

histories and of the terrestrial setting (Vayda 1969). Political action is one way of changing a culture self-consciously, but much change continues to result from unselfconsciously responding to changing world views, technological capabilities, and perceptions of how other cultures are evolving.

The attitudes toward both basic and cognitive needs and the degree to which they require fulfilling vary from culture to culture. Indeed, the beliefs about the way some needs should be fulfilled help define a culture. In some cultures, people seem to have a broad need for affiliation and use many symbols to denote their membership in various organizations. This may not be an attribute of all members of that society but may be a strong need for the majority. Similarly, a group of people may have a high need for achievement, and once attaining it they may have a high need for conspicuously consuming to display that achievement (see Reissman 1964). While this behavior is often a personality attribute of an individual, it can also be the personality attribute of a people—a culture.

Social roles within a culture

Each individual has a role to play within a culture. This role establishes a routine to a person's life. Needs are seen from the perspective of the role. Identifying them is not easy because roles overlap. The productive roles of individuals may well overlap the roles required at a stage in their life cycles—for instance, being a parent and a wage earner may occur simultaneously. Similarly, being a child in a family or being elderly are not only stages in life cycle but social roles. They are ways of establishing a place in society. In some societies the roles have traditionally been rigidly defined by gender and/or the role of one's parents, for instance. Although there is no place for it in the original Hindu Vedas, the caste system that evolved as a part of Hinduism and Buddhism rigidly assigns people of certain occupations to a specific place in the hierarchy of places in society. Although castism is illegal in both India and Japan, the roles of untouchables (Harijans in India, Eta in Japan) are still rigidly defined in both countries. Crossing social barriers is extremely difficult.

The daily routine of an individual may be a major factor in establishing how the basic necessities of life are met and also in what they wish to do with their spare time. A person isolated at home with children most of the day may have very different needs than a person who works on an assembly line or an executive who has a sedentary occupation. A general rule of thumb for a fulfilling life is that the activities occurring

during breaks in the routine must satisfy needs complementary to those served by the routine.

Environmental setting

Cultures and all artificial physical environments exist within particular terrestrial settings. Each setting has a specific set of affordances. What one knows about the world and thus the perception of needs is shaped by these affordances. The geographic setting is thus part of the culture, shaping it and being shaped by it, and is the repository of the myths and memories of its inhabitants.

Human needs and the built environment

There are continuing attempts to take an empirical, human needs approach to urban design. This is apparent in the writings of Christopher Alexander, particularly his early work (e.g., 1969) and that of Alexander and his colleagues (1977, 1987), the writings of Kevin Lynch (1982, 1984), and the architectural work of architects such as Ralph Erskine (Egelius 1980a, 1980b), Herman Hertzberger (1980), and Charles Moore (Littlejohn 1984; Johnson 1986). It is now possible to give a much clearer portrayal of the relationship between the built environment and human needs fulfillment than the deterministic models of the Modern architects.

The concept of "affordance", borrowed from the work of psychologist James Gibson (1979), is increasingly used among designers because it adds conceptual clarity to the understanding of the link between the built environment, human behavior, and values and needs fulfillment. Any pattern of the built world affords certain activities or aesthetic interpretations. These patterns enlarge or constrain our options for behaviors—physical and mental—depending on the overall configurations and properties of the layout of the built environment.

To meet their needs, people must make behavioral choices. Such choices may be achieved in a number of ways. Individuals can adapt themselves either psychologically or physiologically to a situation; the former may often be difficult and stressful and the latter largely impossible. They can also manipulate the nature of a situation through social or institutional modifications. These changes may, in turn, necessitate making changes in their location in the physical environment or the structure of the built environment.