these tender points. For other types of pain, the results of only two clinical trials have been published and they are both negative. Other disease treatments have not been subject to anything but a creeping barrage of anecdote.

Before attempting an explanation, we badly need clear statements of what it is we have to explain. Acupuncture is liable to disappear from sight once more, under a heap of dissatisfied patients and impatient doctors: I hope we will not have to await its next rennaissance before it is put to properly conducted trials which specify where and when it is effective. I hope this book with its careful description of "what" and "why" will encourage others to carry out those tests.

Patrick D. Wall is Professor of Anatomy at University College, London, and co-author of the gate control theory of pain which is used widely in this book as an "explanation" of acupuncture.

The fundamentals of chemical kinetics

C. F. Wells

Basic Chemical Kinetics. By H. Eyring, S.H. Lin and S.M. Lin. Pp.504. (Wiley-Interscience: 1980.) £19.15, \$43.75.

I AM usually somewhat wary when I pick up a book with the word "basic" in the title, as I expect to find a highly simplified examination of the subject often without any pretence of rigour. This is very far from the case here, where "rigorous fundamental" should be read for "basic".

After a brief introduction to rate equations and their integration, the authors devote their next chapter to potential energy surfaces. The dynamics of collisional processes are then considered, both from classical and quantum mechanical points of view. This is followed by a treatment of transition state theory, a theory to which Eyring has contributed so much, and of the theories of unimolecular reactions in the gas phase and their application to some experimental data. After a similar discussion of bimolecular reactions in the gas phase, the authors concentrate on photochemical reactions in condensed phases as well as in the gas phase. In the final chapter selected topics concerning kinetics in condensed phases are discussed. Four appendices complete the book: three devoted to an elaboration of mathematical treatments used earlier in the book, the fourth containing 79 problems covering aspects raised in all the chapters.

In one sense, this book is an extension and up-dating of the classic text, *The Theory of Rate Processes*, written by Eyring in collaboration with S. Glasstone and K. J. Laidler, and first published in 1941 by McGraw-Hill. This new book, too, should be of interest to all (particularly final-year undergraduates and research students) involved with the fundamentals of chemical kinetics. It will be invaluable to gas kineticists and to those concerned with photochemical kinetics, but perhaps has less direct application to the problems currently engaging solution kineticists. Chemists without an adequate mathematical background may find it hard going, and in this respect there are instances of undue compression of the text; for example l'Hôpital's Rule is referred to several times in Chapter 1 and is used in a problem in Appendix 4, yet nowhere is the Rule stated or defined.

Despite this reservation, the book is thoroughly recommended to all interested in the fundamentals of kinetic processes; it may well achieve "classic" status again for Eyring.

C. F. Wells is Reader in Inorganic Chemistry at the University of Birmingham, and is especially concerned with the kinetics of inorganic reactions in solution.

The sinister phenomenon

Freda Newcombe

Neuropsychology of Left-handedness. Perspectives in Neurolinguistics and Psycholinguistics. Edited by J. Herron. Pp.357. (Academic: 1980.) \$24.50, £13.80.

DEPARTURE from the usual pattern of right-handedness has often provoked annoyance, if not frank hostility, in the layman and has not inspired much in the way of scientific research until quite recently. There were occasional bursts of interest, ranging from a brief and hesitant question in a nineteenth-century anthrological journal (''is my parrot left-handed?'') to the more unequivocal pronouncement of the venerable Dr Henschen on sighting the asymmetrical skull of a gorilla in University College Museum: ''this gorilla was probably lefthanded''.

But these flashes in the dark, with their interesting implications of paw preference and morphological correlates, were not followed up by phenomenological studies or biological speculations until clinicians

started to record anomalies of brain organization: speech disturbances due to damage to the right hemisphere of the brain, sometimes in left-handed patients. The work of Chesher, Penfield and Roberts, Subirana, and Luria developed the theme that the link between brain organization and handedness is less predictable in the non-right-handed members of the population: whereas some 98% of right-handed persons have speech functions represented in the left hemisphere, the proportion of left-handed people exhibiting this pattern is in the region of 60-66%. The remainder show the reverse pattern except for a very small minority that show bilateral represen-



The Cheirotelic pulmonic Thai-Yin acu-tract (left) and the Cheirogenic crassointestinal Yang-Ming acu-tract from Chang Chieh-Pin's *Lei Ching* of + 1624.