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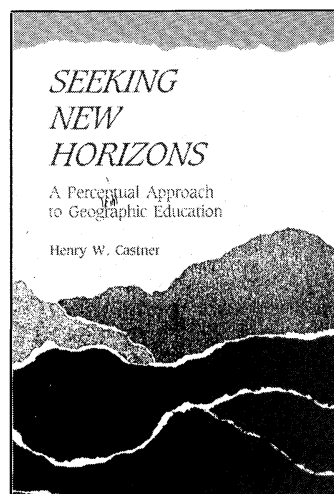
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CASTNER, Henry, W. (1990) *Seeking New Horizons. A Perceptual Approach to Geographic Education*. Montreal/Kingston, McGill-Queen's University Press, 206 p.



Today, in the media, there is increasing evidence that many school students are geographically illiterate. Their awareness of the world around them is limited or erroneous. Is a major contributing factor to this situation the current approach to geographic education? In Castner's own words his book presents an "unorthodox" (p. 6) approach to geographic education — a perceptual approach. An active, rather than passive approach to knowledge and learning, which "carries with it great potential for a discovery approach to education" (p. 19).

The book comprises eight chapters; the first seven consider some of the ways individuals experience and describe the world, setting the scene for the final chapter which outlines Castner's perceptual approach to geography. Chapter one discusses the nature of *graphicity* and outlines general issues associated with changing the existing geographical curriculum. The general education theme is continued in chapter two which provides some understanding of the limits within which changes to a geography curriculum could be initiated. This chapter, influenced by the work of Piaget, provides statements on "what children are taught", "what children can learn" and "what children should be taught".

Information about the world is gained by discrimination through the senses. For most people the two most important are vision and listening. Thus chapter three is devoted to a detailed description of vision; the components of vision, visual sampling strategies (spontaneous and task specific viewing), pure and cognitive perception, and perceptual constancy (after Gibson). Chapter four examines the parallels between the perceptual system of seeing and the auditory system of listening as Castner acknowledges that his approach to geographic education has been influenced by the music teaching philosophies of Shinichi Suzuki and Carl Orff. In these techniques critical listening, repetition and improvisation are seen to play vital roles in guiding musical development. Castner believes that to improve basic skills in visual perception a visual analogue to improvisation needs to be defined, and that the process of "mapping" constitute this analogue. Map making and mapping are perceived to be two quite distinct procedures. *Map making* is

concerned with the *product*, the map, and its structural components while *mapping* is concerned with what one wishes to communicate through the *process* of mapping.

Cartography has been described as an art and a science. In chapter five Castner argues, however, that cartography's connections with art are "neither clearly identified by practitioners nor recognized by educators" (p. 90). He advances several reasons for this situation and suggests how goals common to cartographic, geographic and art education might be promoted. Chapter six discusses the nature of science, science education and scientific knowledge with their implications for geographic education.

Chapter seven opens with an overview of the *processes* involved in the communication of cartographic information and the implications for cartographic design practice and cartographic education. Castner concludes that if more was taught of the "perceptual logic of graphic images and how they can be manipulated for specific purposes children would begin to use a wide range of graphics in communication rather than one small set, namely, reference maps" (p. 161).

The final chapter presents the perceptual approach to geography: "A perceptual approach to geography rests on the proposition that the basic discriminations we make in visual perception can be related to a similar number of cognitive identifications of categories of geographic information. An analysis of these categories, in turn, suggests a set of defining processes or conceptual rules" (p. 172). Through diagrams and explanatory text, Castner first identifies eight perceptual discriminations that are basic to geographic thinking; textures, colours, shape (labels), shape (form), context (orientation), context (position), invariants (statistical or numeric) and invariants (structural or topological). He shows how these eight discriminations correspond to eight visual cognitive identifications that are basic to geographic thinking, each of which can be related to distinct conceptual goals of geographic thinking.

The author's objective "to make a case for an alternate approach to geography and cartography through the definition and elaboration of the idea of geographic thinking" (p. 16) is achieved. Subject matter drawn from a diverse number of fields does provide a sound basis for looking at the development of a perceptual approach to geography. However, in the final chapter, more examples of relationships between the corresponding elements would have been beneficial. In addition, the reader is left with numerous questions about how the perceptual approach can be practically applied in a classroom setting.

This book was written primarily for those concerned with teaching geographic education at the elementary and high school levels. However, it merits careful attention by instructors at all levels. It advocates changes to the traditional method of geographic education which will challenge those interested in presenting students with an exciting and stimulating approach to geography.

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