

# USING “CULTURE” IN HOUSING DESIGN

Amos Rapoport

## Abstract

*Amos Rapoport has been the keynote speaker at the two annual conferences of the American Association of Housing Educators that were held outside the United States – first in Winnipeg Manitoba, Canada in 1992 and then in Seoul, Korea in 1998. Dr. Rapoport was invited to prepare his talk from the 1998 conference into a paper that could be published in Housing and Society. The article presents a framework for examining culture in housing environments. Various relationships are examined and discussed.*

## Introduction

In my keynote talk to the American Association of Housing Educators conference in Winnipeg (Manitoba, Canada) in September 1992 (“Some thoughts on housing and culture”), I concentrated on the *need* to consider culture in housing design. This is a theme that I have been addressing, on and off, for the past 30 years. It appears that this need is now much more widely accepted than it had been; for example, the theme of the Seoul meeting in August 1998 emphasized the importance of the cultural dimension of housing. However, it has seemed to me for some time that, despite the growing awareness of the importance of considering culture, little progress seems to have been made in its implementation.

Consequently, when I was invited to present this paper, it seemed useful to take the next step and to discuss one particular way in which one might actually go about the task of achieving culture-specific housing. Before we address this first, and principal, topic, we need to address a second topic that will both provide a context and draw attention to some general problems facing the field. That is, the culture-specific approach needs to be put in the context of Environmental-Behavioral Studies (EBS).

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Amos Rapoport is a Distinguished Professor in the School of Architecture and Urban Planning at the University of Wisconsin-Milwaukee.

Although housing (and most other environments) needs to be culture-specific, the mechanisms at work are general and the process, concepts, and the like also need to be general, transcending groups, times and settings (Rapoport, 1997, in press).

### **Housing and Environmental-Behavioral Studies**

As I have often argued, EBS is best conceptualized in terms of what I call the three basic questions that define the domain:

- 1) What biosocial, psychological, and cultural characteristics of human beings, as members of a species, as individuals, and as members of various groupings, influence (and, in design, should influence) what characteristics of the built environment?
- 2) What effects do what aspects of what environments have on what groups of people, under what circumstances and why?
- 3) Given these two-way interactions between people and environments, what are the mechanisms<sup>1</sup> that link them?

It is important to note, and it can be demonstrated, that culture plays a role in all three questions. Moreover, this is also true for any other conceptualizations of the domain of EBS, for example, into settings and places, user groups, and socio-behavioral phenomena (Moore, Tuttle, & Howell, 1985).<sup>2</sup>

There is, however, one particular characteristic of EBS, as it has developed thus far, which I regard as a major weakness, and that is the lack of explanatory theory. This lack causes two major problems (among others). The first is that there is no *compressibility*, i.e., no way of concisely and economically stating principles by condensing empirical findings (for some examples see Rapoport, 1990a). The second problem is that there is no shared understanding, nor agreement about terms, concepts, and the like.

The lack of compressibility, the fact that there is accumulation but no cumulative-ness, presents a particularly serious problem in the case of housing. This sub-domain probably possesses the largest body of literature in EBS, for obvious reasons: Housing is the primary setting *par excellence* and therefore has the most important meaning for people. The result is that there are thousands of housing studies of all kinds, and their very number actually becomes counterproductive. A course, "Behavioral factors in housing design" makes this clear to me each time I teach it. The amount of material becomes overwhelming: I cannot possibly have access to, read, and digest it all; students have even less chance of doing so, and practitioners and decision-makers certainly cannot be expected even to try. One tends to give up. In research as in teaching, without theory one begins each time with the basics, reinventing the wheel rather than starting at the "state of the art", launching right into substantive issues, and thus advancing the field. With theory, making advances can become the common practice (Rapoport, in press).

Only in explanatory (scientific) theory does one find unifying concepts, capable of bringing order out of chaos, enabling one to "thin the thicket" in order to get a viable forest. These processes depend on the significance of concepts, models, mechanisms,

and so on, and require agreement about both the meaning of concepts and the like and their significance (Huisgen, 1994). Also, theory makes it possible to know what the relevant literature means without having to remember specifics, and hence how to use it. Theory also makes it possible to integrate the large body of often confused and misleading literature, i.e., to achieve cumulativeness. One needs critical analysis and judgment that only theory provides, so that one can identify relationships that others have missed (what I call “lateral connections” [Rapoport, 1990b; 1997a]) and base further work on these relationships (Barton, 1991).

The lack of agreement about the meaning and significance of basic concepts, and the lack of operational definitions, is partly a result of the lack of theory, but is also independent of it, because such agreement often *precedes* theory, in fact being essential for its development (Rapoport, 1990a; 1997a). As one example of the need always to begin with basics, it is necessary, once again, to discuss and define the two principal subjects of this conference: “culture” and “housing”.

It is usual to find the term “culture” used without further explanation or clarification. I have also been using it, so far, as though it were a self-evident concept, which needs no explicit discussion or clarification of its nature, while in fact, a definition is highly necessary.

The term culture is recent; it was first used in its current anthropological sense in 1871, when it was defined as “that complex whole which includes knowledge, belief, art, morals, customs and any other capabilities and habits acquired by man as a member of society” (Tylor, 1871). This meaning is very different from the popular meaning of “high” or “civilized” life and artifacts; as we use the term in housing studies, all human groups possess culture.

Anthropologists agree about the centrality of “culture” in defining humanity, but tend to disagree about definitions. In 1952 two prominent American anthropologists, A. L. Kroeber and C. Kluckhohn, reviewed numerous definitions of culture in a sizable book (Kroeber & Kluckhohn, 1952). Since then there have been many more definitions and conceptualizations of culture and, various classifications have been proposed for grouping these various definitions (Kroeber & Kluckhohn, 1952).

I have used a different set of categories and have argued for some time that for purposes of EBS it is useful to think of all definitions falling into one of three general views of culture. One view defines it as a way of life typical of a group; the second, as a system of meanings and schemata transmitted through symbolic codes; the third, as a set of adaptive strategies for survival related to ecology and resources. These three views are complementary rather than conflicting. Thus particular cultures begin as a group’s adaptive strategies within their particular ecological setting. These schemata, symbols, and ideals, in turn, lead to particular ways of living and behaving, and include designed environments as settings for the kinds of people that a particular group sees as the norm; that is, the particular life style that distinguishes this group from others.

Recently, there has been a suggestion in various fields that, in making inferences about unobservable entities such as “culture”, it may be more useful to ask what the

entity *does* rather than what it is (and then *how* it does what it does). When this approach is applied to culture, three answers will be found.

First, culture maintains the identity of groups within the single biological species that humans belong to. Second, culture acts as a control mechanism, carrying information that directs how behavior and artifacts are to be created. It has been compared metaphorically to both a blueprint and to DNA (which seems preferable, being dynamic), and has been described as a design for living. Third, a major role of culture is to act as a structure or framework that gives meaning to particulars (Rapoport, 1995a). Again, these answers are complementary rather than conflicting or mutually exclusive. In fact, all of the approaches to culture briefly reviewed above can be shown to be complementary. They are also useful for particular types of questions, problems, and topics, of different degrees of generality, at different scales, and consequently for different disciplines and fields. Even within EBS (and, by extension, environmental design) various formulations may be found to be more or less useful, depending on the question or topic being considered.

In order for us to deal with the second term, 'housing', cross-culturally, the theme of this conference, housing needs to be defined in a culturally neutral way. Like much in EBS, a definition of "housing" becomes easier to achieve when the body of evidence is expanded to involve (1) all types of environments (tribal, vernacular, popular, etc.), (2) all periods, (3) all cultures, and (4) the whole environment (Rapoport, 1990b, 1993). Cross-cultural studies are thus highly important. Only through concepts and EBS theory can we detect the patterns, regularities, and similarities behind apparent differences; differences behind apparent similarities; different expressions of the same thing, and so on. Cross-cultural studies carried out in this way make possible two types of learning (and hence also two types of research). The first involves EBS generalizations, for example, the range of mechanisms linking people and environments, or the role of cultural universals and their specific expressions. The second explains the requirements for the design of culture-specific environments (Rapoport, 1993), which I will discuss later.

This large and diverse body of evidence thus makes it possible to learn from precedents, but such learning must be "indirect", at a higher level of abstraction (or conceptualization). It occurs not by copying (and certainly not of shapes (Rapoport, 1983a) but by deriving principles and lessons that can then be applied (see Figure 1).

With regard to the neutral definition of housing (or the dwelling) it is the last of the four "expansions" of evidence listed above that is critical—the consideration of the whole environment. One thus realizes that the nature of a dwelling is not self-evident and in any case is, more than the building itself. Without going through the process whereby one arrives at a definition (Rapoport, 1980, 1990c, 1994a), the outcome is that, in order to be culturally neutral and thus usable for housing/culture studies, including comparative analyses, the dwelling needs to be conceptualized as a specific system of settings within which particular (specified) systems of activities take place (see Figure 2). This system is, in turn, embedded in the yet larger system of settings

that is the environment (Rapoport, 1975, 1977, 1986, 1990c), because what happens (or does not happen) in one setting influences activities in others.

The question that needs answering is “who does what, where, when, and why”. To answer, three aspects of activities must be considered: The activity itself (its instrumental aspects), how it is combined with other activities to form systems of activities, and the meaning of the activity (its latent aspect) (see Figure 3).

The meaning of the activity is important because it draws attention to *wants* (as opposed to “needs”)—and wants are often more important than needs in an explanation of the nature of housing (including space organization and standards, shape, form, transitions, material, decorations, and so on) (Rapoport, 1990d, 1994b; Hedges 1994; Kaitilla 1991, 1994; Sadalla & Sheets, 1993; Sastrosasmita & Nurul Amin, 1990; Iovine, 1999). Wants also help explain the apparent “irrationality” of housing choices. The most important role of variability in the meaning of activities (as well as of the second and third aspects) is, however, that variability helps to explain both the extraordinary variety in types of dwellings and possibly also the disappearance (or reduction) in this variety (Rapoport, 1988, 1990d, 1995c).

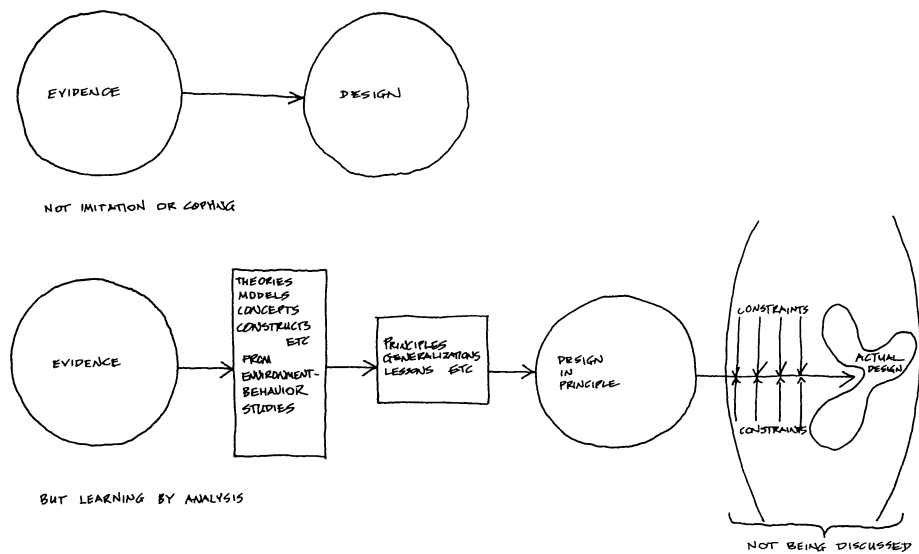


Figure 1. Learning from the evidence. This diagram applies to both types of learning. (Based on Rapoport 1990b, Fig. 2.1, p. 31; 1990f, Fig. 4.18, p.100 [with modifications].)

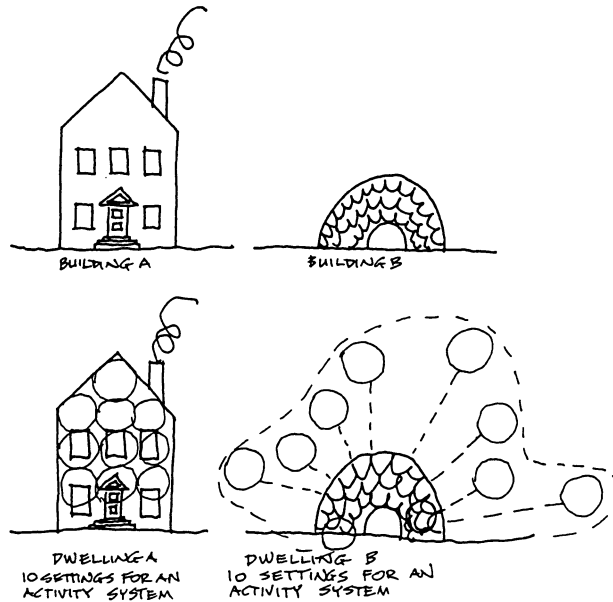


Figure 2. The two buildings above cannot be compared as dwellings. The two systems of ten settings each define the dwelling and form the units suitable for cross-cultural comparison. (Based on Rapoport 1990c, Fig. 2, p. 464.)

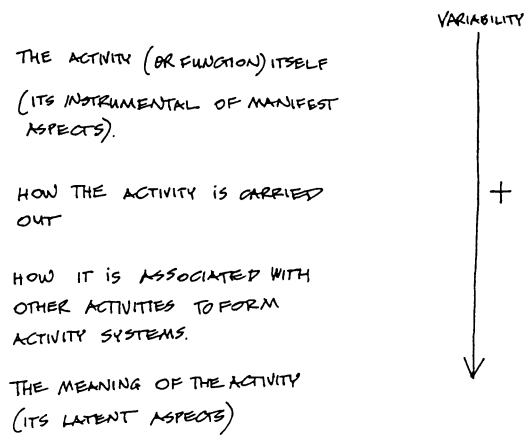


Figure 3. The four aspects of activities. (Based on Rapoport 1977; 1990b,d; 1994 d, Table 1, p. 471; In Press, Fig. 1.)

### Achieving culture-specific housing

As already pointed out, much has been said over the years about the importance of culture/environment relationships, especially in housing, and many have even accepted the value of, or the need for housing that is culturally specific (Kamau, 1978-79; Chua, 1988; Rapoport, 1983a; Pader, 1993; Sun Rhodes, 1993; Pellow, 1996; Suchar & Rotenberg, 1994; Cooper & Rodman, 1995; Werner, 1987).

I suggest that establishing relationships between “culture” and “environment” (in this case housing) is impossible because of the very high level of generality and abstraction of the term “culture”; there are also some problems with the term “environment”. I have already suggested a way of defining “dwelling” in a potentially more useful way. There are also more useful ways of conceptualizing “environment”.

“Environment” can be conceptualized in several ways: (1) as the organization of space, time, meaning and communication; (2) as a cultural landscape, composed of fixed, semi-fixed, and non-fixed features, and having certain attributes (e.g., ambience, which itself can be defined and operationalized) (Rapoport, 1992); (3) or as a system of settings (on which the above definition of dwelling depends). These conceptualizations, as the definitions of culture discussed earlier, are complementary rather than conflicting; more than one can be used in the same study.

In the case of “environment”, as in the case of other concepts, the process of clarification, at least in my view, involves *dismantling*. This clarification is critical in the case of “culture”, which is an ideational term, a concept, a definition which, as we have seen, has referred, since it was coined, to all (or most) things that people do or create. As a result, no one will ever “see” culture, but only its outcomes or, possibly, its constituent parts.<sup>3</sup>

I would suggest that as it stands the concept of culture is not very useful in EBS—in fact, it is essentially useless. There are two reasons.

The first reason concerns the nature of statements about the relation between culture and environments. These statements tend to assume implicitly that culture and built environments are equivalent units, in the sense that they are equal in “scale”. That is not the case. Culture is a vast domain. Built form, however broadly defined, is a small part of the whole culture and is also a subset of it. The latter is, as it were, embedded in the former; thus, the nature of the relationships between culture and environment and the nature of any translation process of one into the other, becomes difficult to grasp. Without resolving either the nature of the relationship or the translation process, it is essential that this difficulty be borne in mind.<sup>4</sup>

The second reason why culture as it stands is not very useful in EBS, is that it is impossible to use culture to either try to understand environments and how they are used, or to design environments for culture. It can be suggested that “culture” is both *too abstract* and *too global* (or general) to be useful. As already suggested, it is often helpful to clarify excessively broad and abstract concepts by “dismantling” them and studying the components and the ways in which the components interrelate with each other and with other variables (e.g., components of built environments). Over the

years I have developed two complementary ways of responding to the twin problems of excessive abstractness and excessive generality.

The first (and more recent of these) addresses the view that “culture” is too abstract (see Figure 4). It begins with the frequently found reference to “socio-cultural” variables (e.g., Rapoport, 1969), and takes the position that “social” and “cultural” are distinct and different. “Cultural” refers to *ideational* variables, the blueprint for the social variables, which are then seen as referring to more concrete manifestations or expressions of culture. Important among these are the actual, potentially observable, social expressions of culture such as family and kinship structures, social networks, roles, statuses, social institutions, and the like. These can feasibly be related to built environments, whereas “culture” cannot.

It needs to be reiterated that “culture” is a theoretical construct. It exists by definition and is a conceptual summary shorthand (and proposed explanation) for particular conjunctions of a great variety of human phenomena. As already said, no one has ever

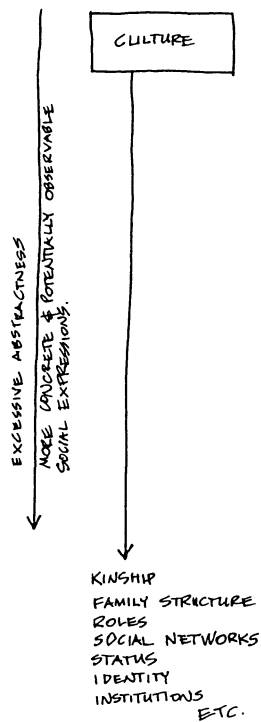


Figure 4. Dismantling ‘Culture’ in response to the problem of excessive abstractness. (Based on Rapoport 1990c, Fig. 2.1, p. 10; 1993, Fig. 1, p. 16; 1994a, Fig. 3, p. 476; In Press, Fig. 2.)

seen or will ever see or observe culture, only its effects, expressions, or products. One is thus making inferences about an unobservable entity. This is common in science and presents no insurmountable problems if the nature of this entity is borne in mind.

The discussion immediately above bears on the second problem, the excessive breadth or global nature of “culture” (see Figure 5). There is a second way of dismantling that concept that addresses the issue, which I have used, advocated, and developed since the 1970s. This method of dismantling also begins with the observation that it is not possible to link culture and environment at this level of generality. To be asked to analyze the relation between culture and environment, or to “design for culture”, is to be given an impossible task. Greater specificity does not help: To design housing for culture is indeed more specific but neither easier nor more feasible. To consider housing for a particular culture or group<sup>5</sup> is still more specific but also impossible. Part of the problem is that the terms “environment” and “housing” are so broad in meaning, as I have already discussed. It remains to deal with “culture”.

The proposed dismantling of the term “culture” depends on the notion that particular parts of the environment are congruent with or supportive of particular “lower-level” components or *expressions* of culture, given some understanding of the mechanisms involved. While social variables are useful, as already discussed, I have used a particular sequence of increasingly specific expressions of culture—such as worldviews, values, images, lifestyles, and activity systems.

Worldviews, the way members of a particular culture “see” the world, have some utility and there is, in fact, a literature on worldviews. The concept is, however, still rather abstract and not easy to use. Values are more specific and more useful. The study of environmental preference and choice is explicitly based on values (for example those used in making tradeoffs); so is much of microeconomics. The concept of lifestyle has proved particularly useful for the study of a great variety of environment-behavior interactions and for the design of environments, as well as for marketing (Rapoport, 1985, 1995c). Lifestyle itself has been defined in many different ways; these definitions have been reviewed and an operational definition proposed. This

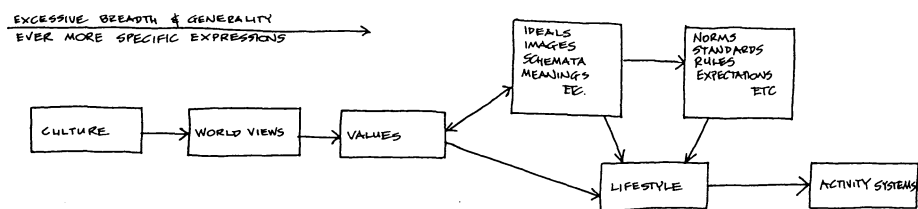


Figure 5. Dismantling ‘Culture’ in Repsonse to the problem of excessive breadth and generality. (Based on Rapoport 1977, Fig. 1.9, p. 20; 1990c, Fig 2.1, p. 10; 1993, Fig. 1, p. 16; 1994a, Fig. 3, p. 476; In Press, Fig. 3.)

definition (Michelson & Reed, 1970), that lifestyle is the outcome of choices about how to allocate resources, I have found most useful. I have used it since the 1970's, have refined it, and have suggested how it can be represented graphically in the form of profiles (Rapoport, 1995e).<sup>6</sup>

Lifestyle, in turn, leads to activities and activity systems, the specifics of which begin to explain the diversity of environments and thus their links with "culture" (see Figure 3 above). Together, lifestyle and activity systems are extremely useful in analyzing and designing environments. Lifestyle groups are extremely useful, because most other criteria for group membership such as age, sex, race, ethnicity, caste, religion, occupation, tribe, ideology, and so on (used historically and cross-culturally) can be expressed in terms of lifestyle, and can then bear on the nature of housing and other environments. As already mentioned, lifestyle is increasingly being used in marketing, market segmentation, advertising, consumer research, and housing design by developers (Rapoport, 1985, 1995c). Activity systems are the most concrete, and architects and planners are relatively familiar with using activity analysis, although the latent aspects of activities (meaning) must be included and considered.

These two dismantlings can usefully be combined into a single diagram, in which the width of arrows suggests the relative feasibility and ease of using the various components for both analyzing and designing environments, in this case housing. The links between these components and housing are through the various mechanisms of supportiveness<sup>7</sup> (see Figure 6).

To continue, the most useful approach would be to begin with the variables in the above diagrams, not with specific groups. It, then, is relatively straightforward to link lifestyles, activity systems, and social variables with housing.

### **Relating activity systems to environments**

I have already referred to the variability of human groups, as defined by culture. For example, there are still approximately 6000 languages in existence; some areas, such as India or Papua-Niugini, New Guinea have hundreds. Built environments, especially housing, are also highly varied. An important question is why the relatively few things people do in dwellings (which all groups possess)<sup>8</sup> require so many different types and forms of dwellings, settlements, and so on (Oliver, 1997).

The answer to this question begins with activities that, as already pointed out, are an expression of lifestyle and values, and ultimately culture. These activities can also be seen as involving four components, which go up in variability as one moves from the activity itself to its meaning (Rapoport, 1994a, in press). As one example, consider cooking. All humans cook, and cooking has been used as a major discriminant between human and non-human: only humans transform raw food into cooked (Levi-Strauss, 1970). How food is cooked (or otherwise transformed) is extraordinarily varied. How cooking is associated with other activities, the meaning of cooking to a specific culture, and its social or ritual significance (its latent aspects) are even more variable. These social and ritual aspects influence the specific cooking arrangements including the design of what we call "kitchens". In a similar way, other settings, in-

volve variable responses to latent aspects of activities. The extraordinary variety of dwellings, for example, is a result of the latent aspects of activities which the dwellings are meant to accommodate and support.

It follows, among other consequences, that the distinction commonly made between “function” and “meaning” is misconceived, so that meaning is not only an important aspect of function but often *the most important function* (Rapoport, 1990d), because it leads to the specific attributes of settings and environments. Since activities and function are ultimately an outcome of culture, culture plays a role both in analyzing and designing environments. Culture helps us to understand the different orders used (Rapoport, 1984), the differing notions of comfort and environmental quality, the different standards and responses to site and climate, the use or non-use of available materials and technologies, and so on.

Since one cannot consider single activities but rather only *systems of activities*, variability increases. Activities systems vary among different groups in terms of the specifics of these systems, the sequence of individual activities, their linkages in space and time (where and when they occur and their proximities and separations), or who is

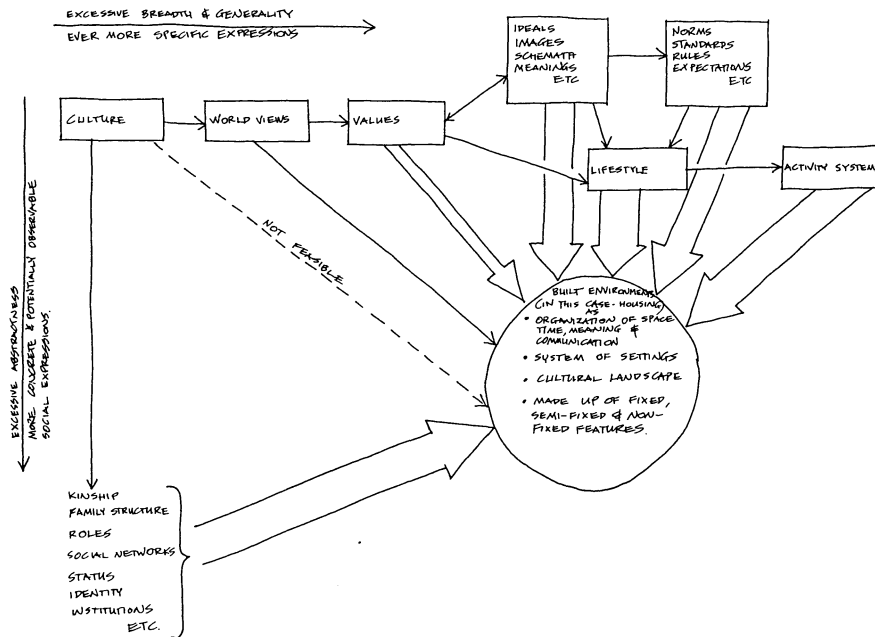


Figure 6. Combined diagram of the two dismantlings of ‘culture’, relating its expressions to the built environment (e.g. housing). The width of arrows corresponds approximately to the hypothetical feasibility and ease of relating the various elements.

included or excluded. Since systems of activities occur in systems of settings, and what happens in some settings depends on what happens (or does not happen) in others (Rapoport, 1986; 1990c) (See Figure 2 above) it is also important to “distribute” activities among settings. The relationships between systems are highly variable in terms of images and schemata, and in the norms and rules that apply in various settings. These schemata make certain uses “inappropriate” in certain settings and not only lead to different orders, but also to the rejection of certain environments, (Rapoport, 1977 and references therein; Spalding 1992).

### **Lifestyle and environment**

Activity systems follow directly from lifestyles, which themselves reflect values, images, and norms. Although there are still concrete and operational values, images and norms, they are more general than the activity systems and they form a particularly useful aspect of culture in relation to environment (see also Figure 6).

Recall that one of the definitions of culture is the way of life of a group; it follows that lifestyle can be a very useful way to define groups.<sup>9</sup> The many already listed criteria used to define groups cross-culturally and through history only become relevant regarding environments, such as housing, when they lead to specific lifestyles, as is true in the United States today, when many of the criteria do not in themselves lead to specific housing forms, and when one often belongs to more than one of the traditional categories. This observation also applies to the various “special user groups” mentioned earlier. In all these cases lifestyle alone needs to be considered. Also, since lifestyles can be operationalized and expressed graphically as profiles, they are easy to visualize and use.

Lifestyle is also useful because it is defined operationally in terms of choice, and choice plays a major role in the second basic question of EBS (through habitat selection). People leave undesirable or unsuitable environments for those evaluated positively [obviously within more or less stringent constraints (Rapoport, 1983b, 1985)]. The two sets of choices will tend to be congruent; people will make them congruent so as to obtain environments that fit and are supportive of their lifestyles. Such congruence is often further improved through modification.

The choice of environments is based on a set of attributes or qualities that can also be represented graphically by a profile. The environmental quality profile and lifestyle profile can be matched, the process being both feasible and not too difficult (Rapoport, 1995e).<sup>10</sup> Constraints again play a role in how closely one can approach an ideal environmental quality profile.

Design can also be visualized as a choice process--what I have called the choice model of design (Rapoport, 1977). Choices are made among available alternatives, about what to include or exclude. This process is related to images and schemata, and is expressed through norms and rules (which link it to culture) and leads to systematic choices within groups. This *process* is general and applies to vernacular, popular, and high-style design of products, buildings, and cultural landscapes (that is, to all of material culture). What vary are the schemata and ideas, the criteria used, their order of

application, who applies these criteria (i.e., who makes choices), and the time-spans involved.<sup>11</sup> The important thing to note in the present context is the common theme of choice in both lifestyle and design, i.e., making environments as opposed to choosing and then modifying them, as discussed earlier. This common theme of choice helps to relate lifestyles and, housing in a number of different ways.

### **Social variables and environment**

The third aspect or expression of culture, which I suggested was particularly useful in relation to environments is social variables (see Figure 4 above). These will be discussed even more briefly. It can be shown fairly easily that the types of variables listed—kinship and family, social networks, status, roles, and institutions—are rather easily related to specific features and attributes of environments, particularly housing. For example, social networks can help define the larger systems of settings within which the dwelling is located, such as urban neighborhoods (Rapoport, 1997b) can explain the use of urban space and settings, and can also play a most useful role in housing analysis and design. Status is easily related to location, space organization and access, size, color, materials, and the like. Institutions - such as recreation, commerce, and shopping - can be shown to vary among different groups and to influence the settings that they require (King, 1976). There is currently a large and growing literature on the effect of changing sex roles and family structure on housing, neighborhoods, and other types of environments. Changes in kinship structures play a major role in developing countries and can be linked directly to changes in a large variety of settings (Rapoport, 1995d).<sup>12</sup> Once again the point is made—although “culture” as such cannot be related to environments, social variables, and the other expressions and aspects of culture discussed, can relatively easily be related to various environmental components, in this case housing.

The discussion about linking environments in general and housing in particular to culture via activity systems, lifestyle, and social variables makes it useful to borrow the idea of a *model system* (from the bio-medical sciences). In this case such systems are more easily provided by ‘extreme’ situations, such as developing countries, immigrant communities, and a variety of vernacular cases, in which the effects or role of the variables discussed can be seen more clearly, in black and white as it were. These situations are not simpler, but are easier to identify and study, and provide a point of entry into the system, making possible moving on to the more difficult, shades-of-gray situations.

These model systems provide clearer insights because the situations lead to “reduced competence” and, therefore, *higher criticality*, which, in turn, requires highly supportive environments. This is, of course, also the case with the more commonly used “special user groups” – the elderly, people with dementia, those with physical or mental illness or handicaps, prisoners, and the like. Developing countries in particular also provide clear and striking examples of rapid changes in values, lifestyles, activity systems, kinship and family structures, roles, institutions, social mechanisms, social networks, meanings, and images (and hence wants). These changes not only lead to

the higher criticality already mentioned (due to the stress of excessively rapid change), but also bear on issues of synthesis (or syncretism) leading to insights about identity and how it might be preserved by identifying and supporting elements of the cultural core, while at the same time allowing (or encouraging) peripheral elements representing new wants to change more rapidly (Rapoport, 1983a). Of course, all the variables discussed above are always changing, even in developed countries (Iovine, 1999), but they do so more slowly and less clearly. One consequence of the prevalence of change, and of continuing change, which has major implications for housing design, is the need for *open-endedness* (Rapoport, 1995b). Another consequence is that a major goal of housing researchers, educators, and practitioners should be to increase the range of alternative types and forms of housing among which people can choose (Rapoport, 1985, 1995c).<sup>13</sup>

One additional point needs to be made, which is also a caution. In dealing with culture/housing (or, more generally, culture/environment) relations, one tends to emphasize, and concentrate on, differences and variability (as I have been doing in this paper). For example, in anthropology extreme cultural relativism has long been orthodox. This attitude is starting to change, but reconsideration comes mainly from fields such as evolutionary psychology, sociobiology, gene culture, co-evolution and the like (see discussion and references in Rapoport, in press). What is the relative importance of constancy vs. change and the significance in EBS and housing are empirical questions. However, if such constants do exist, and are significant, it would be easier to deal with differences, because they would comprise a smaller part of the whole. Also, it is important to know that even if specific expressions differ, they may stem from underlying constancies (see Figure 7).

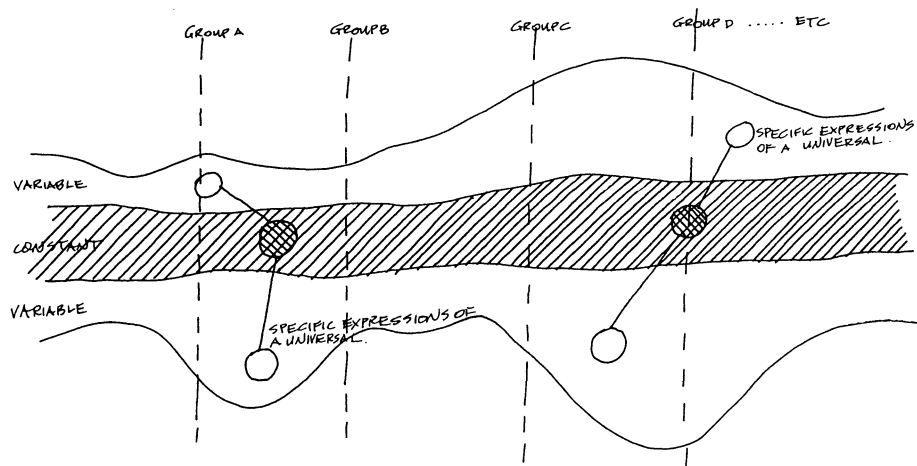


Figure 7. Possible constancy and variability in culture. (Based, with applications, on Rapoport 1990b, Fig. 3.12, p. 111; which was redrawn from a 1975 paper.)

There seems to be a clear tendency for housing to become “suburban” as soon as resources increase. This tendency can be seen in places as diverse as Japan, Thailand, Russia, African countries, and Latin America. In fact, it is difficult to find places where suburbanization is not occurring and, as is often the case, such a movement is documented better in the mass media than in the research literature (Andrews, 1995; Lawson 1993; English cable look wins favor in Bangkok, 1988; Myre, 1997; Vrana, 1994; Rapoport, 1990d, 1990e).<sup>14</sup> The particular image of the detached house, greenery, and low perceived density is certainly not universal, and there are countervailing (although I believe weaker) trends toward densification, co-housing, communal housing, and downtown living (Brooke, 1998). However, the “suburban” image (as well as its opposites) can be interpreted in terms of environmental quality. That, in turn, as already mentioned, can be dismantled and made operational (and even diagrammed) by means of what I call *environmental quality profiles*, which is a major topic in itself (Rapoport, 1995d; for an application see Khattab, 1993).

An interesting example in which several of the themes being discussed play a role (mainly environmental quality and imagery, but implicitly also the importance of meaning and wants, and housing as a system of settings) is the Australian Green Streets Project (New Choices in Housing.) It has been government policy in Australia for some time to encourage “densification”, although there is some professional opposition (Stretton, 1991; Troy, 1996; Rapoport, 1994b). There is also public opposition. Ignoring for the moment the validity of this policy, the intention of the Green Streets project is to influence the public to accept densification as desirable. One approach has been to have marketing organizations try to discover (for the Department of Health, Housing and Community Services) which components of densification are acceptable: minimal street width, spacing of dwellings, lot size and so on (Gutteridge, Haskins, & Davey, Pty. Ltd., 1989; Motive Market Research, 1992). The intention is to incorporate acceptable attributes and to eliminate those that are unacceptable. Of more interest, however, is a series of posters meant to convince the public about the merits of the program. The striking thing about this series of posters is that they show trees, lawns, and open space, so that buildings tend to recede into the background. The image of these denser developments is clearly that of suburbia and of low perceived density (Rapoport 1975, 1977).

### Conclusion

I have rather briefly and somewhat superficially dealt with a fair (albeit still limited) number of issues. My intention was to suggest at least one way of thinking and working that might help achieve culture-specific housing (assuming that it is a worthwhile goal). Many of these issues I have both written and talked about previously, in different contexts, order, and combinations. The repetition I find necessary is another example of the lack of agreement about basics, about concepts, about the meaning of terms and the lack of theory; one has to repeat things in order to make oneself understood.

My final point is, therefore, that it might be time to begin to analyze and synthesize the many housing studies already in existence and carried out in many places, cultures, and periods. Such a synthesis would enable us to develop and clarify concepts and to emphasize what I call “lateral linkages” and theory development – both in our own research and in our teaching. In connection with the latter, the time has come to encourage students (and institutions) to work on these topics, rather than on ever more empirical studies.

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### Footnotes

<sup>1</sup>Although all are important, identifying mechanisms plays a particularly important role in theory building.

<sup>2</sup>Moreover, these other conceptualizations can be derived from the three basic questions.

<sup>3</sup>Not everyone accepts this approach. For an explicit rejection by two anthropologists, see Cooper and Rodman (1995), p.124.

<sup>4</sup>The discussion of the process of dismantling does, in effect, deal with the nature of the translation process.

<sup>5</sup>The nature of valid, useful, or relevant groups, and how to define them (as well as distinguish them from aggregates) is another major gap in EBS.

<sup>6</sup>First published in a conference proceeding in 1990.

<sup>7</sup>Regarding supportiveness, it is useful to ask three questions: What is being supported? By what is it being supported? How is it being supported ( i.e., what mechanisms are involved)? (Rapoport, 1983a, p. 256, 1990b, p. 252-253). The number of mechanisms can be shown to be fairly limited, simplifying the problem (Rapoport, in press).

<sup>8</sup>Note that the increase in the number and specialization of setting types with increasing complexity and scale of societies, and hence the changes in dwellings and the development of new types of settings, is itself part of the variety of environments and is related to culture change (e.g., Rapoport, 1990c, esp. p. 17-18; Kent, 1991; Sancar & Koop, 1995).

<sup>9</sup>An example of the value of using "lifestyle" to define groups is the growing heterogeneity of societies such as that of the United States, one result being *market segmentation* by groups based on lifestyle. Data on such lifestyle groups, for use in marketing, advertising, and the like, are now available commercially.

<sup>10</sup>First published in the proceedings of a conference *Quality in the Built Environment*, University of Newcastle (UK). July 3-5, 1989.

<sup>11</sup>Certain recent changes from what I call selectionist processes to instructionist ones have major implications for design, but cannot be discussed here (see Rapoport, 1995a (originally 1986) and subsequent work).

<sup>12</sup>First published in 1980 in *Architectural Association Quarterly* (London) (Vol. 12, No.1).

<sup>13</sup>That an increase in the range is a goal of housing professionals is also suggested by analyzing housing advertisements (e.g., Rapoport, 1990d,e, 1995c).

<sup>14</sup>Many more examples could be given. I personally have a collection of cuttings, photographs, slides, and sales brochures from many countries that I use in both housing and developing-countries courses.