

Conway has been an authority on the subject for many years and he is to be congratulated on completing this mammoth task so satisfactorily. I am full of admiration.

Inevitably, the work is not without flaws, some trivial, some rather more serious. It should be said, however, that even in sum these do not detract significantly from the importance of the book to those in this area of research.

The main thrust is towards the measurement and interpretation of thermodynamic and electrochemical properties of aqueous solutions of ions. This is both lucid and thorough. Less thorough and less critical attention is given to spectroscopic studies, and there is almost no mention of the powerful tools of X-ray and neutron diffraction. There is a chapter on non-aqueous solvents, but I do not feel that the results for such solvents are used to shed light on the aqueous solution problems. In addition, the ordering of topics seems to me to be somewhat arbitrary: thus, for example, the key topic of solvation number is not discussed seriously until Chapter 29. This chapter nicely illustrates some of the historical quirks of the subject, but I would have been happier had the firm information that is now available regarding solvation numbers been used more incisively.

Sections of interest to the biophysicist (and surely to biochemists, physiologists

etc.) include discussions on interfaces, transport through membranes and hydration of polyelectrolytes.

Chapters concerned with the application of physical techniques, for example NMR spectroscopy, are each preceded by a (necessarily) brief introduction. I feel that some of these introductions fall between two stools, being too curt for the uninitiated, but unnecessary for others. Since such topics as NMR spectroscopy have been routinely taught to undergraduates for many years, I think that a book at this advanced level could have assumed a basic knowledge of such techniques.

Having studied ionic solvation by ultraviolet spectroscopy for the past 27 years, I was sad to find no mention of the use of this technique, especially since infrared and Raman spectroscopic studies are given fair coverage. I also think that the book would have gained by a consideration of solvated electrons. These interesting entities have

been studied in great detail and many of the results are of significance to the problem of anionic solvation. However, it is easy to be critical, impossible to be comprehensive and certainly impossible to please everyone.

Finally, a small complaint about references. I realize that it is convenient to produce a list of references for each chapter. However, it would be far more convenient to the reader if these lists were collected together at the end of the book.

I will certainly recommend this work to all interested in ionic solvation: they can wander through this forest of information and make it their own task to "see the wood for the trees". For the more general reader, absence of such an endeavour on the author's part may make the book somewhat less satisfactory. □

Martyn Symons is Professor of Chemistry at the University of Leicester.

Hesse on post-revolutionary reconstructions

R.G.A. Dolby

Revolutions and Reconstructions in the Philosophy of Science. By Mary Hesse. Pp. 271. ISBN 0-85527-268-6/0-253-33-381-4. (Harvester Press/Indiana University Press: 1980.) £20, \$22.50.

MARY Hesse, Professor of Philosophy of Science at the University of Cambridge, is one of the leading British philosophers of science. The present book, her fifth, collects together a selection of ten of her papers which have appeared since 1965. A specially written introduction has been added.

The book is concerned with the new empiricist philosophy of science which has emerged over the past few decades. Professor Hesse fully identifies with it, vigorously defending, for example, the theory-ladenness of all observation, and arguing that the importance of metaphor in science necessitates revision of the deductive model of scientific explanation. The primary purpose of the book is to help consolidate the new philosophy of science, by mapping out more clearly its central concerns and through careful discussion sorting the sensible from the silly.

The book begins with a discussion of recent historiography of science, seeking to explain some of its peculiarities in terms of reactions to its past philosophical fashions. The second paper is the only one which has been significantly changed for the present volume; it is a study of "the strong thesis of sociology of science". This is the claim that true belief and rationality (in science) are as much to be explained by social causation as are error and non-rationality. The discussion tends to the conclusion that this apparently provocative claim is much

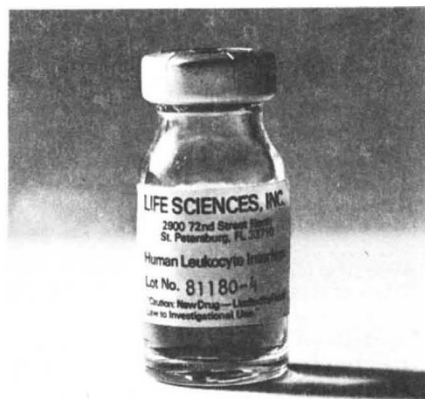
weaker than it at first appears. In the second section of the book, Professor Hesse returns to some of the themes of her earlier writings to do with the relation of observation and theory, the function of metaphor and the nature of theory change. In addition, she discusses what changes the new developments in philosophy of science imply for such central concepts as objectivity and truth. The third section develops these issues by focusing upon hermeneutical philosophies of the social sciences, especially in the work of Habermas. The paper in the final section looks at the implications for theology of such ideas as the consensus theory of truth which were discussed in the earlier sections.

A book such as this, which reprints learned articles, is primarily directed to a limited intellectual community centred upon philosophy of science. Much of it would be difficult reading for a more general audience. However, Professor Hesse is at her best in her lucid representation and examination of fashionable developments in related areas, from which she extracts the claims and arguments which have most interest to the new philosophy of science. In addition to recent history and sociology of science, for example, she discusses such figures as Habermas, Althusser and Monod.

This collection of papers is to be valued for its consolidation of the new philosophy of science rather than for breaking new ground, and will be a valuable resource for all who are interested in the field. □

R.G.A. Dolby is Senior Lecturer in the Unit for the History, Philosophy and Social Relations of Science, University of Kent at Canterbury.


**LIFE SCIENCES,
INC.**



Supplying Human
Leukocyte Interferon for
clinical tests and
research.

2900 72nd Street North
St. Petersburg, Florida 33710
(813) 345-9371

Circle No.06 on Reader Enquiry Card.