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Research Annotation 05
Environment, Cognition and Action
Chapter 3: *Cognition of Physical and Built Environments*, Golledge

In this chapter of *Environment, Cognition and Action* the author explains how environment influences knowledge and experience. Environments vary in a number of ways and may be direct (active, physically tangible) or secondary (mediated, virtual) such as the case of visual representations like photos or videos. Interactions with these types of environment are dependent on the subject and the interpretations of the environmental cues present within a given environment. Golledge clarifies the term environmental cues:

> In the language of environmental cognition research, identified or labeled occurrences can be called 'environmental cues'. This term covers occurrences that have a unique physical existence (e.g., a tree, a house, a sign, a mountain, a freeway, segment, or a river), regardless of whether it is part of the natural or built environment (pg. 37).

The number of environmental cues is so large in quantity that they must be grouped into classes. Given the large body of research, these cues can be readily differentiated with decision-making models. Golledge contends that these cues are place-specific and influence the cognitive map is developed (pg. 37). The responsive perceptions may shift as the respective cues present in the environment are also subject to change. Thus researchers must focus on "anchors" of the cognitive map and the meaning assigned to said anchors (pg. 38-39).

The work Golledge draws from is fundamentally quantitative as it is situated in geographical and environmental cognition research. The field investigates environmental knowledge structures, however it lacks qualitative analysis. Where environmental cognition research is focused on computer modeling as a methodology as a means of answering deeper questions, it distinctly lacks a qualitative approach for the answers it seeks.

Most interesting of this article was the question of how people structure knowledge and the subsequent relationship between knowledge structures and the environment. Within environmental cognition research, the aim is to establish a knowledge base as a reference point for how value is assigned to experience (pg. 42). Golledge goes on to describe how knowledge structures belonging to an individual are constantly inundated with new information that must incorporated into what the author refers to as a "mental map" creating the foundation of the individual's knowledge base:

> A model of existence then would be one in which an organism is constantly an inexorably bombarded with infinite bits of information all of which have the capacity for passing through sensory filters. Some of these may become entangled in nets of awareness, meaning, comprehension, understanding, and so on, and then stored in long-term memory (pg. 43).

Golledge speaks to the individualized nature of knowledge, but he also acknowledges the shared knowledge embodied in culture through social constructs. Building on this concept, environmental cognition research can understand how knowledge bases are formed individually as well as socially. In gaining a sense of how individuals filter and incorporate information into their respective knowledge structures, academics in environmental cognition can better understand how environmental cues fit into the formation of the mental map (pg. 43).

While computer models may be useful for the categories established by past environmental cognition research, further insight may be gained by more in-depth social science research. This chapter provides a solid foundation for how the physical environment--in addition to the built environment--influence perception and knowledge structuring by the individual. Implementing more philosophical and social science theories may aid in rounding out some of the quantitative methodologies and scientific arguments made in this chapter.