

## Book Reviews

### ALL ABOUT FACES

A. W. Young & H. D. Ellis (Eds.) (1989)  
*Handbook of Research on Face Processing*  
Amsterdam: North-Holland. pp. 605  
ISBN 0-444-87143-8

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This book covers all the angles. From innate preferences for faces in newborn babies to face recognition by machines, comprehensive reviews are provided of recent research on pretty much all the face-related topics currently under scrutiny by psychologists.

The volume is divided into eleven sections, each with an expository article, followed by two or three short commentaries. Some commentaries critique the lead article, others develop additional points. The organization is (roughly) from theoretical to applied, beginning with a section on "that old chestnut", specificity. The question of whether faces are special is a good starting point for the volume because it answers determines whether face-research is a theoretically isolated, albeit fascinating, enterprise, or whether it forms a natural part of the broader attempt to understand how perception and recognition operate. As befits an old chestnut, the answer is not straightforward, but the consensus is "No" under any strong interpretation of specificity. Next come sections on structural processing, expressions, lip-reading, semantic processing and social attribution, each focussing on a different kind of information to be had from faces. These are followed by sections on developmental issues and neural mechanisms, and finally there are three applied chapters: Disorders, computer recognition and forensic issues.

What should you expect from this handbook? Certainly not a readable (in the cover-to-cover sense), integrated account of how face processing works. "Recognising Faces" by Bruce (1988) is the book for that. Apart from a little scene-setting in the opening chapter on specificity, no attempt is made to provide an overview or to link the topics. If there is any

connection between lip-reading and social attribution to faces, for example, then it is definitely not highlighted here (at a cursory glance there was not a single reference in common between these two chapters). Instead the handbook provides reviews of various face-related topics that would be most useful to the graduate student or researcher who wanted a quick introduction to a particular topic. The applied chapters are especially good. To those already working on face processing, I suspect that the volume has less to offer. Any attempt to distill broad developments in the field or unifying theoretical generalizations would be hard going.

Given that this is a handbook of research on "face processing" I would have expected more attention to the \$64,000 question, namely how are faces actually processed? Bruce and Young's (1986) boxes-and-arrows model is discussed of course, but the big "how" question is what are the perceptual and memory representations used in face recognition like and how are they derived from retinal images of faces? These questions should have featured in the "structural processing" section, which instead focussed on the neuropsychological rather than the information-processing/computational level. It could be argued that the omission reflects a lack of any computational account of face processing in the field, but a good review highlights what we ought to know and don't as well as what we ought to know and do. In addition there's plenty of relevant material even if the \$64,000 question has yet to receive a definitive answer.

All in all this is a volume for the library rather than the office book-shelf. Neither the production (copy-ready type) nor the price are attractive.

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H. Kirschenbaum & V. L. Henderson (Eds.)  
(1990)

*Carl Rogers: Dialogues*

London: Constable, 255 pp

ISBN 0-09-469790-6

H. Kirschenbaum & V. L. Henderson (Eds.)  
(1990)

*The Carl Rogers Reader*

London: Constable, 526 pp

ISBN 0-09-469800-7

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These two volumes would have delighted and disappointed Carl Rogers, who died in 1987 at the age of eighty-five. He would have been particularly delighted, as included in the *Dialogues* is the 1962 Duluth debate between him and B. F. Skinner, which appears in print for the first time. Writing in 1974, in the *American Psychologist*, Rogers had said "My one disappointment in regard to Skinner is his refusal to permit the nine-hour confrontation we held at the University of Minnesota in Duluth to be released . . . . After the meeting, Skinner refused his permission. I feel the profession was cheated." After Rogers' death, and shortly before his own, Skinner relented. It is worth obtaining a copy of the *Dialogues* to read this section and to judge why Skinner suppressed its publication for so long. The *Dialogues* also contains conversations between Rogers and such others as Martin Buber, Paul Tillich, Gregory Bateson, Michael Polanyi, and Rollo May. But these passages differ greatly in length and quality and may be of limited interest to many readers.

*The Carl Rogers Reader* is rather like a *Readers Digest* version of Rogers' work. It is easy to read, covers a wide range of topics, and may stimulate interest in examining more seriously what Rogers had to say. Rogers regarded himself as a clinical psychologist and as such was a model of the scientist-practitioner. He also felt that he was not taken seriously by the academic community even though he started at the top. In 1940 he accepted a position at Ohio State University where "they offered me a full professorship.

I heartily recommend starting in the academic world at this level." Later in life he received the APA's first Distinguished Scientific Contribution Award which is an honour he appears to have valued more than any other. However, he will be remembered by many for his other achievements, principally for his humanistic-existential approach to psychotherapy. He also had courage: He was the first person to record and publish a case of psychotherapy. He enjoyed taking risks. Towards the end of his life he became active in resolving conflicts and reducing tension at the international level and shortly before his death was nominated for the Nobel Peace Prize. But courage and risk taking were also exemplified early in his professional career. His first struggle of professional significance was with psychiatry for psychologists to be allowed to practise psychotherapy and to have administrative responsibility over "mental health" work. But returning to the disappointment that Rogers would have felt with regard to the two volumes under review, on the dustjacket of one he is referred to as "the distinguished psychiatrist Carl R. Rogers, while on the other, he is "the great American psychiatrist Carl Rogers." The terms 'distinguished' and 'great' certainly apply and his outlook was always positive: "I hope it is clear that my life at eighty-five is better than anything I could have planned, dreamed of, or expected . . . I have lived a full and exciting eighty-five years."

Farah, M. J. (1990)

*Visual Agnosia: Disorders of Object Recognition and What They Tell Us about Normal Vision.*

Cambridge, MA: A Bradford Book, The MIT Press, 184 pp.

ISBN 0-262-06135-X

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Visual agnosia is a selective inability to recognize visual objects. Although it was recognised as a neurological disorder in the 19th century, it received little attention outside of the neurological literature for almost a

century. In recent years it has attracted considerable interest within neuropsychology, due largely to the development of theory and research in visual cognition, led by such influential figures as David Marr, Roger Shepard, and Anne Treisman.

Martha Farah's lucid, insightful review is based on detailed analyses of what must be the great majority of the cases studies reported in the literature. She steers a balanced course between the extremes of so-called "ultracognitive neuropsychology," with its emphasis on single cases, its box-and-arrow models, and its disregard of anatomy, and the connectionists, those modern-day anti-localizationists who regard individual memory representations as distributed through substantial areas of brain tissue. Indeed she uses this very contrast to good effect, noting for example that impairments in visual object recognition tend to cover broad classifications of objects, consistent with distributed representation, while impairments in naming are much more specific, suggesting more localized representation.

She is in general suspicious of classifying agnosia into rigid categories, casting doubt even on Lissauer's classic distinction between the apperceptive and associative agnosias — the one a deficit in higher-order object perception, the other a deficit in which perception is normal but there is a failure of recognition. However she does propose a dichotomy of her own: In a review of 99 case reports, she notes that associative agnosia virtually never occurs without being accompanied either by alexia (impairment of word recognition), or by prosopagnosia (impaired recognition of faces), or by both of these disorders. This implies that alexia and prosopagnosia, which are themselves forms of associative agnosia, serve as markers for different kinds of object representation, the one partwise and the other holistic. This is a *conceptual* dichotomy, not a dichotomy of patients themselves, and it is one that may have significance in the understanding of human cerebral assymetry, and perhaps even of human evolution.

The book is written from the perspective of a cognitive psychologist with a respect for the brain, and it seeks to discover insights rather than to develop overly elaborate models. Although the topic is a rather specialized one, Farah's clear, succinct prose is accessible to

anyone who might want something more substantial than Oliver Sacks' *The Man who Mistook his Wife for a Hat*. There is a useful glossary at the end.

#### PSYCHOLOGICAL THINKING IN THE MIDDLE AGES

Kemp, S. (1990)

*Medieval Psychology*

New York: Greenwood Press, 185 pp, US\$42.95  
hardback,

ISBN 0-313-26734-0

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Perhaps the most provocative aspect to this book is its title — just what is 'medieval psychology'? The author describes medieval psychology in terms of thinking that was important to medieval scholars and "for which there seem[s] to be some equivalent in modern psychology." In practice, this involved placing a framework of contemporary psychology onto medieval thinking and extracting those aspects that appeared familiar or related to ideas we hold today. Hence, all the chapters (except that on the soul, for which there is no modern equivalent in psychology) cover subjects such as sensation and perception, cognition and memory, emotion and the will, individual differences and mental disorder, all of which would not seem out of place in any introductory psychology textbook. The content however is very different and may even be characterised as "enthralingly exotic" (Corsini, 1984).

For example, the chapter on individual differences includes astrology and the doctrine of the humours. Anyone familiar with Shakespeare's plays will recall reference to melancholy, black bile and so forth. The body was thought of as containing four types of fluid or humor — blood, phlegm, black bile and yellow bile — which played a part in the overall functioning and temperament of the individual. Each fluid was associated with various attributes, and an excess or imbalance of one type of fluid could result in personality and behavioural changes. An excess of yellow bile,

for example, was related to activeness, ingenuity and bad temper.

The author must be applauded for considering a very wide variety of sources (most of which will be unfamiliar to psychologists) covering a period of ten centuries (roughly, 500–1500AD). When it is considered that there were many scholars during that time and a multitude of varying theories and beliefs, it is clear that Kemp has succeeded admirably in providing a clear and palatable synthesis of thinking we could describe as psychological.

This clarity was aided, I suspect, by a long gestation period — Kemp having written on matters such as medieval astrology, witchcraft and madness over a five year period before the book emerged — as well as a good general knowledge of the middle ages, reflected in the introductory chapter.

My only criticism is with Kemp's historical method. Kemp not only chose material on the basis of its similarity to modern psychology (a procedure which effectively selected out material unlike modern psychology and gives therefore a biased view of medieval "psychological" thinking), but he also tends to ignore the theological, philosophical and social aspects of the thinking, which were intimately associated with what he calls medieval psychology. Such presentism (Stocking, 1965) has been known to seriously distort the meaning of ideas which are so selected (see for example Samelson, 1974). This becomes especially significant as regards medieval thinking because, as Kemp at one point admits, "the main intellectual interest of many [medieval scholars] it is worth remembering, was the nature and purposes of God."

The historiographical naivety of this book seems less troublesome however, if we consider the text as a prolegomenon rather than a definitive work. As such it succeeds as any good introduction should, by not merely introducing the subject to the reader, but also by enlivening it and leaving the reader wanting more.

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N. McNaughton & G. Andrews (Eds.) (1990) *Anxiety*: Otago University Conference Series No. 1. Dunedin: University of Otago Press. ISBN 0-908569-55-6

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This book, the first by the University of Otago Press in its Otago Conference Series, is one which all associated with its production should feel proud of. If future productions have the quality and utility of this inaugural one it will become a valued series.

The papers which make up this book were first presented at the Seventh International Australasian Conference on Brain Research in Queenstown in 1989. The symposium was organized by the Editors in an attempt to resolve a dispute between them "as to whether basic research into the mechanisms of anxiety could inform clinical treatment of the anxiety disorders, and if so, why it has not done so to any great extent" (Preface, p.1). Does the book resolve this particular dispute? The reader will have to judge for her or himself. For reasons discussed below, I think it falls rather short of doing so.

The book is divided into five sections covering roughly: (1) epidemiological issues; (2) panic disorder and agoraphobia as paradigms of anxiety disorders; (3) pharmacological treatments for anxiety disorders; (4) the basic biology and psychology of anxiety; and (5) the pharmacological and neural mechanisms of anxiety.

The opening chapter is a characteristically bold argument by Gavin Andrews for a general clinical model of neurosis which contains interesting data on his recent studies of twins. Andrews concludes that personality — of the sort derived from structural equation modelling rather than armchair theorizing — underlies individual vulnerability to anxiety disorders, and argues that evidence shows that while long-term psychotherapy does not alter these personality traits, cognitive-behaviour therapy does, despite the fact that the personality vulnerability seems to be genetically based.

The final chapter, by Andrews and

McNaughton, provides a short but fair overview of the whole book. Given that each paper has at least one and sometimes two commentaries, written by another of the contributors, the book is high on self-commentary. Some of the commentaries have the flavour of the perfunctory about them but, overall, I think the decision to provide commentaries was a good one, which other editors of Conference Proceedings might well emulate.

The first two sections are uniformly worthwhile. It is useful to have available in one place some of the local epidemiological data provided by the Otago Women's Health Survey and the Christchurch Psychiatric Epidemiological Study. The second section includes a paper by Ron Rapee describing his research on the way psychological factors modulate the response of panic-prone individuals to biological challenges designed to induce panic. This paper might have gone in the section on basic psychological mechanisms, although I suppose it has implications for clinical treatment. This section ends with a brief but valuable summary by John Franklin of a long-term follow-up of his behavioural therapy for panic disorder/agoraphobia. Franklin's work provides an excellent model of clinical research in this area and I hope that some New Zealand clinical psychologists might be encouraged by examples such as this and actually be emboldened to do some research into therapy processes and outcome.

The next section, mercifully short, was for me the low point of the book. Three chapters, each by a presenter who attended the Queenstown conference with the support of a different drug company, discuss the uses of clomipramine, buspirone, and benzodiazepines in anxiety disorders. The commentaries on these contributions tend to be short and negative, in my view deservedly so. Clinical psychologists who are anxious to enjoy prescription privileges, as some members of the American Psychological Association apparently are (Fowler, 1991) should read this section as a warning of how using drugs can dull the mind.

The fourth section is ostensibly about basic biology and psychology of anxiety. It contains two excellent papers, one by Neil McNaughton on "Evolution and anxiety" and the first of two papers by Bob and Caroline Blanchard

describing an ethologically and ecologically valid approach to the study of natural patterns of behaviour in rats in response to predators. A second paper by these authors, which is the opening paper of the fifth section, shows how this ethological analysis can be used to elucidate the effects of ethanol and other drugs on anxiety. For me, these two papers were the outstanding contributions to the book from the basic experimental perspective.

Of the remaining papers in the fourth section, there are two which seem to belong in the second section, with its more clinical orientation. One of these, by Elaine Fox, promotes the interesting idea of using dental anxiety as a model preparation for the study of situational anxiety. The second paper which also seems to be out of place is an overview of social phobia, which shows how neglected this anxiety disorder has been by researchers. The low point of the fourth section was a paper on psychoanalytic defence mechanisms. I recommend that readers take the antidote of the associated commentary first, or ignore it.

The fifth and final section is concerned with basic pharmacological and neural mechanisms in anxiety disorders. The most impressive paper by far is the one by Blanchard and Blanchard already mentioned. With the exception of another McNaughton paper (on hippocampal mechanisms) the remainder are on possible neurotransmitter-mediated mechanisms as revealed by psychopharmacological research. It is clear that there is much research within this tradition, and that to date it has not yielded much to integrative efforts.

The editors of any multi-authored work face many constraints on achieving high ideals of breadth of scope, uniformity of style and quality of analysis. When the work is the proceedings of a conference, these constraints multiply. Under the circumstances, McNaughton and Andrews have produced a book which is an excellent record of a clearly interesting conference. As an instantiation of the dialectic between basic and clinical research, however, this book is an imperfect record.

From the clinical perspective there seems to me to be far too little on the processes and outcomes of behavioural and cognitive-behavioural therapies, which after all, have been the real success stories in the treatment of anxiety disorders in recent decades. There

was not even any serious attention given to the use of combined pharmacological and behavioural treatments, despite good evidence for the effectiveness of this approach, (e.g. Telch, Agras, Taylor, Roth, & Gallen, 1985). Perhaps my biases are showing, but the little attention given to psychological therapies versus that given to pharmacology seems to me to not-so-subtly suggest that psychological therapies are a second-best option while we wait for the Holy Grail of a pharmacological fix to be discovered. Yet, I do not think that this is actually the editors' position, so I wonder why the scope of the conference and the book was not widened to reflect more accurately the current activity in basic and clinical psychological research into cognitive processes in the development, maintenance and therapy of anxiety disorders.

This research is being conducted both using laboratory-based animal models (e.g., Boulton & Swartzentruber, 1991; Mineka, Davidson, Cook, & Keir, 1984; Thyer, Baum, & Reid, 1988) and laboratory and clinic based research with humans (e.g. Beck & Clark, 1988; Ehlers, Margraf, Davies, & Roth, 1988; Eysenck, 1988; Foa & Kozak, 1986; McNally, 1987; 1990; see also the recent issue of *Clinical Psychology Review*, Vol 11, No. 2, 1991). To be fair to the editors, some of this research is relatively recent, and would have been even less well known when the symposium was being planned in 1988. None-the-less, I think that it is unfortunate that in a book titled *Anxiety* this growing field of research, which so aptly illustrates productive links between basic and clinical research, was not better represented.

A final gripe. As a teacher and researcher interested in the relevance of basic research to our understanding of anxiety disorders, how come the first I heard of this conference was when I got this book to review?

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1987 was a significant anniversary year for applied behaviour analysis during which the *Journal of Applied Behavior Analysis* marked twenty years of publication with a special issue. As Baer, Wolf, and Risley (1987) noted in their contribution, applied behaviour analysis, as a scientific and professional activity, had in those years outgrown the experimental science whence it came. However, despite growth in numbers of practitioners, in effectual procedures and in its scope of enquiry, the definition of what applied behaviour analysis is remains unchanged from its foundational statement in 1968 — "Analytic behavioral application is the process of applying sometimes tentative principles of behavior to the improvement of specific behaviors, and simultaneously evaluating whether or not any changes noted are indeed attributable to the process of application . . ." (Baer, Wolf, & Risley, 1968, p. 9).

Another 1987 publication also stands as tangible evidence of the growth to maturity of applied behaviour analysis, the text by Cooper, Heron and Heward *Applied Behavior Analysis* (hence forth *ABA*). This is not the first textbook for students of applied behaviour analysis, for there have been important precursors (Alberto & Troutman, 1982; Baldwin & Baldwin, 1981; Kazdin, 1980a; Reese, 1966; Whaley & Malott, 1971). *ABA*, however, has the feel of a classic, definitive text.

It is organised into eleven parts, with one or more chapters in each part. Each chapter was written by one, or sometimes two of the authors, but they have been well-edited into a consistent and easy style. Chapters begin with a list of key terms, contain short paragraphs with bold headings and keywords highlighted, and end with useful summaries. Along the way the tables and figures are numerous, appropriate and clear. It is good to see New Zealand research by Ballard, Glynn, Sanders, Seymour and Singh getting a mention, or two.

I have used this book to teach courses in both the USA and NZ, and my impression is that students like it, and learn from it effectively. It would form an excellent base for a Keller-style programmed course, if supplemented by some practical exercises in observation and graphing procedures, but its length (28 chapters) makes it a challenge to fit entire into a single academic year. A conversation with Timothy Heron revealed that it was designed as a text for at least two, one-semester courses in North America — one on principles and assessment methods, the other on more specific applications.

As Baer, Wolf, and Risley (1968) noted, applied behaviour analysis is "technological," in that its procedures are defined and described in such a manner that other practitioners can replicate the procedures without extra information. This stress on the technological aspects of the field has led to the development of a view that it is just a bag of technical "tricks." Those who hold this view tend to treat textbooks as "cookbooks," and look for clear recipes for treating this disorder or that problem. The not uncommon practice of writing books on behaviour modification from a settings or problems perspective abets this false notion. One of the virtues of *ABA* is that its initial chapter locates the field firmly in the

scientific-empirical tradition of psychology, and within the radical behaviourism of B.F. Skinner. This alerts students to the fact that in a foundational sense, applied behaviour analysis was/is strongly committed to a particular ideology about behavioural science, and may help counter the "bag of tricks" approach to the discipline. The chapter which follows, on "Basic Concepts" supplied a brief introduction to key terms, and establishes the three-term contingency (antecedent stimulus, response and consequence) as the core behaviour-analytic concept.

Part Two contains three chapters on the methodology of gathering data by observational procedures, while Part Three contains five chapters on evaluation and analysis of behaviour changes, by the graphical presentation of data gathered within one of the distinctive single subject designs characteristic of applied behaviour analysis. This combination of direct observation of behaviour, graphical rather than statistical analysis of data and single subject design constitutes a unique, identifying signature of applied behaviour analysis. The adaptable and persuasive single-subject designs which have been developed by applied behaviour analysts out of the single-subject procedures espoused by the experimental analysis of behaviour (Sidman, 1960; Skinner, 1956) are an important contribution to behavioural science generally, and deserve to be better and more widely appreciated. The exposition given in *ABA*, while not as comprehensive as that found in Hersen and Barlow (1976), is unsurpassed for clarity and attention to the basic logic of the designs, whose usefulness has been demonstrated by twenty years of practice.

Chapters 11 to 22 deal with specific procedures for increasing the rate of existing behaviour, developing new behaviours and decreasing and eliminating behaviour. It is good to see observational learning getting a mention (Chapter 16 "Imitation") since this is increasingly recognised as a most important source of behaviour change, but I do not think that the chapter does the topic justice. I would also have included the topic of prompting in this chapter, because of the close conceptual and procedural relationship between modelling and prompting. Response reduction procedures (extinction, positive punishment, over-correction, time-out, response cost and

differential reinforcement procedures) get comprehensive treatments with a chapter each. The book employs a sound definition of punishment, defining positive punishment by analogy with positive reinforcement as involving the presentation of a stimulus leading to reduction in response frequency and negative punishment as involving the withdrawal of a stimulus. This definition of punishment (and reinforcement) is not easy for students to grasp, and in *ABA* it is presented on p. 24, a long way away from the chapters on punishment procedures. I would like to have seen a brief recapitulation of the definitional issues at the beginning of this section. Another lack in this section is attention to the controversies which attend the use of punishment (LaVigna & Donnellan, 1986; Matson & Taras, 1989). Students need to be given some resources with which to justify and defend the use of punishment procedures, and perhaps need to know how to establish the social acceptability of procedures, as by using the Treatment Evaluation Inventory (Kazdin, 1980b), but the text provides little help here.

Chapters 23 to 26 are collectively called "Special Applications" and deal with procedures such as token reinforcement (mistakenly called "token economy") and self management. There is a strong bias here to consider only school applications, which rather limits the generality of these chapters, without reducing their utility for teachers and those who work in educational settings. Finally, *ABA* ends with two excellent chapters, one on promoting the generality of behaviour change, a key issue in applied behaviour analysis for the past decade, and on communicating the results of applied behaviour analysis investigations, a skill worth inculcating in all students.

If the book has a major weakness it is the orientation to applications in school settings. This is understandable given the audience it was primarily written for—students preparing for careers in special education. The problem is that while it gives students an excellent conceptual and technical introduction to applied behaviour analysis it may leave them

with limited appreciation of the range of its applicability. Of course, authors face hard decisions about what to include and what to leave out, but I wish that in place of some of the chapters included in the "Special Applications" section there had been chapters on behaviour analysis in community and family settings, and perhaps behaviour analysis contributions to health. By enlarging the vision of students as to what behaviour analysis can accomplish outside of the narrow educational setting this book may have multiplied its impact on the field. Perhaps this might be done in the second and further editions I hope this book goes through in a richly-deserved long life.

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