

Castner, H.W. (1990). *Seeking new horizons: A perceptual approach to geographic education*. Montreal: McGill-Queens University Press, 206 pp., \$34.95 (hardcover).

In *Seeking New Horizons*, Castner presents a theoretical and philosophical exploration of the implications of cartographic communication research for the geographic education of young children. Castner asserts that maps are integral to the way in which we first learn about the world around us and that map teaching and the way we view and represent our world should be infused with a set of ideas radically different from those used at present. His world is perceptual, but not perceptual in the narrow sense of the word. Perception is viewed as closely linked to cognition as an educationally significant entity in itself and as an important focus for teaching.

Castner states in his introduction that in the core of the book (chapters 2 to 7) he wants to consider the various ways in which we experience and describe the world. Specifically, he is seeking common themes, ideas, and questions. In chapter 1 he argues for a new and enlarged concept of *graphicacy* as the visual counterpart of *literacy*. He suggests that those sharing this graphicacy should focus on the perceptual potentialities and needs of learners. He further suggests that educators can learn a great deal from research in cartographic communication. If teachers properly understand graphicity, they will recognize that children can deal with visual resources of considerable graphic complexity as long as the intellectual complexity of these resources is appropriate to their experiences and developmental characteristics. An aerial photograph is an example of such a resource and it is no coincidence that Castner makes use of such material in his contributions to the school atlas, *Thinking about Ontario*. For Castner the heart of graphicacy is the skill of mapping — a complex, comprehensive skill which is foundational not only to geographic thinking but to thinking in general. Mapping in its most fundamental and inclusive sense is the skill of taking objects and experiences which were initially perceived as isolated in space and then arranging them intellectually so that

there is coherence. He sees mapping as a fundamental human activity, an activity worthy of more creative, rational, and serious efforts by educators.

In chapter 2 Castner examines research on children's intellectual and perceptual development and concludes that geographic knowledge is not elaborated in a way that lends itself to easy translation into a developmentally sensitive pedagogy. He asks how we can use children's strong visual-perceptual potential to best effect to make geography accessible and attractive for children. In chapter 3 he helps to answer this question by providing a detailed description of the human visual system with an emphasis on the perceptual aspects of that system which are most relevant to geographic education.

The centerpiece of the book is the fourth chapter, where Castner reveals a key hypothesis, namely that certain highly successful programs in music education offer seminal insights into the possibilities of perceptual education. He believes that the pedagogic concepts and techniques in the Suzuki and Orff music education programs make use of children's innate abilities in auditory perception to stimulate impressive gains in the discrimination and representation of sounds. The key to the success of these programs lies particularly in their use of improvisation, the purposeful exploration of new patterns and combinations using skills already learned. The Orff-Schulwerk program involves the guiding of children through phases of musical development which lead to improvisation and, ultimately, to creative expression. For Castner, the Orff-Schulwerk approach suggests that the key to a successful perceptual education is helping children master a limited range of skills so that they can confidently and satisfyingly engage in competent explorations of a variety of possibilities. Such an approach can help them explore the various nuances of the important spatial relationships within an area of study. Castner argues that in geography, as in music, improvisation can be a dynamically purposeful and skillful activity which allows a learner to explore the novel character of essential interrelationships. Improvisation abets the teacher's long-term goal that learners grow in confidence and creative understanding as well as the more immediate goal of establishing and celebrating a successful communication between teacher and student.

In chapters 5 and 6 mapping is explored in the context of science and the visual arts. For both areas knowledge is portrayed as a creation of the human mind and improvisational activity is viewed, potentially at least, as an essential thinking process. With reference to the visual arts, Castner regrets a lack of precise goals and suggests that recognition of the goals of music education in the Orff tradition might move some aspects of visual arts/graphics education toward a more purposeful and satisfying curriculum. Graphics education with more clearly defined goals would give improvisation (mapping) a central role to play.

Science education has precise goals and is (or should be) an improvisational activity. Castner recommends that teachers recognize the constructivistic, reconstructivistic, dialectical nature of science. Science is constantly emerging in which theories are constructed to explain events, evidence is gathered to evaluate these theories, and rejected theories are supplanted by new ones.

In chapter 7 Castner explores recent contributions to research in cartographic communication, a field which has contributed a rich conceptual basis for developing improvisational techniques in map reading, analysis, and interpretation. Castner believes that this work provides us with sufficient grounds for a stimulating, improvisational curriculum focused on environmental questions. In the final chapter he seeks to deliver that conceptual basis for an improvisational approach to mapping and graphics education. As Castner explained his theory in the introduction:

It is the discrimination of shapes, colours, textures, contexts, and invariant dimensions in scenes or images that allows us to determine such things as the essential character of objects of information, the boundaries between regions, or the homogeneous cores of areas. (p. 13)

There is little doubt that Castner has provided geography and social studies teachers with a truly innovative approach to their work. While this methodology is based on a lifetime of research, the true test of Castner's ideas will require their widespread deployment in classrooms.

Gary J. de Leeuw
Nigel M. Waters
University of Calgary

Cranton, P. (1992). *Working with adult learners*. Toronto: Wall & Emerson, 234 pp., \$19.50 (softcover).

In the Preface of *Working with Adult Learners* Patricia Cranton sets the challenge for herself to provide practical information for adult educators within a theoretical context. She states that her intent is to go beyond "recipes" and to translate the complexity of adult education into useful information for practitioner/educators who wish "to reflect on their work and to develop their own informed theory of practice" (p. xi). While these are laudable goals, in a short text they necessitate considerable insight, a delicate balance, and an integration of theory and practice.

To use Cranton's words, the first three chapters describe "the broad array of theoretical foundations, learner characteristics, and educator roles" (p. 207). The approach she has taken is to describe briefly a broad array of topics commonly found in introductory adult education texts. In the first chapter, "Theoretical Framework," Cranton begins with a three-page introduction to the field of adult education and then provides an overview of several psychological and educational theories. In an attempt to "provide an organizational framework and a means of identifying the assumptions that underlie practice" (p. 19) she presents a model for working with adult learners. A one-page discussion of the model's connection to the previously discussed theories ends the chapter.