

techniques in the non-psychotic depressed population. Since the book was published, there have been 5 independent meta-analyses with different statistical methods investigating the acute antidepressant effect of rTMS. Three found a moderate effect size and clear significant differences from sham treatment, and one using the Cochrane method concluded otherwise, despite also noticing a positive effect of 2-week fast left and slow right prefrontal TMS. rTMS is now approved for treatment of depression in Canada, and a multicentre clinical trial geared toward obtaining a similar indication from the US Food and Drug Administration is currently being conducted in the United States.

Few rTMS studies have focused on schizophrenia. Slow and fast prefrontal rTMS has been tested for treatment of positive, negative and mood symptoms with mixed results. Obsessive-compulsive disorder and Parkinson's disease involve fairly well defined functional neurocircuitry, and this makes the use of TMS theoretically quite promising. Yet, to date, TMS therapeutic investigations have yielded limited and preliminary results. Post-traumatic stress disorder and Tourette syndrome also warrant further research. All clinical investigations will benefit from improved sham applications. The final clinical role played by TMS in psychiatry is yet to be fully determined.

Because of the non-invasive nature of TMS and its wide range of potential applications, there will likely be more and more researchers and clinicians using it. This handbook is geared more

toward serious practitioners than casual readers in a field that is rapidly evolving.

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Foundations in Social Neuroscience. Cacioppo JT, Berntson GG, Adolphs R, Carter CS, Davidson RJ, McClintock MK, McEwen BS, Meaney MJ, Schacter DL, Sternberg EM, Suomi SS, Taylor SE, editors. Cambridge (MA): MIT Press; 2002. 1345 pp with index. ISBN 0-262-53195-X (paper). US\$55.

There are several techniques for summarizing a field of research in a book. The most common is to arrange a meeting in a suitably popular location and induce the participants to submit a chapter. This book uses a less common tactic — collecting published papers. Although little information is given on the process of assembling the book, presumably the 12 editors, all distinguished researchers, were responsible for choosing the 82 articles that, together with a brief introductory chapter, make up the 1345 pages of this book. Most of the original articles would be easily available at any university library — *Science* and *Nature* feature prominently — and only one is a chapter from another book, so the merit of this book comes from the compilation of articles from a wide range of disciplines that, broadly construed, form a foundation for a social neuroscience.

The articles are divided into 5 main sections entitled Multilevel integrative analyses of social behaviour; Social cognition and the

brain; Social neuroscience of motivation, emotion and attitudes; Biology of social relationships and interpersonal processes; and Social influences on biology and health. The articles include reviews and original research studies on both experimental animals and humans. Several broad themes, which are well represented, include:

- Neuroanatomical aspects of cognitions and behaviours more or less related to social interaction, which includes studies on patients or experimental animals with brain lesions, as well as studies on normal subjects or patients, using various techniques for neuroanatomical localization (e.g., electroencephalography and positron emission tomography). The brain outputs that these studies attempt to localize include general behaviours such as aggression, fear, anxiety (social, but also other types), motivation, affect, face recognition, voice perception, gambling and even conscious experience.
- The relation between neurochemicals and social behaviour. This theme focuses mainly on low serotonin levels and aggression and other types of socially inappropriate behaviour, mainly in monkeys but also to some extent in humans, and the role of oxytocin and vasopressin in social behaviour in prairie voles (a line of research pioneered by the recently appointed director of the National Institute of Mental Health in the United States, Dr. Thomas Insel).
- The interrelation of the hypo-

thalamic pituitary adrenal axis and social stress.

- The effects of social interaction, particularly social stress, on health.

One interesting aspect of the volume is what is missing. In the introductory chapter, types of social interaction that are mentioned include attraction, altruism, aggression, affiliation, attachment, attitudes, identification, cooperation, competition, empathy, sexuality, communication, dominance, persuasion, obedience and nurturance. The chapters that follow describe some small aspects of the neural systems involved in a few of these types of social interactions in humans. However, one striking unstated conclusion from this book is how little we know about the neural substrates of any aspect of human social behaviour, despite the overwhelming evidence of the importance of social interactions for mental health.

One result of this lack of knowledge is the inclusion in the book of studies on the fringes of actual social interaction. For example, face recognition may facilitate some social interactions but is not always necessary (e.g., phone conversations). In some cases, the editors have chosen work that seems to have little direct relevance to social behaviour. For example, one chapter has a fascinating analysis of the amygdaloid region's involvement in the conditioning of preferences, but the monochromatic patterns used as stimuli do not represent an application to a social phenomena.

An issue that is not considered (which unfortunately reflects the state of the literature) is the extent to which some of the animal mod-

els are relevant to humans. For example, it is intriguing that variations in the extent to which rat mothers lick their pups are related to differences in the regulation of glucocorticoid function when the pups become adult. However, given that laboratory rats are raised in an unnatural environment, that rat pups are born at a much earlier stage of development than human babies and that rat social behaviour is quite different from that of humans, the relevance of this finding to humans remains uncertain. One chapter does attempt to connect the work on oxytocin and vasopressin in rodents with autism. The impression lingers, though, of how circumstantial the evidence is and how large the gulf is between rodent experiments and human disorders.

The overall feel of the book is that this is an exciting field that is still emerging. The chapters and their assignments to sections provide a sketch of what the field will come to look like. Hopefully, the foundations of human social neuroscience will continue to be laid over the course of the present decade, but, to date, some of the work is too peripheral. Too many holes still exist in the literature for this collection to be considered a firm "foundation of social neuroscience."

One important quality of this book is that it describes the state of the art and leaves readers to form their own impression of that art. A valuable companion to this volume would be a book, waiting to be written, that critiques the emerging field and lays out strategies for the future. One such strategy must be for neuroscientists

and social scientists to talk to each other much more than they do now. Great advances have been made in neuroscience in the study of the brain and in the social sciences in the study of human social behaviour. The time is ripe for greater interaction between these disciplines.

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Psychiatry in the Elderly. Jacoby R, Oppenheimer C, editors. Oxford: Oxford University Press; 2002. 991 pp with index. ISBN 0-19-851563-4 (paper). CAN\$157.95.

Geriatric psychiatry is certainly a specialty that has grown over the past several years. Numerous advances have been made, and we continue to learn more about the pathogenesis and molecular genetics of dementia, as well as possible treatments. Transformations in our social milieu have brought about changes in our provision of services to the elderly, with a greater emphasis on standards of care and quality of life. With this third edition of *Psychiatry in the Elderly*, Jacoby and Oppenheimer have attempted to reflect the developments that have taken place since the previous editions of the book, published in 1991 and 1997. This most recent text is a compilation of chapters written by different authors, all chosen because they are experts in their respective fields. The result is an overview of geriatric psychiatry that is far more readable and "user-friendly" than the usual reference textbook.

This review was undertaken via