APPENDIX I: BEHAVIOR

[Canter, David. Psychology for Architects. p.152-153]

"One way of summarising the contribution of psychology to architecture is by suggesting that, somewhat paradoxically, it is the view of man which psychology provides which is its greatest contribution. This is the view, in lay terms, of what 'makes people tick'. Or slightly more technically, the appropriate 'model of man'. If a designer sees people as essentially **passive**, responding to the pressures of his building in a simple and direct way, then this will shape the building form which he produces. On the other hand a model which has its roots more directly in organic or biological analogies, which sees people as consciously trying to **adapt to**, and sense of, their environment leads to a different (and often more indeterminate) type of architecture. The great dangers of the 'self-fulfilling' prophecy require that these models are brought out into the open and tested objectively. For instance, a building which limits the possibilities of adaptation will tend to encourage regular, unvaried **behaviour**. If the designer looks at this behaviour he will say; 'There I told you. People don't need adaptable buildings'. Thus a mechanical

model of man on the part of the designer may lead to mechanical-like behaviour on the part of the users. Here perhaps lies the strength of the academic psychologist's approach over the architectural practitioner. Where the architect can only really test the degree to which the **patterns of behaviour**, in the buildings he designs, fit his implicit or explicit views of how and why people behave, the academic, working with his abstract stimuli and often more or less independently of real world problems, can test and compare the basic models he has of how and why people behave as they do. His conclusions on this are the essence of what he has to pass on to those who must apply his findings."

[Wheeler, L. Behavioral Slide Rule for College Architects. p.106]

"**Behavioral science** - the analysis of man's interaction with his environment - is a new tool for designers and architects."

"and the development of a new creative kinship between the architect and the social scientist, the communications expert, and the anthropologist."

[Stea, D. Space, Territory and Human Movements. p.13]

"We tend to regard space, in the designed environment, as defined by physical barriers which are erected to restrict motion and the reception of visual and auditory stimuli. In fact, it is also defined by the behavior of organisms occupying the space. The characteristics of their **spatial behavior** are many, but several similar ones have been grouped under the general heading 'territoriality'.

"In civilized man, aggression is highly socialized, so we cannot always use this form of overt behavioral expression as an index. Nevertheless, we have reason to believe that **'territorial behavior,'** the desire both to **possess** and **occupy** portions of space, is as pervasive among men as among their animal forebears - witness the attitude of slum-area street gangs toward their 'turf.' There is some suggestion, coming largely from the animal world, that territorial possession, as had originally been supposed, but is equally or even more fundamental."

[Stea, D. Space, Territory and Human Movements. p. 16]

"This relates to what some architects may mean when they speak of space and sense of space, to the problem of the familiar path in the Umwelt (phenomenal world) described by Jakob von Uexkull three decades ago. Thirty years later, John Barlow suggested that von Uexkull's three sensory spatial cues could be reduced to two: sense of direction and sense of distance. From recent experiments with human

and animal subjects, we know that humans are not the only ones who tend to alter their **familiar paths** in retracting a point-to-point route. But we do not really know very much about the variables controlling the establishing of familiar paths in designed environments. That no two human Unwelten are the same implies that even two **objectively** identical familiar paths are **subjectively** different. The difficulty one experiences in finding one's way about a city on the basis of directions given by a friend."

[Rapoport, Amos. History and Precedent in Environmental Design. p.246-247]

"it is likely that even if people are 'unaware' of their **needs**, they will respond to characteristics of settings appropriate to walking, select such settings for walking, and walk more in settings possessing these. This congruence between walking and supportive characteristics should be most in evidence in settings specifically created for walking, when that was the only, or principal travel mode."

"the effect of environments on people. That hinges on the validity of the notion of **environmental determinism**. The evidence makes it quite clear that the design of the physical environment alone cannot lead people to engage in any activity. Moreover, it is easier to be negatively determining, that is, to block given behaviors by making them impossible or very difficult, than it is to be positively determining - to generate activities or behaviors. In other words, motivation may overcome unsuitable environments, at a cost, but environments cannot generate motivation (Rapoport 1968a, 1969c, 1977, 1983c). Given the motivation or predisposition to walk, for example, the question becomes, What physical characteristics of the environment are most congruent with, and supportive of, such behavior?"

"People are not, in general, put into environments that then **affect them**. Rather they **select environments**, leaving those they find undesirable and seeking out desirable ones; there is a choice of settings based on preference (Rapoport 1977, 1980b, 1983c). This notion of **habitat selection** is very basic and, although derived from ecology, seems to apply very well to humans (e.g. Rapoport 1985b). One can study how different individuals and groups make different choices using different priorities and consequently are distributed differentially across different settings; not all settings attract people equally. This choice process involves an interplay on inborn characteristics and experience."

"it then becomes necessary to distinguish between **wants** and **needs**, but this needs to be done very cautiously and on the basis of reliable knowledge (Rapoport, 1980b, 1985b). The question being considered is which kinds of habitats, that is, settings will be (or would be) selected for pedestrian activities. Note, however, that pedestrian activities consist of two major kinds: **dynamic**, for example, walking and strolling; and **static**, for example, sitting or resting (e.g. DiVette 1977; Rapoport 1977, pp.

246-247). Both are pedestrian in the sense that people are not riding or driving; in that sense both are likely to differ from settings for traffic. Given that there are many possible types of space (Rapoport 1970b, 1977), both the preceding examples are pedestrian in contradistinction to traffic/motorist spaces, that is, **human space** rather than machine space."

"Dynamic and static spaces are likely to have, or require, different characteristics. **Movement spaces** tend to be linear, narrow, and have high complexity levels so that they entice with hidden views, encouraging walking, strolling, and sauntering. **Rest spaces** tend to be more static and wider, frequently contain greenery, require sitting facilities, and so on. Such spaces, whether plazas or avenues, encourage visual exploration from one spot - mainly of other people; they need to act as stages for social behavior for people who become objects of interest and provide the requisite complexity levels."

"There is also evidence that different perceptual processes operate in linear spaces (streets) and nonlinear spaces."

[Rapoport, Amos. History and Precedent in Environmental Design. p.253]

"I am concerned with perceptual variables as opposed not only to cultural but also as opposed to **cognitive** (having to do with orientation, imageability, and the like) (e.g. Lynch, 1960; Rapoport 1977); and also opposed to **associational**. This means that very little explicit consideration is given to the meaning of such settings. In practice, of course, these two aspects cannot easily be disentangled. It is likely that settings with perceptual characteristics supportive of pedestrian movement are also settings that signify or communicate their appropriateness for such behavior and activities."

"Yet **meaning** is important because, as already indicated, one is dealing not only with manifest and instrumental functions but also with latent aspects, among which meaning plays the most important role. In choosing such settings, certain perceived characteristics are matched against certain expectations, norms, images, and so on, which makes this process conceptually similar to other forms of habitat selection based on perceived environmental characteristics (Rapoport 1977, especially chapter 2; 1980b). It can, however, also be argued that meaning is more important in the case of pedestrian **static** settings (such as plazas) than of settings for pedestrian **dynamic** behavior, such as streets."

[Barker, Roger G. The Stream of Behavior. p.1-3]

"**Temporal aspects of behavior** are among the most compelling in experience and among the most easily measured of all of behavior's unnumbered characteristics. Despite the saliency of the time dimension

however, little is known about the actual arrangement of behavior along its temporal axis. The studies reported in this volume attempt to push forward on this frontier; they are all empirical approaches to the stream of behavior and they have had to cope with some common problems."

"The stream of behavior can be divided into an infinite number of parts. These countless parts of the behavior continuum are of two types so far as their origin along the time dimension is concerned. One type, here called **behavior units**, consists of the inherent segments of the stream of behavior. The boundaries of behavior units occur at those points of the behavior stream where changes occur independently of the operations of the investigator. Alpha waves, psychotic episodes, and games of marbles are behavior units. Behavior units enter psychology when investigators function as transducers, observing and recording behavior with techniques that do not influence its course."

"The other parts of the behavior stream may be appropriately called **behavior tesserae**. Tesserae are the pieces of glass or marble used in mosaic work; they are created or selected by the mosaic maker to fulfill his artistic aims. Similarly, behavior tesserae are fragments of behavior that are created or selected by the investigator in accordance with his scientific aims."

"**Behavior Units** are **natural** units in the sense that they occur without intervention by the investigator; they are self-generated parts of the stream of behavior. **Behavior tesserae**, on the other hand, are alien parts of the behavior stream in the sense that they are formed when an investigator, ignoring or dismantling the existing stream of behavior, **imposes** or chooses parts of it according to his own preconceptions and intentions."

"The identification and description of the natural entities or events of a science, and of their relevant contexts or environments, and the incorporation of these into a unified system of concepts constitutes the **ecological** side of science."

"Even in the case of so precisely contrived a system as geometry, and such a static, natural system as the earth's surface, an interaction is evident in the superimposed maps of eastern Kansas."

"In this task they were tough-minded like the surveyors; they allowed few natural features of the behavioral terrain to interfere with the structures imposed by their experiments, tests, questionnaires, and interviews. They imposed a geometry upon behavior, a geometry grounded upon the axioms of experimental design and statistical methods, **a geometry** which reveals nothing directly about the **behavioral surface** upon which it is imposed."

[Barker, Roger G. The Stream of Behavior. p.20-21]

"The empirical study of behavior units and their temporal arrangement is a central issue in history, in linguistics, in music, in the literary arts, and in the dance. Laymen, too, find the **structure of the behavior stream** to be a manageable phenomenon, and they have much practical knowledge of it. In the ordinary course of like, the beginning and the end of actions are of utmost importance, for awareness of the arrangement of a person's own and his associates' behavior streams is the basis of effective social behavior."

"the stream of behavior is not a formidable datum, that it occurs in bursts, pauses, and pieces of many sorts which can be described and evaluated for both scientific and practical purposes."

[Barker, Roger G. The Stream of Behavior. p.23]

"Is the **stream of behavior** seen as a **continuum** or as a **sequence** of discrete units? If the latter, do different people see the same units? People behave toward others, and they speak and write about their own and other's behavior as if they perceive behavior in units; and the degree of harmony with which interacting individuals guide their behavior suggests considerable agreement regarding the beginning and end-points of the behavior units they discern."

[Barker, Roger G. Ecological Psychology. p. 11]

"Such **physical-behavioral units** are common phenomenal entities, and they are natural units in no way imposed by an investigator. To laymen they are as objective as rivers and forests, and they can be defined by denotation; they involve, in the beginning, no theories or concepts; they are parts of the objective environment that are experienced directly as rain and sandy beaches are experienced. An initial practical problem of ecological research is to identify the **natural units** of the phenomenon studied. The essential nature of the units with which ecology deals is the same whether they are physical, social, biological, or behavioral units: (a) they occur without feedback from the investigator, they are self-generated; (b) each unit has a time-space locus; (c) an unbroken boundary separates an internal pattern from a differing external pattern."

[Barker, Roger G. Ecological Psychology. p. 16-17]

"with some effort and experience the extra-individual assemblies of behavior episodes, behavior objects, and space that surround persons can be observed and described."

"Such entities stand out with great clarity; they are common phenomena of everyday life. We have called them K-21 behavior settings (frequently shortened to **behavior settings** and settings in the text). Studies of K-21 behavior settings provide evidence that they are stable, extra-individual units with great coercive power over the behavior that occurs within them."

[Barker, Roger G. Ecological Psychology. p. 19-20]

"The **behavior-milieu parts** are called synomorphs. The physical sciences have avoided phenomena with behavior as a component, and the behavioral sciences have avoided phenomena with physical things and conditions as essential elements. So we have sciences of behavior-free objects and events (ponds, glaciers, and lightning flashes), and we have sciences of phenomena without geophysical loci and attributes (organizations, social classes, roles). We lack a science of things and occurrences that have both physical and behavioral attributes. Behavioral settings are such phenomena; they consist of behavior-and-circumjacent-synomorphic-milieu entities. We call these parts of behavior setting behavior-milieu synomorphs, or more briefly, synomorphs. Structurally a behavior setting is a set of such synomorphs."

[Barker, Roger G. Ecological Psychology. p. 26-27]

"In addition to their essential, unvarying, structural and dynamic attributes, behavior settings have many other properties. Those we have studied will now be briefly described;"

"**Geographical locus**. Every behavior setting has a precise position in space which can be designated with the degree of precision the investigation requires."

"**Temporal locus, serial occurrence, and duration**. Behavior settings may occur only once, on a specified day, or they may recur according to some temporal schedule of days."

"**Population**. A behavior setting has a definite number of inhabitants at each occurrence. This population can be identified with respect to whatever attributes are relevant, such as age, sex, social class, town residents, nonresident inhabitants."

"**Occupancy time**. The number of person-hours a behavior setting is occupied over a designated period of time is the occupancy time of the setting for that period; it is the product of the mean population per occurrence and the duration in hours of all occurrences."

"**Functional position of inhabitants**. Behavior settings have an internal structure, and individuals and categories of individuals occupy the various parts to different degrees. An important feature of the

internal structure of a behavior setting is the power that different parts exercise over its functioning."

"We have called this dimension of the internal structure of behavior settings the penetration dimension; and we have called those parts of setting with some direct power over all or a part of its functioning the performance zones; persons who inhabit performance zones are performers."

"**Action patterns**. The pattern of behavior of a setting has limitless attributes."

"**Behavior mechanisms**. The behavior pattern of a setting involves different effector systems to various degrees. The degree of involvement of the following mechanisms has been systematically studied; affective, gross motor, manipulation, verbal and thinking mechanisms."

"**Pressure**. Behavior settings differ in the degree to which they bring pressure upon different population subgroups to enter and participate in them."

[Craik, K. H. The Comprehension of the Everyday Physical Environment. p.33]

"**Motational systems** have been developed as standardized methods, akin to choreographic notation systems, whereby trained observers may note the sequence of principal elements and features in the experience of moving through environmental displays, as in the movement along highways and pedestrian pathways."

[Eisenman, Peter. The Affects of Singularity. p.45]

"But crucial to this argument, is the fact that the mediated behaviour of today does not come from any **personal or individual form of behaviour**; it is collective behaviour. Media not only sets out to destroy the possibility of individual affect in order to be affective itself, but also must substitute **effect** for **affect**. Media assumes that an affective message must be an effective one and this influence alone has entirely altered our concept of affect as well as **individual behaviour**. For example, media cannot tolerate the possibility of mistake, the misgotten message, error and untruth, all of which are part of the possibility of affect.

Architecture not only does not deal with affect but it no longer deals with effect as well as strong media. Then how does architecture stand in the face of media, and specifically with the loss of the affecting aspect of individual expression. A possible way of returning architecture to the realm of affect may not be through the idea of the individual or the expressive, or through any kind of standardization or repetition of a norm but, in fact, through an idea of singularity.

Architecture - now operating as weak media - needs to regain the possibility of an affective discourse.

The term singularity begins to explore the possibility of a discourse which brings to the electronic paradigm what particularity, individuality, personal expression was to the mechanical paradigm. That is a general context for exploring the possibility of an architecture of affect. It begins to suggest a contemporary notion of how architecture which is seen as singular can operate as weak media in an affective way within the electronic paradigm.

One way to approach the question of affect in architecture is by looking at the difference between singularity and individual expression, and to answer the questions: 'Why is individual expression no longer valid?' and 'Why is singularity not merely a form of expressionism?' The difference is at the heart of the idea of singularity.

Singularity, as the Japanese critic, Kojin Karatani, suggests is the difference between 'I' the individual subject and the 'I' which belongs to the general category of everybody."