

consciousness (a possible exception may be the special case of the somatosensory system). Nevertheless, this proposal is likely to be highly controversial in that it casts doubt on any research that seeks to provide a comprehensive account of consciousness from the perspective of a single sensory modality such as vision. Paradoxically, for those of us who study emotion, it is gratifying to think that, without the usual fanfare, we have implicitly been studying consciousness.

At the end of his life, the British poet W. H. Auden movingly acknowledged an indivisibility of self and bodily experience in referring to his body as “my tutor also, but for whose neural instructions I could never acknowledge what is or imagine what is not”. To think, imagine and feel are the very stuff of mind and in Damasio’s account they are deeply rooted in a sense of body. The exposition of this relatedness in *The Feeling of What Happens* constitutes a remarkable work of intellectual daring. The challenge posed is a radical redefinition of what constitutes the central concerns for a comprehensive account of consciousness. Indeed, by placing human emotion and feeling at centre stage, Damasio ensures their rehabilitation into mainstream neuroscience, a move first initiated in his previous book, *Descartes’ Error* (Putnam, 1994). Any of the above achievements would make this book recommended reading; combined, it becomes compulsive and compulsory. ■

Raymond J. Dolan is in the Wellcome Department of Cognitive Neurology, University College London, Queen Square, London WC1N 3BG, UK.

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The claim of the inner world

Cassandra’s Daughter: A History of Psychoanalysis

by Joseph Schwartz
 Penguin: 1999, 339 pp. £20, \$20.95

Jane Kitto

It is a brave man who attempts a history of psychoanalysis in 300 pages. The controversies are legendary, and most people already have an opinion and know something about the personalities involved. We need a history of psychoanalysis for the general reader, but I am afraid this is not it, even though it goes some of the way.

Joseph Schwartz brings Sigmund Freud to life: his early scientific struggles; his search for somewhere to make his mark; his early theories; and the collaboration with Josef Breuer which came unstuck. He deals with Freud’s journey towards a workable method, the ‘analytic hour’. There is a long section on the vexed matter of the seduction theory and child sexual abuse. Schwartz leaves Freud the theoretician at about 1910 (and about one-

third of the way through the book); the next two chapters describe the early splits with Alfred Adler and Carl Jung.

He then shifts to the United States with a fairly brief account of psychoanalysis there and a long and interesting discussion of the reforms in psychiatric institutions during the early decades of the century, specifically the work of William Alanson White and Harry Stack Sullivan. Most of the last third of the book deals with developments in Britain, beginning with Melanie Klein and child analysis, followed by a brief discussion of Jacques Lacan in France.

This is no potted history. Schwartz began as a physicist, and has become a practising psychotherapist via research into mental health. He is a staunch defender of psychoanalysis, and he handles the question of its scientific status, or otherwise, robustly. It is, he says, “a science in the sense that it attempts to understand human subjectivity in material terms”. In the final chapter he takes up the question of neuroscience and psychopharmacology, arguing that although drugs have their place in treatment, they do not replace psychoanalysis; “in the absence of a

deeper understanding of mind–body connections, such pharmacological agents will always have a certain hit or miss quality to them”. Neither pharmacology nor psychoanalysis has a magic bullet. Schwartz believes that psychoanalysis is a serious business, and has no truck with dinner-table chatter. The psychoanalytic profession, not having been very good at defending itself, needs this kind of support.

As a scientist, Schwartz has his feet firmly on the ground. But there is another Schwartz who gives the impression of trying to ride two or more horses at once. The book is partial in both senses of the word. While there is no harm in this, provided it is made explicit, Schwartz’s preferences are left to the reader to discern — although this is not too difficult. It is not until page 138 that he shows his hand: “This book could be said to be trying to position psychoanalysis as an extension of the Western scientific tradition as a way of understanding the human inner world”. But it is sub-titled *A History of Psychoanalysis*, and the result is an uncertainty of focus which leads one to wonder why he has chosen particular topics to expand on.



Capitalizing on psychoanalysis: a psychoanalysing machine exhibited at an industrial show in 1931.

CORBIS/BETTMANN

Why so much on psychiatric reform in America? How does it relate to the book's purpose? The choice may appear arbitrary.

Two rather more serious problems are fairness and consistency. Like everyone else, Schwartz has his preferred theorists and they are those who emphasize the external over the internal; for instance, John Bowlby, Donald Winnicott and Heinz Kohut. This seems inconsistent, in view of his description of psychoanalysis as the attempt to "understand the structure and dynamics of the inner world of the experiencing human being". In fact, the question of external and internal is not as simple as Schwartz suggests.

As for fairness, psychoanalysts have from the outset dealt with theoretical disagreements by accusing opponents of personal failings, sometimes verging on character assassination. Schwartz the scientist knows that the theory-maker's personality is irrelevant to the value of the theory, but Schwartz the polemicist cannot resist joining in the fun. Melanie Klein is in danger of emerging as a difficult woman who had some important ideas about children but paid little attention to the outside world. This fails to do justice by a long way to the depth of her ideas, for instance her formulation of the paranoid and depressive positions, which provides psychological grounds for some fundamental questions of society and politics, and their subsequent development by others. By Wilfrid Bion, for example, regarded by many as the most profound psychoanalytic thinker since Freud, but who gets just one mention — in a chapter note.

One must not be unjust to the opposition. To give one example, Joan Riviere was an early and enthusiastic supporter of Klein. She was also a rather conflicted woman and she went into analysis with Ernest Jones, himself an equivocal character, who seems to have behaved quite unprofessionally towards her. Jones finally sent her to Freud, who repaired some of the damage and wrote in forthright terms to Jones about his conduct. Schwartz mentions that Riviere translated some of Freud's papers, but fails to mention that she wrote a number of her own, including one on the clinical problems of narcissism which has become a classic. As a result she emerges as a rather neurotic lady but not as the significant figure she was.

To return to Schwartz's declared purpose, psychoanalysis does indeed have a place in twentieth-century Western tradition, and in his view it is a high destiny. This approach can easily lead to some rather large statements, such as "psychoanalysis has been charged not with participating in the glory of the Industrial Revolution but with clearing up the mess it left behind". One can nod in agreement, or one can take it with a pinch of salt, but this sort of thing is risky, as another example, which may raise some eyebrows this side of the Atlantic, shows — "He went to

Cambridge in 1925, then at the height of its fame in natural sciences".

This could have been a truly well-argued book if Schwartz the scientist had kept a better hold on the other Schwartz. As it is, anyone reading it will certainly learn something about psychoanalysis, and may be stimulated to read further. There is still a book to be written about the development of psychoanalytic thinking and practice which steers clear of the personal. It will be longer and will not be such a racy read. ■

Jane Kitto is an analytical psychotherapist and is at 2 The Park, London N6 4EU, UK.

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Dogs, telepathy and quantum mechanics

Dogs That Know When Their Owners Are Coming Home – And Other Unexplained Powers of Animals

by Rupert Sheldrake

Crown: 1999. 323 pp. £16.99, \$25

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John Maddox

Rupert Sheldrake is steadfastly incorrigible in the particular sense that he persists in error. That is the chief import of his eighth and latest book. Its main message is that animals, especially dogs, use telepathy in routine communication.

The interest of this case is that the author was a regular scientist, with a Cambridge PhD in biochemistry, until he chose pursuits that stand in relation to science as does alternative medicine to medicine proper. Some readers with long memories may recall that, when Sheldrake's first book appeared in 1981, it was referred to in an injudicious leading article in this journal (*Nature* 293, 245; 1981) under the title "A book for burning?" (where the question-mark was intended as part of the title). The text that followed went on to declare roundly that "even bad books should not be burned", and concluded that the book "should not be burned... but put firmly in its place among the literature of intellectual aberration".

The publicists for Sheldrake's publishers were nevertheless delighted with the piece, using it to suggest that the Establishment (*Nature*) was again up to its old trick of suppressing uncomfortable truths. Many years later, Sheldrake confided to my wife that his children routinely prayed for the soul of the editor of *Nature*, believing that such a wicked person could only come to a bad end.

The motif of the first book, which formed its title, *A New Science of Life: The Hypothesis of Formative Causation*, runs through all the later volumes in this distinctive *oeuvre*. Sheldrake believes that the form or shape of all things, animate or otherwise, is acquired

through the influence of "morphic fields" in a process called "formative causation". Moreover, morphic fields evolve in the course of time, ensuring that when a crystal of copper sulphate or a daffodil first takes on a particular habit, the morphic field ensures that all later crystals of copper sulphate (or all daffodils) follow the same pattern.

In *Dogs That Know ...*, morphic fields have an appendix to themselves, but also frequently recur in the body of the text. In a new twist, Sheldrake cautiously advances the idea that his morphic fields may share with those of quantum mechanics some of the properties of non-locality which offer the chance of making even faster computers some time next century.

Even Sheldrake's fiercest critics will applaud his consistency. The purported role of morphic fields on the shapes of objects in the real world has hardly changed since 1981. It is no less — and no more — than it was then. The idea is borrowed from classical embryology, where a gradient of the concentration of some chemical (such as the protein product of a Hox gene) is supposed to regulate the development of part of an organism's body, and is sometimes referred to as a "morphogenetic field". But morphic fields are evidently all-pervading. No corner of space can be free from them, for then copper sulphate crystals (or daffodils) would acquire different shapes in different locations.

Similarly, Sheldrake's opinion of science has not changed. He speaks of the gulf between "personal experience and the theory that living organisms ... are merely soulless automata", and declares that his experience has made him a holist.

So what is new in this latest book? As Sheldrake describes it, causative formation is no longer merely a hypothesis, but a research programme, complete with the now-standard perquisites of a database and a website (www.Sheldrake.org). And the data? A vast and growing collection of information about incidents involving domesticated animals in interaction with people, or sometimes other animals. The title of the book refers to the copious collections of records, written by people responsible for dogs and, less frequently, cats, describing the pets' capacity to anticipate the arrival home (from work or from a journey) of a second human member of the household. Sometimes the dogs react, not when the second party is leaving the office, say, but when he or she has decided that the time has come to leave.

As an observational programme, none of this is simple. How does a dog signal its anticipation of the homecomer? By waiting at the garden gate, or inside the front door of the house, wagging its tail all the while or showing other signs of excitement. There is the case of a male dog called Jaytee, from a small town in Greater Manchester, who was closely observed and then videotaped in the course