

CHAPTER 3

The Importance of Culture

The major premise of this book is that within an EBS context, a consideration and an understanding of culture are extremely important in many domains, including environmental design. It should be emphasized that this is an *hypothesis*. In reality, the importance of culture cannot be assumed or asserted but needs to be tested empirically. Moreover, it also needs to be established how important culture is in various domains, how important relative to other considerations in environmental design, for whom, under what circumstances, for which environments, and so on. These are all empirical questions, but I will provisionally accept this hypothesis because it seems to be well supported by the available evidence.

The General Importance of Culture

In connection with EBS, culture is important in two ways: first, in identifying the role of culture in various explanations, models, and eventually theories of EBR, i.e., its role in the discipline as a whole; and second, more closely related to environmental design, how important culture is in understanding particular specific user groups, situations, and environments. Regarding the first, I have already suggested that culture clearly seems to play a role in all three of the basic questions of EBS and is, therefore, inescapable, a point I will elaborate shortly. As a result, and in response to the role in specific issues of design, there has been, and continues to be, major growth in the interest in culture and a growing awareness of its importance, or at least of investigating it, e.g., since *House Form and Culture* in 1969. Similarly, a concern with culture has become ever more important in many other fields:

**Fields in which
culture has
become
important**

- Developmental psychology
- Adolescence
- Developmental disorders
- Language development
- Counseling

The Importance of Culture

- Education (learning and teaching)
- Psychology
- Sports
- Economics
- Business
- Organizational behavior
- Work/employment
- Marketing and advertising
- Product development and packaging
- Law
- Politics
- Strategy, and military and security studies
- Third world development (economic, social, physical)
- Psychiatry
- Substance abuse
- Medicine and health, generally
- Human ecology, use of resources and sustainability
- Aging, etc.

A number of these have potential links to environmental design. For example, once health and medicine are studied in different groups (and, as we shall see, groups are a key aspect of culture), this leads to a concern with ideals, values, lifestyle, religion, sex and other roles, etc. We will see that these are closely related to what we call 'culture.' They also suggest the need to design specific health delivery systems, sometimes considering the potential role of traditional medicine and healers, and possibly the need to design health facilities (clinics, hospitals, etc.) differently for different groups.

Returning to the *general* importance of culture in EBS, I will elaborate the role that culture plays in the three basic questions. It is that role which made me suggest earlier that a consideration of culture is inescapable in EBS and environmental design. First of all, the possession of culture is what is generally taken to define humans; since EBS involves humans, one must consider culture. At the same time, the specifics of culture lead to major differences among various groups. This results in a paradox: the possession of culture makes us all human and defines our species, yet it also divides us by language, religion, food habits, rules, and many other specific aspects of culture to the extent that one can speak of 'pseudo-species.'

**Characteristics
of people are
related to
culture**

Effects of environment on people

It follows that many important characteristics of people (Question 1) are related to culture.

Similar environments can have very different effects on people (Question 2), depending on their specific characteristics, many of which, as we have just seen, are cultural or influenced by culture. For example, for sedentary groups, being displaced presents severe problems; for nomads, it is being settled. High-rise apartments have a very negative effect on members of some groups but work well for others. Density and crowding mean very different things to members of different groups so that the same standards cannot be used, and similar numbers of dwellings per unit area, or people per dwelling will be evaluated very differently and, therefore, have different consequences. The contexts or circumstances also play an important role in the effects environments have on people, and many of these are related to culture. For example, rates of cultural change are important, with rapid change often presenting problems. Another factor is the 'cognitive distance' among groups, so that urbanization is easier for settled people than nomads, and migration easier when cultures are more similar. Another important contextual variable related to the two just mentioned is what is called 'reduced competence' and hence higher criticality.

'Reduced competence' (a technical term) refers to the notion that people, due to age, illness, extremely rapid, and hence disruptive, rates of cultural and social change with the consequent need to acculturate to very different lifestyles, work, time, organization, etc., have fewer resources available to them than others. This reduces their ability to cope with the additional demands imposed by unsuitable, unsupportive environments. Such demands, with which fully competent people can deal easily, may become destructive for more vulnerable people who have already reached (or even exceeded) the limit of their ability to cope. It follows that environments have much larger effects on people like these. This may be because they cannot leave unsuitable environments and seek out others (blocked habitat selection). It may also be because they cannot rely on various customary social and cultural mechanisms. In either case, the criticality of environments is increased and highly supportive (possibly even 'prosthetic') environments are needed. Note that such supportiveness is often indirect (as discussed in Chapter 1 regarding basic

question 2) and often through various social and other expressions or components of culture, to be discussed later in Chapter 5.

Note also that many of the mechanisms linking people and environments (Question 3) are cultural, are related to culture, or vary with culture. This variability differs for different mechanisms. I have already suggested that there seems to be a limited number of such mechanisms. A first attempt to list possible mechanisms, knowledge of which is essential for explanation of EBR (and hence explanatory theory), has already been given in Chapter 1.

Cultural mechanisms linking people and environment

Two things need to be noted. First, some of these mechanisms vary much more with culture than others. For example, whereas perception is largely unaffected by culture, cognition varies significantly with culture, and meaning and evaluation are culturally extremely variable. Second, some of these mechanisms interact and work together, for example, affect, meaning, and evaluation. Also, this list is a first effort and can be expanded (or modified) if necessary, i.e., as and if new mechanisms are discovered and new knowledge obtained. Also, the mechanisms listed can be further subdivided, for example, meaning into different levels and types, the ideal images involved, etc., or by listing the specifics of cultural aspects of supportiveness. This implies that even more specific and concrete mechanisms can be introduced, often on the basis of new findings. One example is specific brain mechanisms for various cognitive tasks, such as way-finding, orientation, memory, learning, affect, etc., discovered by cognitive neuroscience, which is developing extremely fast. Another example is that new theoretical developments can also make mechanisms more specific. Thus, my interpretation of one behavioral mechanism, how settings communicate expected behaviors via cues, is clarified by frame/script theory from computation science, which shows how this process actually works.⁷

There is another formulation of the domain of EBS.⁸ This suggests that EBS is concerned with settings and places, user groups, and socio-behavioral phenomena. This formulation can be derived from that based on the three basic questions, which therefore I see as more basic and fundamental. More important for the present topic is the fact that all three are, once again, related to culture. Different

User groups

groups subdivide the world into different domains and settings and use them differently (this also applies to 'places,' but that is a term which I believe has many problems and which I will, therefore, not use). User groups are generally, and most usefully, defined through 'culture' (as we will see later), and many socio-behavioral phenomena are related to, influenced by, or defined by 'culture.'

The discussion thus far suggests, as already pointed out, that groups seem to be the key. For example, users as a whole are very different indeed from designers, and this difference between these two groups, which, in effect, are different (sub)cultures, creates many of the problems EBS is meant to alleviate, which are discussed below. Also, users are *not* one group; there are many user groups, defined by various specific characteristics important for culture-specific environmental design; this bears on the *specific* importance of culture in EBS, as opposed to its general importance, which I have been discussing. The nature of relevant groups is an under-researched topic, but those often used in design and even in EBS (e.g., the elderly, children, patients, the urban poor of the Third World, etc.) are *not* useful because they are much too broad. This topic will be discussed in detail later in Chapter 6 and is an important aspect of this book.

The Variability of Environments

There is a very important question: Why should there be such an extraordinary variety of built environments, especially houses and dwellings, and also settlement forms? This variety has previously not been explicitly noted nor emphasized. The recent publication of the *Encyclopedia of Vernacular Architecture of the World* suggests the possibility of an estimate. In it, I counted 1,278 areas/groups, each with its own distinct environment. Others exist, because the coverage, although extraordinary, is not complete. Also, the coverage is by groups and areas, some of which comprise more than one type (and form) of environment. Other classifications are also possible, which might further increase the number of house types, settlement forms, non-domestic buildings, significant outdoor settings, etc. Moreover, any one of the entries in the encyclopedia could be studied at a finer grain or scale, leading to more types.

The Importance of Culture

This extraordinary variety is puzzling because, after all, people do a much more limited set of things in such environments, and the number of climatic zones, materials, and techniques is also smaller. The reference above to 'doing things' in environments and the definition of housing in Chapter 1 suggest that it is something about *activities* that results in this variety. The answer follows from the fact that activities can and need to be dismantled. In fact, activities (and this also applies to 'function') can be dismantled into four components:

- The activity itself
- How it is carried out
- How it is associated with other activities to form systems of activities
- The meaning of the activity

**Four
components
of activities**

The first is the instrumental, or manifest (i.e., obvious or self-evident), aspect of the activity; the last is its latent aspects. The important thing to note is that variability goes up as one moves from the instrumental/manifest to the latent aspects of an activity (or function).

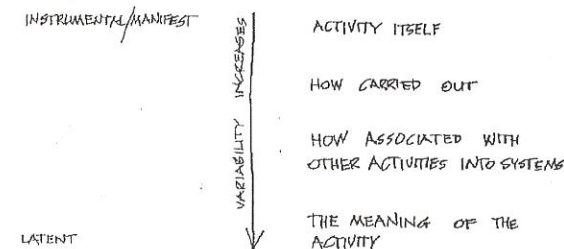


FIGURE 14.
Dismantling
activities.

Several examples of such an analysis of activities may help to clarify this point. Consider cooking. At its simplest, most instrumental level, cooking is the transformation of raw food into cooked food (as the title of Lévi-Strauss's well-known book suggests). It is a particularly useful activity to consider for several reasons. First, because it is a human universal and hence useful for cross-cultural comparison. This universality is why Lévi-Strauss used cooking as a major discriminant between 'culture' and 'nature,' between human and non-human. This is an apparently simple activity, but because activities are an expression of lifestyle

**Examples of
variability in
activities —
cooking**

(and, ultimately, of culture) and because they vary as one moves from their instrumental/manifest to their latent aspects, even this apparently simple activity is highly variable and, therefore, leads to highly variable design requirements. How food is transformed already varies a great deal: roasting, boiling, frying, baking, and other ways of applying heat (burying with rocks, throwing on the fire, a great variety of oven types even in one country, e.g., Egypt). There are also other ways of transforming food: fermenting, pickling (e.g., Kimchi in Korea), marinating, etc. Cooking containers and appliances vary a great deal, so does their location, and hence ergonomics and body positions (e.g., squatting).

Associated activities vary even more. Cooking can be a solitary activity, carried out by servants, a communal activity, a social activity, or a teaching activity for offspring. It may be accompanied by radio, music, TV, or socializing. It may be highly private, done out of sight (as in the kitchens described as "hidden rooms" in Kenya), or central in the dwelling as a place for social interaction, hospitality and entertaining, eating, and other activities. They then need to be large, as in the 'family room' in U.S. dwellings. It can also be a principal locale for most activities, including children's homework, as among the English working class. It takes on added importance when cooking becomes a hobby (gourmet cooking), a way of establishing identity, or even a status symbol.

Consider the latter in somewhat more detail. One study of Puerto Rican immigrants in New York did a redesign of tenement apartments based on architectural criteria. Since the apartments were small, efficiency kitchens were used. The activities involved were then analyzed. In this particular case, kitchens needed to be large because a specific way of cooking in front of female guests establishes female status hierarchies. In effect, cooking becomes a *performance* and effort is emphasized. Also, large groups are entertained. The large kitchen size is also made necessary by the presence of many appliances, which also help establish status. The initial design of an efficiency kitchen was totally inappropriate and an expression of Anglo-American culture where food magically appears without apparent effort.⁹

Cooking may also be linked to specific rituals (as among the Apache) or religion more generally, for example,

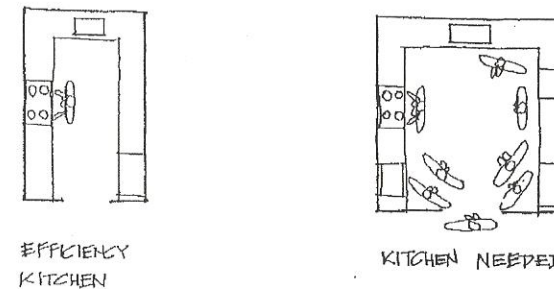


FIGURE 15.
Culturally appropriate kitchen for Puerto-Ricans in New York (based on verbal description in Zeisel J (1973) Symbolic meaning of space and the physical dimension of social relations. In J Walton and DE Carns (Eds.), *Cities in change — Studies on the urban condition*. Boston: Allyn and Bacon, pp. 252-263.).

through purity laws in India and Indians elsewhere (e.g., Singapore), which influence the relation of the kitchen to other spaces. Other examples include Orthodox Judaism where, because of requirements for separating meat and milk, kitchens need two sets of everything; polygamous Mormons require multiple kitchens, one for each wife, as do many traditional African polygamous groups.

As we have already seen, all these variations are directly related to and influence the settings involved. These can be part of a single multi-setting space (also used for many other activities, either simultaneously or organized in time), they can be a separate structure, or they can be part of the dwelling in the winter and separated in the summer, as in North Africa and the Middle East. They can be outdoors or they can be demarcated within the dwelling by walls as a 'kitchen,' itself a culture-specific concept. This latter is an example of the point already made that, in general, the number of specialized settings increases as societies become more complex. The size, nature, and organization of kitchens clearly varies depending on the more latent aspects of cooking, i.e., specific ways of cooking, associated activities, and the meaning of cooking.

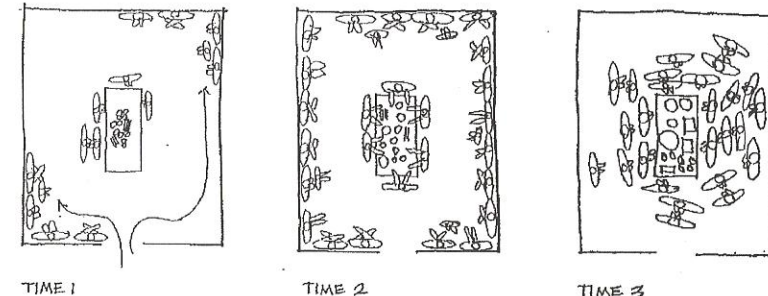
One could elaborate the analysis of this single activity further and give many examples. The point is, however, that lifestyle and the latent aspects of activities (both a function of culture) can easily be linked to the built environment and design. It follows that as meanings and lifestyles change, and even as new appliances appear, kitchens change. Thus, it was recently pointed out that in South Korea, due to changes in lifestyle, kitchens needed to change in major ways. The main point is that lifestyle and

the latent aspects of apparently simple activities clarify reasons for the organization of built environments and are easily linked to design. This applies to all activities, no matter how apparently simple.

Variability of eating

Eating, another universal, is also highly variable in terms of foods acceptable and used (usually only a portion of those available). In fact, the choices made are often used to establish cultural, religious, ideological, and other forms of group identity. The order in which dishes are eaten also has latent meaning so that the anthropologist Mary Douglas was able to speak of "deciphering a meal." Eating can be done by individuals at odd times, by various individuals in sequence, or can become a social, family, or even ritual occasion. Who eats with whom, where, when, including/excluding whom varies with culture and plays an important role in the enculturation (socialization) of children, i.e., the transmission of culture (as does the organization and use of dwellings and other settings). It also greatly influences the design of dwellings. Thus, in Kenya and other parts of Africa, eating is also a "hidden" activity, whereas among the Apache, for example, not only does the kitchen need to be large (in one case 22 x 15 feet, i.e., ~7 x 5 meters) (as in the case of Puerto Ricans), since cooking involves a number of women, but also the living/dining room (and the distinction or separation is undesirable). The anthropologist George Esber points out that in the Apache case, three variables are involved: the extent of conversation, social distance, and the presence or absence of food. He describes complex and, for Anglo-Americans, unusual patterns that require very different organizations and allocations of space based on the behavior in settings involved. Communal meals are very important culturally and socially. Arriving guests sit on the periphery of the room at large personal distances and remain largely silent observing each other. Small rooms interfere with this pattern, making normal, i.e., expected, social interaction impossible. As a sign of welcome, women begin to prepare food. When the food is served, people gather at the table and conversation begins. (See Figure 16, p. 45.)

Similarly, living rooms — their size, significance, and formality — vary depending on latent aspects of activities. In some cases, the living room has been described as a "sacred space" and plans in which entry is directly into the living room are unsuitable; the living room needs to be



distant from entry. In the Danish outdoor museum of vernacular architecture, there is a very small sea-captain's cottage, half of which is a formal living room used rarely. Currently, as house sizes in the U.S. are going up (while family size goes down), living rooms tend to disappear or become mere vestiges. The way living rooms are furnished may become symbols of identity, as in what has been described (by Jopling) as a culture-specific 'aesthetic complex' among Puerto Rican immigrants in Boston.

Consider another activity, buying and selling, including shopping. At its most instrumental, it involves exchanging goods for other goods, in our case (and often elsewhere) through some medium of exchange (money). It can be carried out by mobile vendors, in outdoor markets, bazaars, or shops. Bargaining may be central or not acceptable. Buying and selling may be associated with important social interactions, as in specialized shops for various immigrant groups, which become central social settings in the system. They may also play a critical (latent) role of information exchange. Thus, in a case in Mexico that I have described elsewhere, periodic (e.g., weekly) outdoor markets involving mobile vendors were replaced by shops and supermarkets by planners. For often illiterate residents, the vendors acted as major sources of information and maintained communication among family members and friends; as a result, they could not be dispensed with. A combination of such markets and shops/supermarkets (to foster competition) proved to be the best solution.

Shopping may be combined with entertainment, e.g., story and fortune tellers, musicians, snake charmers, jugglers, etc., as in outdoor markets in India or the Jemaa el Fna Square in Marrakesh, Morocco. It may be an unimportant activity (servants doing it) or a very important activity in

FIGURE 16. Culture-specific use of kitchen among Apache (based on verbal description in Esber GS (1972) Indian housing for Indians. *The Kiva* Spring:141-147.).

Variability of buying and selling

terms of status, or in itself a form of entertainment ('going shopping') and combined with lunch, afternoon tea, and the like. Shopping may be done by women, or not allowed to women and instead done by men (as in certain Islamic countries).

The settings are equally variable and, again, increase in number and specialization with increasing social complexity. There may only be periodic outdoor markets, or shops of many kinds: groceries, butchers, hardware stores, supermarkets, department stores, discount stores, boutiques, and so on. They may be organized in bazaars along streets or as shopping centers. These latter then often take on latent functions — places to 'hang out' by teenagers, to exercise (e.g., walking) by elderly, or to eat. They have been described as "new downtowns."

In this last example, I have moved from the single dwelling to other settings in the system. The shop can be a social center, as in the *bodegas* in Hispanic immigrant areas in the U.S. The pub (U.K.) or tavern (U.S.) become central settings in working class men's housing systems, in effect their 'living room.' Similar is the centrality of small wine-drinking settings in Austrian villages, tea rooms in Korea, and coffee shops in many locales. All of these become essential parts of the housing (and other) systems and play 'unexpected' roles, and 'unexpected' activities take place in them.

Discovering latent aspects of activities and settings

It follows that in all cases, the settings involved, and the activities in them, need to be *discovered*, especially since they are frequently counter-intuitive. Frequently, settings for socialization may not be those designed. Thus, in housing for the elderly, clotheslines or mail boxes may play that role. In student housing, laundry rooms and mail boxes are used, not lounges; to sit in a lounge is to admit that one lacks social links. Similarly, instead of singles bars and the like, laundromats are often used to meet members of the opposite sex, with frequent small loads maximizing opportunities. For other lifestyle groups, bookshops, galleries, and museums play similar roles; their latent aspects become important. The main purpose of gardening in front of a house may be to meet and interact with people without seeming to need it (as Gehl found in Melbourne, Australia). In all these cases, the latent aspects of activities, which are most influenced by 'culture,' greatly influence the use

of settings, their location, relationships among them, and the extent of the system. This type of analysis helps answer the important question: Who does what, where, when, why, and including/excluding whom?

Consider two particularly counter-intuitive examples in somewhat more detail. In Hungarian villages, it was found (by Fel and Hofer) that important male gatherings, at which most important decisions were made, took place in the *stables* of various important men. The social system of the village was crucially linked with the presence and location of these stables, and they were used in systematic sequence. Without knowing that, the system of settings could not be understood, and it is highly unlikely that *a priori* this critical role of stables would be considered. In Nantucket (U.S.), the *garbage dump* served as the main social center of the community, as was discovered when the dump was closed.

Finally, consider an activity (play) to emphasize the importance not only of latent functions and their settings but also of identifying the extent of the system. Both examples to be discussed begin with the observation that the settings designed for play are not being used. In one example, in an Italian-American neighborhood, basketball courts were not being used. Teenage boys played basketball near shops. The reason was that prowess in basketball was important in impressing teenage girls. These, in turn, were expected by their mothers to mind babies, and they did so while socializing outside shops. Basketball thus had the latent function of male status, courtship, etc., and its location depended on the location of a particular female-activity subsystem. In the second case in a housing project, playgrounds were not being used. To analyze the situation, the activity system — children's play — was studied in terms of where it occurred. It was found that children used a wide variety of settings — streets, ditches, empty lots, wooded areas, creeks, and parking lots. The activity could only be understood by discovering the extent of the system of settings in which the system of activities (play) took place.

The extent of such systems varies with 'culture.' For example, in some situations men and women have systems of very different extent, in others there may be no difference. Typically, the systems of girls are smaller than those

The extent of systems of settings

of boys. There are age differences, the extent of systems reaching a peak at certain ages and being smaller at earlier and later ages. The nature of the environment plays a role; currently, the extent of children's play in neighborhoods in large cities is smaller than in the past because of traffic and safety concerns. Generally, such systems of settings tend to be larger in small towns. Occupation, income, education, lifestyle, and the like influence the extent of systems of settings. In some cases (e.g., in the U.S.), higher income groups use more extensive systems, in others (e.g., some developing countries), it is low-income people who do so.

**'Meaning' is
the most latent
aspect of
activity**

To summarize, it is the great variability of latent aspects of activities that leads to the variety of settings for these activities and of systems of settings for systems of activities. This in turn leads to the variability of environments, such as dwelling types. In responding to the latent aspects of activity systems, they are also responding to those most closely linked to and most affected by 'culture.' Since meaning is the most latent aspect of any activity, this means that meaning is not something added to 'function' but that meaning itself is a most (if not *the* most) important function in the sense that the form of the environment responds to it. This helps explain why wants are often more important than needs and why apparently 'irrational' choices are made by users. This helps clarify the cases of North Africa, the Motilone, and the Australian aborigines discussed in the introduction. It also plays a major role in helping to explain the major differences in evaluation and preference, and thus choices between users as a whole, and designers, and among different groups of users in any one country or city. More generally, as already discussed, it helps to explain the otherwise puzzling large number of different built environments, such as dwellings.

**Variability of
norms and
standards**

In addition to the latent aspect of activities, the various expressions and components of 'culture,' to be discussed in Chapter 7, also play a role in generating environmental variability. One is the variability of norms, and hence of standards. For example, in some work I did with a colleague in the late 1960s, we found that anthropometric standards vary cross-culturally based not only on stature but on how activities are carried out. Major differences were found in stair design (riser/tread relation), storage, recommended temperatures, both generally and for specific

rooms, acoustic standards, and lighting standards. Recommended lighting standards for the most difficult seeing tasks were 10 to 20 times higher in the U.S. than in Sweden, Finland, or Switzerland, all highly developed, technologically advanced countries.¹⁰ Similarly, what is considered an acceptable housing density in Hong Kong is about 40-50 times higher than in the United States. Significant differences are also found between the U.S. and Western Europe, and this also applies to the minimum amount of space required per person. It follows that 'high density' in one cultural context can mean something completely different in another. Since 'crowding' is the negative evaluation of particular densities (and some densities may be evaluated as too low), both at the site level and within dwellings, 'culture' plays a significant role in definition of density and space standards.

Culture can play that role in different ways and through different mechanisms. Among these are definitions of desired interactions versus undesired ones, for example, among kin or strangers. The definition of kin also varies cross-culturally. Also variable are the defenses used to cope, which can be physical elements, organization of activities in time, manners and rules regarding interaction, hence privacy mechanisms, and others. We have already seen that the specific systems of settings used greatly change what is considered to be crowded (see Figure 7, p. 22).

The negative effects of density and crowding occur because such situations lead to stress. In this connection, 'culture' needs to be considered in two respects. First, most models of stress include two elements: situations and individuals.

However, stress is the outcome of an evaluation, or matching, of a situation against certain norms, desired levels, the meaning of the situation, etc., and one is dealing with *perceived stress*. For example, the view that density and crowding (itself the result of a negative evaluation of den-

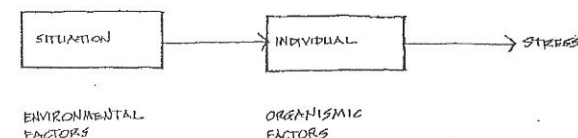


FIGURE 17A. The commonly used two-element model of stress (based on Rapoport A (1978) Culture and the subjective effects of stress. *Urban Ecology* 3(3):244, Fig. 1.).

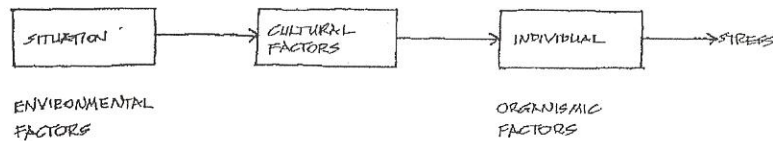


FIGURE 17B. Three-element model of stress (based on *op.cit.*, p. 249, Fig. 3.).

sity) lead to stress due to exposure to strangers depends on who are defined as "strangers," as well as the defenses available. The stressor is then subjectively defined and depends on some norms, expectations, schemata, etc. These, as we will see, are aspects of culture. Therefore, one needs to use a three-element model of stress, which considers the role of culture.

The second way in which culture plays a role in considerations of stress is through the variability of what are considered to be stress-relieving settings (what have been called "restorative environments").¹¹ Although the literature has emphasized natural environments, and they do seem important, in reality a wide range of settings and behaviors are used, which vary with culture. This variation is found among individuals based on their lifestyle (see Chapter 7) and groups within countries. Some of the mechanisms used, and the related settings, may vary significantly, although I am not aware of research on this topic. Here also, the nature of the system of settings needs to be considered. In cases where all the settings in the system are stressful (including the dwelling), i.e., there are no stress-relieving settings, the problem is far more serious. In any case, the relationship between the primary setting (the dwelling) and the other settings used (in culture-specific ways) within the larger system must always be considered.

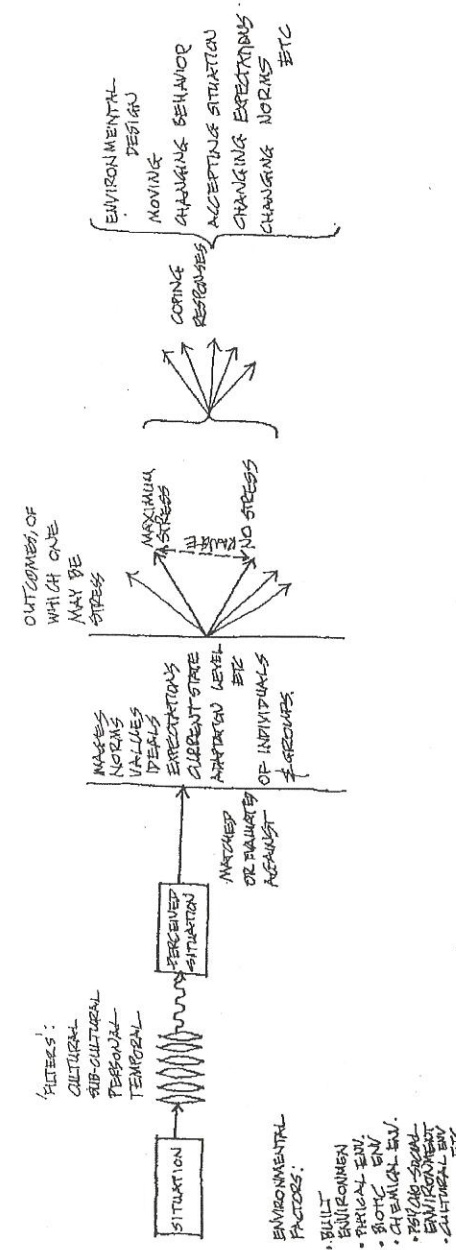


FIGURE 18. A more detailed version of the three-element model in Figure 17B (based on *op.cit.*, p. 246, Fig. 2.).