

How science works

The Vision Revolution is a dangerously opinionated book. Changizi doesn't overturn everything we thought we knew about human vision, as the subtitle promises, but he does give us an insight into the perpetually evolving nature of science.

Changizi is a theoretical neuroscientist, looking at the brain

– and particularly vision – through computational and evolutionary lenses. In this book *The Vision Revolution* he presents four radical reinterpretations of aspects of vision that we thought we understood. Did you think colour vision was for seeing coloured fruit against green trees? Think again – Changizi argues that colour vision is optimised for detecting changes in skin tone that can indicate health or illness, rage or shame (perhaps why we don't have an adequate word for skin colour). Did you think forward-facing eyes are for producing stereo-depth? Think again – the main advantage may be the ability to 'see through' objects that obscure only one eye.

Changizi also has a grand unified theory of visual illusions, connecting them to a deep problem the visual system faces – that of predicting how the world is, based on information that, due to neural delays, is out of date. Finally, there is a theory about

how writing systems around the world have evolved to take advantage of object-processing capacities in the visual brain. Together these four ideas make up Changizi's vision (r)evolution. He calls these abilities 'superpowers'. It is not that they are supernatural, but that the brain is 'super, naturally'.

Lots of science writing is inspired by a textbook model, where an authority, either the science writer or the scientists they channel, lays out 'how the world is'. So prevalent is this model that most of the news and entertainment media seems to have swallowed the idea that science is a body of knowledge or set of facts about the world rather than a process. There are myriad problems with this model of science – for example, scientists are expected to provide definitive answers about inherently uncertain issues, and popular representations of scientific debates tend to reduce to distracting questions of authority. It also makes science seem boring. By contrast, readers of Changizi's book may get the impression that science is an exciting and unstable process, whereby scientists make theoretical proposals and then seek the evidence to confirm or refute them.

The Vision Revolution is essential science writing, not because the ideas are definitely correct, but because the book can give the ordinary reader a glimpse of how science can work. Changizi is unusual in the range and quality of his ideas, and the clarity and humour with which he can lay them out; but the real value of this book is in the excitement of the scientific process that it conveys.

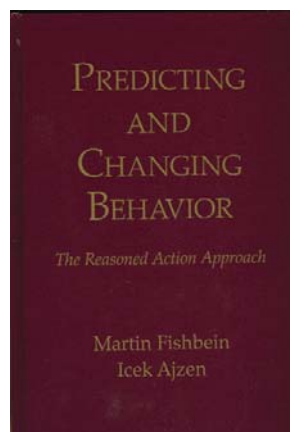
| BenBella Books; 2010; Pb £11.99

Reviewed by Tom Stafford

who is at the University of Sheffield



The Vision Revolution:
How the Latest Research
Overturns Everything We
Thought We Knew about
Human Vision
Mark Changizi



Reasoned action

Predicting and Changing Behavior
Martin Fishbein & Icek Ajzen

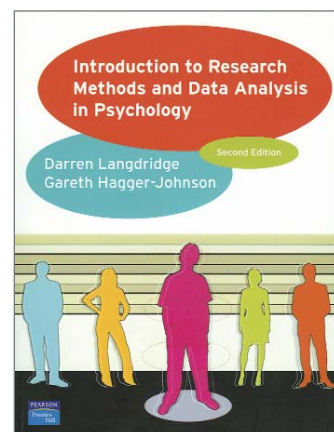
The reasoned action approach is one of the most popular and extensively used theoretical frameworks in the science of behaviour and behaviour change. In *Predicting and Changing Behavior* the authors outline all the relevant constructs of the approach, giving a detailed account of how the theory has been developed and used to predict intentions and subsequent behaviour across many different domains. It also describes challenges to the approach that have been identified in the literature.

The later part of the book deals with the ultimate challenge of behavioural theories: Does it help to change behaviour? The authors outline considerations for using their theory to inform intervention development, supplemented by illustrative examples.

Readers will find that the reasoned action approach to behaviour change is less well developed compared to the impressive amount of predictive work. The book therefore provides a fantastic resource and guide for predicting behaviour within the reasoned action framework, in addition to outlining potential avenues for further development of this theory to guide and explain successful behaviour change.

| Psychology Press; 2010;
Hb £33.75

Reviewed by Stephan U. Dombrowski who is a Research Fellow at the University of Aberdeen



Impressively broad

Introduction to Research Methods and Data Analysis in Psychology (2nd edn)
Darren Langdridge & Gareth Hagger-Johnson

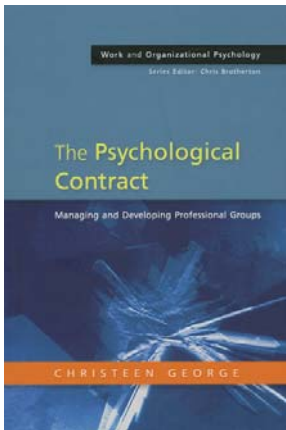
Getting undergraduates passionate about research (while trying to engage them with philosophy of research and ethics, research methodologies, and data analysis) is not a task savoured by many – especially the students! A helping hand is always a good textbook, and an entry-level student would be hard pressed to find a book that covers more than Langdridge and Hagger-Johnson's latest. It is impressively broad, discussing quantitative, qualitative, and mixed methods in great depth.

The emphasis is on providing maximum practical information, where statistical and non-statistical analysis are given equal space, including chapters on R, a free statistical software package, alongside SPSS and NVivo. Further reading points are given at the end of each chapter, which are a jump-off point for the more advanced researcher.

The authors' ability to make complex methods (such as triangulation) intuitive and accessible is commendable. My only criticism is that the first two-thirds of the book are text heavy, and practical examples could have been used to greater effect, but this is a great value-for-money starting point.

| Pearson Education; 2009;
Pb £30.99

Reviewed by Debbora Hall who is in the School of Psychology, Newcastle University



Contract extension

The Psychological Contract: Managing and Developing Professional Groups
Christeen George

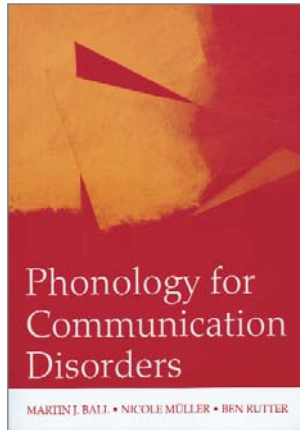
In a useful extension to previous texts in the area, Christeen George applies current thinking about the psychological contract to its impact upon the management and development of the careers of professional workers. Within the framework of the notion that professionals have dual psychological contracts (with their profession and with their employing organisation), she charts the career progress of the professional from early socialisation, education, entry into the profession to the mature career.

Case studies, anecdotes and reflective exercises help bring the concepts to life; however, this is an academic text and, contrary to the suggestion in the title, has not been written with the practitioner in mind. A lack of follow-through from theory to practice is likely to leave the reader feeling a little short-changed.

However, this well-written text provides some thought-provoking insights, including the role of media portrayal of professions in early psychological contract formation, and the application of social identity theory in framing and understanding organisational socialisation.

Open University Press; 2009; Pb £19.99

Reviewed by Jane Arthur who is a researcher at the Centre for People at Work, University of Worcester



Theory and application

Phonology for Communication Disorders
Martin J. Ball, Nicole Müller & Ben Rutter

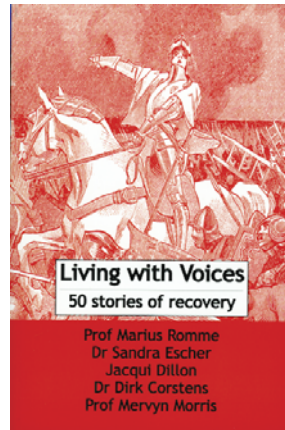
Phonology for Communication Disorders provides a review of various schools of thought in theoretical phonology, and their relevance to clinical explanation and remediation. It is a companion to Ball and Müller's *Phonetics for Communication Disorders* and aims to set out the most relevant approaches to phonology for describing patterns of error in speech and offering possibilities for clinical intervention.

Each chapter deals with one theoretical school of thought, with practical exercises, suggestions for further reading, summary and review questions. The final chapter draws together many of the main phonological approaches, together with their application to clinical data. It is concluded that approaches such as natural or cognitive phonology may have important clinical insights. Nevertheless, the requirement for further development in the field of clinical phonology is stressed.

Although the book is heavy on detail, the writing style provides a clear portrayal of the theoretical concepts. It would be most valuable for students or practitioners of speech-language pathology.

Psychology Press; 2010; Pb £24.99

Reviewed by Helen Henshaw who is a Research Fellow with the National Biomedical Research Unit in Hearing, University of Nottingham



A breath of fresh air

Living with Voices: 50 Stories of Recovery
Marius Romme, Sandra Escher, Jacqui Dillon, Dirk Corstens & Mervyn Morris

From the founders of the Hearing Voices Movement – a movement redirecting thinking from the medical model towards an acceptance of voices and empowerment of the individual – comes the third in a series of books exploring the hearing voices experience.

Based on an analysis of 50 recovery stories, the first half of this book outlines the theoretical explanations of such experiences and the steps to recovery, using personal extracts to corroborate. It considers how debilitating the traditional psychiatric system can be and the sense of hopelessness a 'schizophrenia' diagnosis can cause. The book describes voices as being a reaction to stress rather than a symptom of an illness. It offers

ways to make sense of the voices and to shift one's relationship with them – a frequent feature of recovery.

The second part of the book consists of the voice hearers' anthologies: eye-opening accounts which contextualise their voices with their own experiences.

Written in an engaging and accessible format, this is an essential read for anyone wanting to understand the concept of hearing voices. For professionals who work with voice hearers, it offers a platform to become one step closer to their client, and for voice hearers and carers, it offers hope of recovery. A nice break from the often construed 'oppressive' psychiatric system, this book will come as a breath of fresh air to many.

PCCS Books; 2009; Pb £20.00

Reviewed by Eleanor Parker who is Clinical Studies Officer with the Mental Health Research Network, Institute of Psychiatry

just in

Sample titles just in:

- Psychology in the Real World** Guy Holmes
- The Woman Who Thought Too Much** Joanne Limburg
- Home Is Where One Starts From** Barbara Tizard
- The Oxford Handbook of Chinese Psychology** M.H. Bond
- The Gossamer Thread** John Marzillier
- Social Constructionism** Andy Lock and Tom Strong
- Why We Lie** Dorothy Rowe
- Psychology and Culture** Lisa Vaughn
- Supernormal Stimuli** Deirdre Barrett

For a full list of books available for review and information on reviewing for The Psychologist, see www.bps.org.uk/books

Send books for potential review to The Psychologist, 48 Princess Road East, Leicester LE1 7DR