

architects hoping to sharpen their powers of aesthetic criticism. Architects tend to respond well to pictorial information whilst being impatient with abstract arguments. There are indeed numerous illustrations, but they are of mediocre quality and do not always illuminate the argument.

The author relies heavily on the theories of the Gestalt school of psychology which has undoubtedly offered some insights into aesthetic perception. However, there are hints that Weber is treading dangerously close to the discredited Gestalt theory of isomorphism, namely that there is a structural correspondence between the appearance of objects and the pattern of excitation within the visual cortex. He adds that aesthetic satisfaction is the outcome of electrochemical forces achieving cortical equilibrium. This leads to the conclusion that 'the more orderly a configuration, the higher its aesthetic value' (p. 113) and that aesthetic measure is a function of 'perceptual appropriateness'. The aesthetic rating of a scene or object is proportional to the ease with which the visual array can achieve wholeness and order. This is at variance with the likes of Donald Berlyne who argue that aesthetic reward is the outcome of the clash between order and complexity. Aesthetic pleasure is the reward for recognising the orderliness that can be extracted from complexity. The greater the rate of complexity the more the aesthetic impact when it yields to orderliness. Order that is too easily accessible has limited aesthetic potential. This idea has a long pedigree, going back at least to Aristotle.

Where the author is, in my opinion, on firm ground is in the belief that aesthetic perception is rooted in a 'deep structure' common to our humanity. The way we make aesthetic judgements is determined by the biology of the system and therefore this leads to a high degree of commonality. This, of course, is the fault line in all discussions about aesthetics.

Finally, one is left with a feeling that there is a contradiction at the heart of the book in that it divorces the idea of the aesthetic properties of appropriate form from the concept of value. Weber claims that the book is not an enquiry into beauty, yet the principles of value and the nature of beauty are central to any discussion about aesthetics. Any fear is that this would lead to a form of aesthetic dictatorship is unfounded because it is quite possible to discuss value systems without being prescriptive about style or taste. Nevertheless, there is much that is valuable in the book in terms of information and insights, even though one might dispute its central thesis.

In presentational terms, many of the illustrations suffer from being miniaturised, no doubt for economic reasons. Also, the link between the text and illustrations is occasionally tenuous and sometimes obscure.

This is a book to feed the flames of academic debate, it is unlikely to appeal to the average architect who is automatically suspicious of psychologists in whose camp the author is firmly positioned. Even for those who can understand the book, it is limited in its capacity to illuminate the mysteries of aesthetic perception.

Sensuous Geographies: Body, Sense, and Place.

By Paul Rodaway.

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Paul Rodaway is Lecturer in Human Geography at Edge Hill College, Lancashire. He studied at St Andrew's University and the University of Durham before teaching at John Moore University and the West Sussex Institute. His research includes work on phenomenology and group reflective methods, the geographical experience of the disabled, cultural differences in concepts of space and attitudes to the environment, and resource management.

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Paul Rodaway's 1994 book *Sensuous Geographies* has a fuzzy human in the jacket photo. Much the same can be said for the contents inside the book. This is not all bad of course. Human perceptions and conceptions of place and environment are, in important ways, imprecise, passionate, and value-laden. Rodaway's thin book explores some of these themes about human experience of place and environment. This puts it squarely within the 50-odd-year humanist geography tradition of 'environmental perception', a tradition originated by White, Wright, and Lowenthal, and ably continued by Tuan, Pocock, Porteus, Seamon, *et al.* Rodaway's

postmodern leanings also place his work within the contexts of the geographic writings of Buttimer, Soja, Dear and Harvey.

The book is essentially an account of the multi-sensory nature of human experience of place. Especially important is his effort to elucidate the contributions of touch, smell, and hearing; as in other disciplines that study human behavior, the lion's share of research and writing within environmental perception has concentrated on the visual modality. Part I, 'Sense and Geography', introduces the theme and reviews some of the basics of sensory and perceptual theory, primarily from a psychological perspective. Specific and fleshed-out considerations of haptic, olfactory, auditory, and visual 'geographies' constitute the second part of the book, 'Sense, Space, Place'. The last section is entitled 'Sense and Reality'; it is something of a grab bag of thoughts on changes in sensuous geographies as a result of cultural and technological transformation through premodernism, modernism, and postmodernism. The final focus in this section, naturally enough, is on the experience of 'virtual geographies'.

This book might have been a reasonable, if modest, contribution to the literature on phenomenology and human experience of place. I found Rodaway's transcriptions of self-reports of experience especially interesting, such as those of Hull, a blind informant (e.g. pp. 102-105, etc.). Also valuable are some of his detailed descriptions of the (dare I say it) objective characteristics of places and environments relevant to human perception. And a move towards a focus on experience as 'embodied' is certainly timely (but where are references to Piaget, Lakoff, Sheets-Johnstone, Shepard, etc.?).

Unfortunately, Rodaway doesn't stop there, and that is the major weakness of this book. He attempts throughout to provide us with factual accounts of everything from the history of perception research to the neurological workings of the sensory systems. I do not believe this serves his purpose. He does not restrict himself to a discourse on human experience but instead tries to do a little science of perception also. No disrespect intended, but Rodaway is apparently out of his element with this one. And he's not alone among geographers. Why are scholars such as Yi-Fu Tuan cited as expert sources of factual information about human psychology? For example, Rodaway accepts Tuan's expert opinion that 'perceptions vary widely between cultures and over time . . . between different age groups, the sexes and socioeconomic classes' (p. 22). Not only is this proposition still debatable in the scientific community, to my knowl-

edge, Tuan has never systematically collected the empirical evidence required to address it as an expert in the first place. In other words, this proposition is not a question of acute intuition, intelligent speculation, or interesting anecdote, but of careful science. Such a confusion may be found throughout Rodaway's book.

Because he is out of his element, Rodaway's accounts are frequently faulty. A few specific examples will help substantiate this point. His account of the history of perception psychology (Ch. 2) is inaccurate in some important ways. Behaviorists focused primarily on learning, not perception. Gestalt theorists, on the other hand, offered a very important and elaborated proposal on perception—its omission in detail is inappropriate for any discussion of the history of perception that claims to be informative. On page 28, Rodaway is misleading in his discussion of the sensory modalities. Sensory psychologists have long known that the notion of five senses (a legacy from Aristotle) is incorrect. In particular, 'touch' is actually several distinct senses, and motion perception is dependent in part on kinesthesia and vestibular senses. The reader is not served by references to Tuan and Gold on this point either.

Rodaway has 'for a long time found perception studies in geography too imitative of other disciplines, especially psychology' (p. ix). In spite of this disdain for the science of perception, he finds the ecological theory of the late psychologist J. J. Gibson, arguably the most influential scientific theory of perception in the 20th century, 'most though-provoking'. Fine; as Rodaway states, no other theory of perception is quite as 'geographical' (but let's not forget Ittelson). Unfortunately, a naive reader would not come away with a very accurate picture of Gibson's edifice. On page ix, Rodaway claims that Gibson 'argued' for 'considering the sense organs and cognitive properties of the brain'. At only a modest risk of caricature, Gibson's theory can be summarized as a statement that sense organs and cognitive properties should *not* be considered. On page 131, Rodaway cites Gibson for a list of space perception 'perspectives', including 'aerial perspective'. No, aerial does not 'refer to the perspective found in the map', but to the increasing haziness and blueness of distant features. And it is unusual scholarship to cite *The Perception of the Visual World*, Gibson's seminal 1950 book, as a re-issued 1974 version, without noting this anywhere. Gibson's novel classification of perceptual systems from his 1966 book (no, not 1968 originally), proudly reprinted by Rodaway on page 29, while intriguing,

is neither widely accepted by perceptual scientists, nor is it one of Gibson's most influential or path-breaking ideas. And perhaps it might have been advisable to cite Gibson's last book, *The Ecological Approach to Visual Perception*, published in 1979. On second thought, given Rodaway's interest in sensory stimulation, mental processes, the socialization- and culture-specific nature of perception, his high regard for the utility of Gibsonian theory is probably misplaced anyway.

In a broader context, this book and my review are about attempts to reconcile humanistic and scientific approaches to psychological geography.

Contrary to Rodaway's account of history (e.g. pp. 13-16), 'environmental perception' and 'behavioral geography' have almost from the beginning struggled with each other on these grounds. Unfortunately, Rodaway's book simply does not succeed at this task: no one has really figured out yet how to blend reports of experience with facts about neurophysiology (e.g. p. 120), and it is not clear this is possible or desirable. In any case, such an attempt had better amount to something more informative than Rodaway's statement on page 117 that 'the eye is also reliant on light. In the dark our visual geography is far more impoverished'!!