

RESTOR 00029

Book Review

S. Finger, T.E. Le Vere, C.R. Almlı and D.G. Stein (Eds.), *Brain Injury and Recovery: Theoretical and Controversial Issues*, Plenum Press, New York, NY, 1988, 363 pp.

'To recover or not to recover: that's not the only question'

The subtitle of this book is as important as its title. It exactly indicates its perspective which is unique, stimulating and of concern to neurologists, clinicians, neuroscientists and advanced students interested in the field of brain injury and recovery.

In twenty-two chapters consisting of general reviews and presentations of original data, most of the major controversial issues are considered. There is a good balance of clinically and more experimentally oriented papers presented by established scientists in the field. There is enough disagreement between articles to indicate that the selection of authors was not designed to represent a small, special interest group.

The articles discuss and review well-established theories, speculations about recovery and more historical concepts that were popular as early as the beginning of this century and are still used in some circles today (diaschisis, vicariation, the work of J.H. Jackson, Margaret Kennard and Kurt Goldstein). Other papers take on more contemporary issues related to neural plasticity such as intracerebral brain tissue transplants, trophic factors, axonal and collateral sprouting and environment-induced alterations in receptive fields, to name a few.

Brain Injury and Recovery also examines animal models of human pathology as well as those relevant to normal brain function and the various chapters highlight the advantages and limits of each approach. The various terms that are used to describe the mechanisms of recovery are discussed in terms of their meaningfulness and relevance to what is now known about the physiological substrates influencing the outcome of brain damage. Overall, the book is of great heuristic value and it could become a landmark in the field of recovery from brain damage. Despite its many advantages, some readers may nonetheless be rather discouraged and left with the feeling that there are many more controversies in this area of research than there are hard and uncontroversial data. Other readers, in turn, may be stimulated by this book which does not attempt to avoid controversy but instead, tries to develop a comprehensive 'picture' of where the field should be going. *Brain Injury and Recovery* takes a holistic-historic perspective on CNS functions, although many of its authors employ a more molecular and reductionistic approach to generate their empirical data.

If there are any regrets about this book, they are relatively minor. Some issues such as the nutritional, hormonal and environmental modulatory effects on functional recovery are only briefly sketched. More could have been discussed about the relevance of experimental data to human clinical situations. How can the animal literature on the 'serial lesion effect' for example, be reconciled with the clinical data on brain injury in humans? Also, recent data on neurotoxicity, especially excitotoxicity have generated a lot of new findings pertinent to recovery, but which were not discussed in this volume.

Finally, some major concepts such as 'plasticity' have been used throughout the book but with different meanings according to the author's predilections. This fact underlies the point that there is definitely a need for this type of book, but a final chapter on: 'Towards a definition of neural plasticity', would have been very useful. The field of recovery is still in its early stages of development and the current volume is an important contribution to that effort.

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