

# **Chapter 10**

## **CONTRIBUTIONS OF ENVIRONMENTAL PSYCHOLOGY TO VISITOR STUDIES**

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I view environmental psychology as the academic parent discipline of visitor studies. Philosophically, both areas share common approaches. The goals and methods of both fields are also shared. The purpose of this paper is to review the development of the two areas and examine the philosophical similarities that unite them.

### **Definition of Environmental Psychology**

One definition offered by Fisher, Bell and Baum (1984) is ". . .the study of the interrelationship between behavior and the built and natural environment." Gifford (1987) defines it as "... the study of transactions between individuals and their physical settings." Both of these definitions emphasize the interaction between people and their environments. This means that the behavior and environment must both be measured together. Individual or group behavior is situation specific and can only be understood in the context of the environment in which it occurs.

### **History of Environmental Psychology**

Environmental psychology as a conceptual approach to understanding human behavior has had a short history. In the 1940's psychologists began to use the research from the fields of human engineering and human factors to look at the effects of the work environment on productivity and worker morale. In the 1950's behavioral scientists and architects first

and recording must be tailored to both the nature of the behavior and the situation, many diverse methods of recording are used. Self-report methods including interviews, questionnaires and surveys, rating scales and bipolar adjective checklists are frequently used to assess users' subjective reactions to the environment or exhibit. More recently focus groups (usually used in marketing studies) have also been used to obtain qualitative information about visitors' perceptions of an exhibit. Direct behavioral observation is used when objective or quantitative information is required. When appropriate, direct observation can also be used to validate self-report data. Some of the direct observation methods used include tracking (to measure the percentage of users stopping and duration of use of an exhibit or a facility) measurement of traffic flow patterns, trace or outcome measures (such as litter, worn paths, fingerprints, or other indications of use or misuse of an area). Archival information is another source used in evaluation, such as attendance data, injury or accident records, complaints, etc.

4. **Interactionist perspective.** Both areas share the view that behavior cannot be separated from the environment in which it occurs. It only makes sense to measure the behavior in the actual environment because behavior is assumed to be situation specific. People react to total environments. If one exhibit encourages interaction the visitor may generalize and attempt to interact with other exhibits even though they were not designed to be interactive (i.e., touching mounted specimens). In another example, a building's formal facade and entrance may intimidate visitors so that they are discouraged from exploring and behaving in ways conducive to learning. In spite of the different focuses of the fields, some general principles governing behavior are evolving from the accumulating literature in both fields.
5. **User perspective.** Sommer (1983) emphasizes the role of environmental psychologist as advocate for the users of a building. Architects judge buildings more for their aesthetic and engineering value than for their utility to the users. Similarly in museum or zoo environments exhibit designers all too often design to please other design professionals rather than the visitors. Only when the user's perspective is included in the design phase (front-end analysis and formative evaluation) can we be assured that an exhibit or facility will work as effectively as it should. Simply asking people how the building or exhibit should be designed is not adequate. Many conflicting goals must be resolved in any project. In a building the aesthetic and public relations aspects must be coordinated with budget

considerations as well as the needs of the various user groups (employees, administrators, staff and visitors). In designing exhibits the constraints of the general theme of the area in which it is to be placed, budget, maintainability and educational values must be balanced in an effective exhibit. The role of the environmental psychologist is to assure that the needs of all the user groups are accurately known so that decision makers can make informed decisions.

## Summary

Historically, visitor studies began earlier, but during a relatively dormant period environmental psychology evolved. During the late 1960's and 70's both areas of study have grown so that today both areas are benefiting from the cross fertilization of philosophical approaches and methodology. Both areas share beliefs in pragmatism, empiricism, and methodological eclecticism. Both areas also utilize the interactionist perspective and are advocates for the users or visitors. In fact, a number of environmental psychologists are doing visitor studies. As the literature of environmental design matures, designers will be able to make better informed decisions during the early planning stages of a project that will assure the success of the completed project. Both areas hold the promise for the future of facilities and exhibits that work for the people who use them.

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began to cooperate in designing buildings to better meet the psychological and behavioral needs of the occupants. The name "environmental psychology" first was used in a conference on the design of psychiatric hospitals (Ittelson, 1964). The focus of this conference was how wall color, furniture arrangement, access to private space and other factors affected the therapeutic progress of the patients. By the mid 1970's several universities began offering programs in environmental psychology. The classic study on the variables that determine why people use public plazas by William Whyte (1980) was a model for how empirical research could improve public spaces. The results of this research have been incorporated into the The New York building code for public plazas. Robert Sommer's book *Social Design: Creating Buildings With People in Mind* (1983) emphasized the role of environmental psychologists as advocates for the users of a building or facility. He pointed out that the users of a building are seldom consulted when design decisions are being made by architects and their corporate clients. By 1987 the literature in environmental psychology had grown to maturity as evidenced by the publication of the two volume *Handbook of Environmental Psychology* by Stokols and Altman which documented the many applications of environmental psychology. In 1988 a special edition of *Environment and Behavior* was devoted to Zoological Parks and Environment-Behavior Research.

## History of Visitor Studies

The earliest research in visitor studies (e.g., Robinson, 1930; Melton, 1933) predates the development of environmental psychology. Despite the early beginnings, the study of visitors went into a period of relative dormancy until the late 60's and early 70's spawned a renewal of interest in visitor studies. Shettel's (1968) article on the criteria for judging the quality of museum science exhibits was one of the first of the new studies of visitor behavior. Shettel, Butcher, Cotton, Northrop and Slough also published "Strategies for Determining Exhibit Effectiveness" in 1968. Later studies by Shettel (1973 and 1976) helped teach how to evaluate exhibits from the visitor's perspective. Screven (1973) was one of the first authors to conduct experimental studies in a public museum. Roger Miles at the Natural History Museum (London) was also an early advocate for visitors (Miles & Tout, 1978 and Miles & Tout, 1979). During the period of the 70's and early 80's many museums and zoos expanded and renovated exhibits to accommodate increasing numbers of visitors. Along with this expansion was the need for improved accountability, often required by public funding agencies. Both museums and zoos began to take their educational mission more seriously,

increasing the interest in visitor studies. More sophisticated measures of exhibit effectiveness were needed than the usual "number of visitors per year".

Recent publications reflect the current interest in the area as well as an increasing consensus on methodology. The publication by Steve Bitgood of the *Visitor Behavior* Newsletter in 1986 offered a systematic means of communication between people engaged in visitor studies. In 1987, Loomis' book *Museum Visitor Evaluation* was published. This book reviewed much of the work in the field and has provided a definitive reference for the field. Finally, the 1988 Visitor Studies Conference in Anniston, Alabama, provided an opportunity for people doing visitor studies to convene exclusively for purposes of visitor studies. The success of the current conference indicates that there is a growing interest in the area of visitor studies. One of the factors responsible for the current interest is the shift toward less public funding of zoos and museums and the consequent reliance on visitor admissions and private funding sources to maintain adequate funding levels.

## Relationship Between Environmental Psychology and Visitor Studies

There are several philosophical similarities between the two fields.

1. **Pragmatism.** The focus of both fields is on what works, theory is less emphasized. Both areas value utility and functionality over aesthetics. The most attractive building or exhibit may fail to meet the needs of the users. Happily, in designing buildings and exhibits, functionality and aesthetics are often compatible goals.
2. **Empiricism.** In order to answer the question of what works, empirical observations are required. To determine the most effective design requires the systematic collection of information from the people who will ultimately use it. Front-end analysis in which the objectives of a building or exhibit are determined and formative evaluation in which mock-ups of the facility or exhibit are tested with visitors or users are both valuable tools in the design process. Summative evaluation provides additional evidence of the effectiveness of the exhibit and helps determine the strategies which will be effective in future buildings or exhibits.
3. **Methodological eclecticism.** Since the methods of observation

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