that space has no social role to play? Not necessarily. Space may be equally important, but fulfil a quite different purpose. Space may not be structured to correspond to social groups, and by implication to separate them, but on the contrary to *create encounters among those whom the structures of social categories divide from each other*. In other words, space can in principle also be *structured*, and play an important role in social relations by working *against* the tendency of social categorization to divide society into discrete groups. *Space* can also reassemble what *society* divides.

But if the natural logic of a non-correspondence system is to make local encounters non-specific in this way, then the category system is used to *diffuse* encounters across space to build a denser global network. Of course, some local relations among members with the same label are preserved, but the *defining feature* of the acting out in space and time of transpatial relations in a non-correspondence system is to *cross-cut* local networks, and to generate and affirm enduring ties among people who normally live in entirely different places, and who rarely encounter each other in daily life.

Of course, we are not the first to observe this duality of spatial and transpatial groupings. Service, for example, suggests that in some cases at least, spatial and transpatial groupings may stand in an *inverse* relation, rather than a relation of correspondence: "When subsistence factors cause members to be widely scattered so that the residential (spatial, our interpretation) factor is weak, then the band comes to be more like a sodality (transpatial grouping, our interpretation) with mythology, insignia, ceremony, emphasis on kinship statuses, and so on, which make the band a more coherent and cohesive unity. Sodality, then, is a culturally created factor in social structure which can intrude itself between geography-demography and the rest of the organisation. No bands are simply residential agglomerations; all have some sodality-like characteristics in their sociality. But the number of those features, and their relative strength, is likely to be in *inverse ratio* (our emphasis) to the strength of their residential factor" (Service, 1971, 64). Indeed, the ethnographic literature suggests that the relation between spatial and transpatial groupings is pervasive, problematic, but of critical importance to the understanding of different kinds of social morphology.

We are not the only people who observe this, and relate it to architectural form. Levitas (1978), writing specifically about *urban* societies, suggests that *both* correspondence forms of the city - what she calls the ward city, which reflects ethnic,
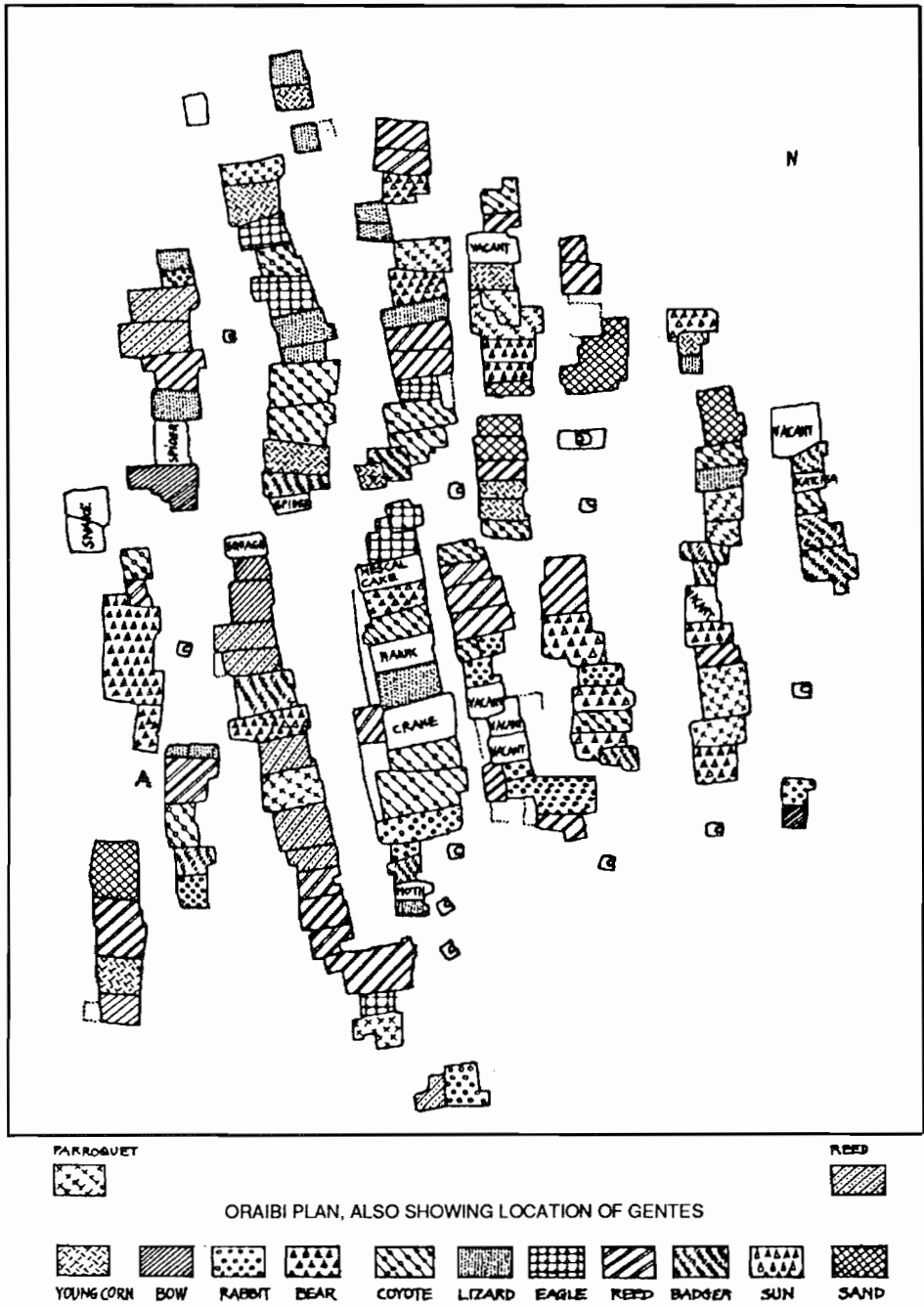
Fig. 3 / whole page

Fig. 3 The pueblo settlement of Oraibi, made up of a number of parallel rows of three to five storey stepped terraced houses, orientated towards the South-West (after Mindeleff, 1891).

Fig. 3 L'établissement pueblo d'Oraibi, constitué par une série d'alignements parallèles de maisons à terrasses de trois à cinq étages, orientées sud-ouest (d'après Mindeleff, 1891).

religious or occupational differences - *and* non-correspondence forms of the city - such as the racially mixed cities of the United States of America, or the caste cities of India, exist today, and, she argues, *require* different degrees of physical demarcation and boundary maintenance.
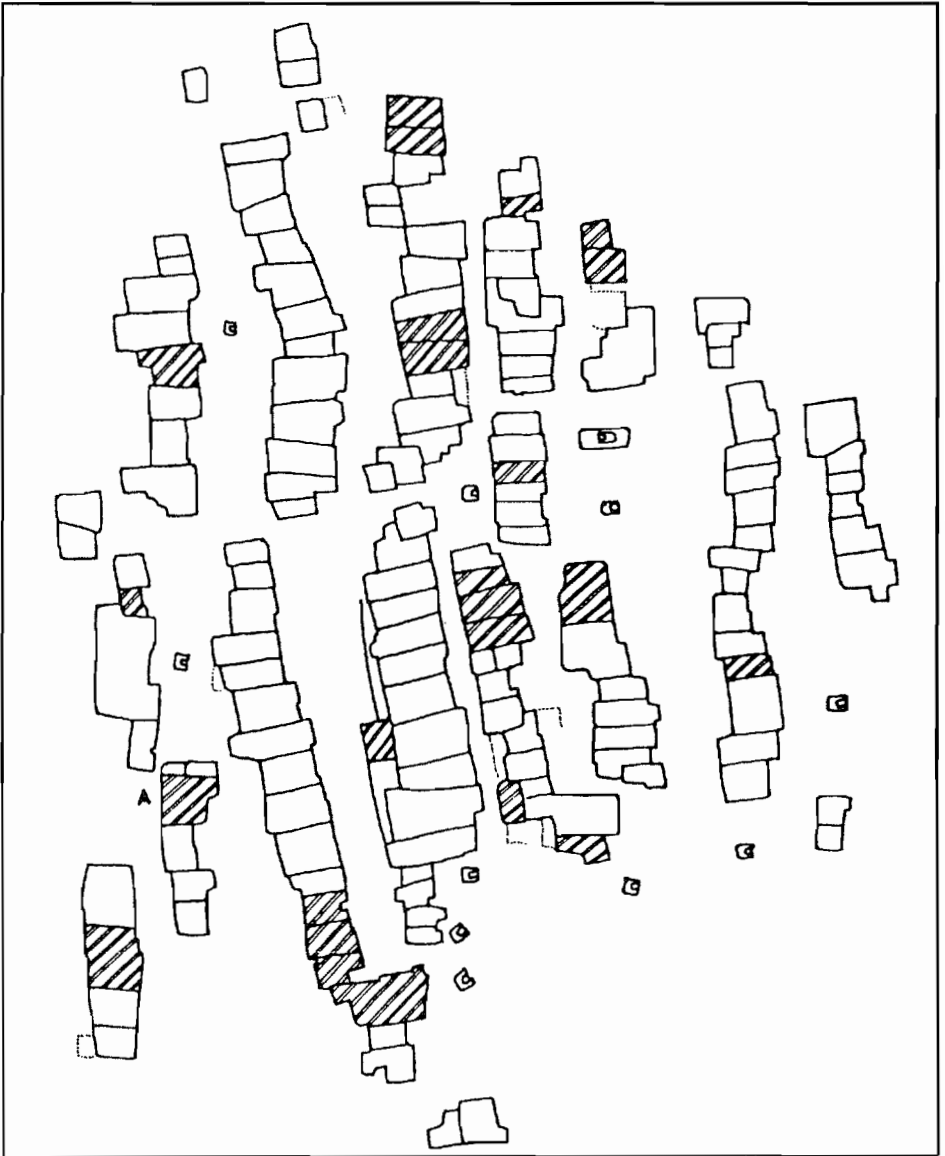
4.1 Non-correspondence: A Worked Example

At this point, an example of what we mean by non-correspondence might be helpful, if only to see how these abstract ideas take on a spatial form. If we look at the Hopi society and the pueblo of Oraibi in that society, as it was recorded at the turn of the century by Mindeleff (1891), we find a picture of what non-correspondence might be like. The pueblo of Oraibi was, at this time, made up of a number of parallel rows of three to five storey stepped terraced houses, orientated towards the southwest. Oraibi is considered to be a proto-urban form of settlement, in other words. Each "house" in the pueblo belonged to an extended family unit, which in turn formed part of a larger social grouping with Hopi society known as clan. It is to the spatialisation of these clan groupings that we will address ourselves here.

Mindeleff identified every house in the "town" by its clan name. These are shown on the diagram above. Between the houses was the open space of the town. Scattered within this public space were a number of kivas, or ceremonial chambers, each of which was again associated with a specific clan. Entry to the houses was from a terrace at first floor level, which was reached by ladders or stone steps. In addition some, but not all of the houses had an entrance at ground floor level, directly from the public space of the pueblo, into a clan meeting room. At the third level was a kind of "street in the air", in the form of a public terrace linking together all the houses in one block. This was used by the townsfolk as a loitering space to "watch the world go by", and on ceremonial occasions, as a vantage point from which to observe dancing and processions taking place below, in the open space of the pueblo. Movement about these public spaces seems to have been relatively unrestricted, although it was apparently considered impolite to loiter about by someone's front door - if a Hopi did this, he or she was likely to be invited in for food or sex. In general the *spatial form and arrangement* of the houses in Oraibi seems to have been *expressly* open and permissive, lacking in any hierarchical ordering principles.

But when we look at the way in which people were *identified with* spaces in Hopi society, the contrast with current design assumptions is even more striking. In Oraibi, at this time, there were twenty-one clans distributed within the 158 houses which made up the pueblo (seven of these were unoccupied). There were eleven kivas in all. Clearly every clan in Oraibi did not own a separate local kiva, or clubhouse. Some clans must have shared a ceremonial space with another clan or clans, or alternatively used the kiva belonging to their clan, but located in another Hopi town. Both kinds of "sharing" were known to have taken place. Ceremonial spaces did not *correspond* to clans on a one to one basis. Even more striking, however, is the fact that all the houses belonging to one clan were not located together in space to form contiguous house blocks, but were scattered throughout the town in a seemingly random manner. If we take the houses of the Reed clan as an example (Fig. 4), it can be seen that representatives of this clan were found in most of the terraces. Thus, while some members of the clan did have other Reeds as neighbours, most did not. Moreover, Reed membership was not confined to Oraibi, but Reeds were found in other Hopi towns.

Fig. 4 / whole page

ORAIBI PLAN, SHOWING HOUSES OF REED CLAN

Fig. 4 Plan of the pueblo settlement of Oraibi, showing the scattered houses of the Reed Clan. This is an example of non-correspondence of space and social group.

Fig. 4 Plan de l'établissement pueblo d'Oraibi, montrant les maisons dispersées des gens du clan Reed. C'est un exemple de non-correspondance entre le groupe spatial et social.

The practical effect of this *non-correspondence* of space and social group can be seen if we look at the Reed household located in the block marked A (in Figures 3 & 4). Their immediate neighbours were drawn from the Coyote and the Lizard clans; they shared a roof-street with these two clans, plus representatives from the Rabbit and the Badger clans; and finally the house blocks which surrounded block A all contained *both* other representatives from the Reed clan and members of most of the other clans in Oraibi. The nearby kiva probably belonged to another clan, and the Reed kiva was most probably in an entirely different part of the town.

The spatial arrangement of the pueblo, and the arrangement of people within that space, drew this particular Reed household into daily association with representatives from most of the other clans in the pueblo. It rendered local encounters *non-specific* categorically. This was true of all Reeds, and of all the other houses in Oraibi. An individual's neighbours varied from place to place, but the principle was to *mix categories locally* to create non-correspondence. In contrast, *ceremonial life* drew together Reeds from all over Oraibi, and on occasion, Reeds from the other Hopi pueblos, into the clan meeting rooms, and, above all, the Reed kiva. In other words, it increased the spatial *range* of encounters by bringing together *people who did not normally meet in everyday life*. This would apply as much, or more, to activity *in relation* to ceremonial rehearsals as to the actual ceremony itself; preparation of regalia, planning of the various events in the ritual, and so forth, would all entail movement about the town, and system of towns, and would necessarily involve informal meetings with Reeds, and their neighbours throughout the system. The actual ceremonial, by *realizing* the Reeds as a group in space, however temporarily constituted, celebrated the conceptual unity of the clan. But even here, the public nature of much of the ceremonial, already referred to, manifested not just the unity of all Reeds as a *transpatial group*, but set this against their *spatial identity* with their neighbours, watching on the roof tops above.

In Oraibi, transpatial relations were used to widen social networks, just as the category mix locally ensured that people from different clan groups encountered each other on a daily basis as a result of their spatial groupings; that is, everyday life mitigated any tendency to make local groups exclusive. The mix did not have to be perfect, including a member from each of the other clans in the town. Members of the same clan could be neighbours as well, provided the cluster did not grow too large. In other words, we are talking about a *statistical* reality, which was significant in preserving a heterogeneous local group. This seems to make sense of the spatial organisation in a new way. Although Oraibi is anything but hierarchical, it is not simply disordered either. The very openness and unboundedness of the system, the *lack* of local enclosure of space and clustering of houses, the absence of any kind of hierarchy of scale from small to large, seem to have made space work as a kind of locally controlled but globally integrating *mixing mechanism* which sustained and controlled the encounter pattern of the pueblo. We might conceive of this type of socio-spatial order as "structured non-correspondence".

5.   Conclusions: Two Spatial Logics of Society

It must be stressed at this point that the aim of this paper is not to set up a typology, whereby it is possible to look at societies, and label them as "correspondence society" or "non-correspondence society". So far as we can tell, *every* society has aspects of its structure which are projected directly into space; indeed, provided that it is *culturally* defined, it would seem that most societies do have mechanisms for ensuring

"privacy" for the individual, and other spatial groupings. But it seems equally clear that *every* society has aspects of its structure which do not correspond directly to space in this way, and these also have consequences for the way in which people are deployed in space, and even for the arrangement of space itself. Moreover, it would seem that, in many cases, the "social fabric" is not made of just one pattern of "warp and weft" relations; that is of one form of spatial grouping and one form of transpatial group-ing. On the contrary, it would seem that in any society where there are differences in sub-culture, class, or even in gender or generational roles, these will be realised in dif-ferent configurations of spatial and transpatial groupings. It is the different principles of social cohesion within and between these groups that mould space and give it its material form.

This view of *society as a spatial system* requires more to be taken into account than any theory, however complex, which is based on "territory" alone. However, some limited generalisations seem possible. To the extent that a social system works on *correspondences*, spatial encounters will tend to be specific to a certain transpatial category, while encounters which are specifically to do with membership of that transpatial label will tend to increase the density of encounters within the group local-ly, but not the range of encounters globally across space. To reproduce itself as a strong and stable statistical pattern, such a system will tend to reinforce the local group, but keep it exclusive. It is, in other words, the formula for homogeneity. Be-cause it requires the arrangement of people in space to be *purified* in this way, such a system will also tend to grow strong and stable to the extent that it emphasises physi-cal separation of spatial groups, closed boundaries, local identification, the localisation of spaces which celebrate transpatial identities, formal hierarchies of integration to the global levels of society, and so on. In such a system, any mixing of categories local-ly, or merging of physical zones, shifts the system in the opposite direction, towards non-correspondence. It is, in other words, a system which tends to be *deterministic*, both socially and spatially.

To the extent that a system works on *non-correspondences*, on the other hand, the categoric purity of the local system will tend to be weakened; it will become more lo-cally heterogeneous, in other words, but at the same time transpatial identities will be used to cross space and work to the global coherence of the society. To this end, such a system will tend to strength and stability to the extent that it locally emphasises openness, continuity of space, lack of local enclosure of space, and permeability of those boundaries which do exist. It works more *probabilistically*, using the numbers and frequencies of events which take place to reproduce a statistically stable global system, rather than relying on the formal clarity of its structure. This gives non-corre-spondence systems a *robustness* which highly structured systems do not possess. They can tolerate much more local *disorder* and yet be reproducible. Nonetheless, any large scale discontinuities which tend to isolate small groups in enclaves, or emphasise a build-up of local homogeneous groups, will represent a perturbation in the system; a barrier to its efforts to project encounters globally across space. If we are to understand the relationship between society and its spatial form, it is to the *conditions* under which these different kinds of spatial logic arise, and the *dynamics* of such systems as they grow, that we need to look.

Such a task is beyond the scope of this paper. Here, we do not need to under-stand the spatial strategies which societies and sub-cultures use to reproduce their pat-terns of *social arrangement and encounter*, so much as *if*, and *how*, these get built into the *spatial* fabric and emerge as different morphological principles. From the point of

view of *space*, the matter is more *immediately* challenging; is it possible to discern certain characteristic spatial structures which are general to non-correspondence cases? To put it another way, is it possible to pinpoint precisely what it is about spatial configuration that enables such systems to run? One thing is clear: so far as the *arrangement of space* is concerned, in the cases which we have looked at, the *common denominator* seems to be that the relation of local space to global design is not hierarchical, or tree-like (with the notable exception of Greenleigh). In Bethnal Green, the organisation of the open space structure results only from the arrangement of the dwellings into streets, courts and alleys. This results in both locally identifiable, unique places, and a completely open, large-scale system of main streets which are orientated to the global structure of London. The West End of Boston, an area which Lynch describes as possessing a poorly defined boundary, was physically characterised by a mixture of quiet backwaters and busy thoroughfares, by "narrow winding streets flanked on both sides by columns of three and five storey apartment buildings", and a street system which "cut through" the area to give access to the rest of the city and the central business district. While walking along the main route, a pedestrian was always aware of a more "private" life, just a step away (Gans, 1962, 3-5). Again, in Oraibi, the only boundaries in the system were the walls of the houses; the system of open space was everywhere continuous and permeable, without any tendency to create pockets of enclosed space away from the main theatres of life. The system even extended three-dimensionally to include the roofs of the house blocks, so that even the terraces themselves were not a total obstacle to movement about the pueblo. Moreover, the spatial configuration itself, in its detailed local design and in its relation to its surroundings, must permit a controlled mixing of local inhabitants and strangers from further afield, and knit the system together in a way which is quite unlike the simple hierarchies of the "territorialists".

The nub of the problem seems to be how it is possible to have spatial *order* without *hierarchy*; and moreover a spatial order that relates the local organisation of the system to the global structure without losing either its *local identity* or its *global re-latedness*. The relation of local to global order, is, it seems, the crucial spatial question, since it seems to be clear that, whilst territorial ideas are not wrong in their entirety, it is rarely the case that they can simply be applied *recursively* to create a global structure out of a local ordering principle. What we seem to lack are spatial strategies for designing *local configurations of space* in such a way as to orientate or *project* them into the *global* system, rather than to *localise* them in *enclaves*. It seems that systems of social relations which tend to non-correspondence of spatial and transpatial groupings, are aimed precisely at creating this kind of non-hierarchical global cohesion, albeit in a probabilistic rather than a highly deterministic way.

We believe that such principles of spatial pattern formation are *identifiable*, and if desired, *reproducible*. But it is equally clear that a necessary first step is the redefinition of *both* architectural concepts of *order* to include *non-hierarchical configurations, and* of the *relation between architecture and behaviour* to include *non-correspondence*.

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