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### *Nuclear Power and Its Environmental Effects*

by Samuel Glasstone and Walter N. Jordan; 408 pages; hardbound \$26.95; softbound \$18.95.

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with it. Hard-nosed scientists or occult innumerates will not.

Rucker's "Absolute Infinity", variously identified with the self, the Universe, God, *The Absolute* and so on, emerges from a masterly discussion of the different degrees of infinity discovered by Cantor. One of the many surprises of the subject is that some infinities (e.g. the number of points in a continuous line) are bigger than others (e.g. the natural numbers 1,2,3, . . .). Absolute Infinity is, if I interpret the author correctly, the grand-daddy of them all. This heady concept cannot, however, be grasped by rational thought at all but could, the author conjectures, be revealed mystically. The culmination of the book is an attempt, which I confess I found completely unconvincing, to identify zero, Zen-like, with Absolute Infinity. This is accompanied by a few tips to help the reader achieve the requisite state of consciousness whereby this apparently absurd conflation would become meaningful.

Another extraordinary claim follows a courageous and engaging plunge into Gödel's theorem and the paradoxes of self-reference. Expanding to tackle the wider issues of the soul, machine consciousness

and all that, the author abruptly announces "To exist is to have consciousness" (I am, therefore I think?), and goes on to confirm this astonishing position by asserting that the very page you are reading is conscious!

In summary, the author has written a remarkable account of a perennially fashionable topic in a peculiar mixture of styles. *Infinity and the Mind* is really two books in one, the first about the mathematician's infinity, the second about the mystic's infinity. The attempt to marry the two has obvious commercial value but, in my opinion, must be judged largely unsuccessful. Indeed, I am not sure that such a marriage is either desirable or feasible. Be this as it may, the book is a mine of mathematical information and a thoroughly stimulating read. I particularly enjoyed the section on the author's personal acquaintance with Gödel, and his dazzling account of bizarre orders of infinity which carry (apparently officially) quixotic names such as hyperinaccessible and indescribable. Everybody's father should read it. □

Paul Davies is Professor of Theoretical Physics at the University of Newcastle upon Tyne.

## Separate the yolk from the white

D.M. Weir

*Immunochemistry in Practice*. By Alan Johnstone and Robin Thorpe. Pp.298. ISBN 0-632-00836-9. (Blackwell Scientific: 1982.) Pbk £9.80, \$19.95.

"The method is essentially [or a slight modification of] that described by Smith *et al.*, 1973".

How often do such statements appearing in the "Materials and Methods" section of a paper lead to a visit to the library, where one finds either that the journal cited is not purchased, is unavailable or, worse still, that Smith *et al.* may explain how to break the eggshell but refer back to earlier descriptions for the more technically demanding parts of the procedure? To step onto this treadmill is a sure way of dissipating a laboratory worker's energy and interest for the technique in question, perhaps even to raise doubts that the authors really want others to look closely at their methodology. And even when authors set out to give a full description of the procedure, the shorthand approach demanded by journal editors all too often ensures that the results are difficult to reproduce or even hazardous to perform without additional information and considerable laboratory skill.

Alan Johnstone and Robin Thorpe have set out to overcome these problems (including isolation of IgG from egg yolk) in their beautifully produced volume on immunochemical methods. For their resources they draw on their own

experience and are not too proud to take advice (suitably acknowledged) from workers with special experience in a particular technique.

There is enough theory in the paragraphs introducing each technique to ensure that the reader is not simply blindly following a recipe. The methods themselves are set out under three main headings: materials and equipment, procedure, and notes. Attention is drawn to toxic agents and carcinogens, and words such as "carefully" and "gently" are emphasized in italics. Sources of equipment and reagents are given and there is an appendix with names and addresses of suppliers, though there is often enough detail to enable the construction of equipment — an asset in these days of economic constraint.

The authors have made available to the large numbers of workers in immunology and related fields a wealth of invaluable information and guidance. In a book of under 300 pages it is not possible to provide full coverage of the subject, but a large number of widely used procedures are described using what the authors call "pertinent applications". Their efforts should go a long way to bridge the gulf that rapid technological developments in immunology can cause between immunologists and workers in other areas of biology. □

Donald M. Weir is Reader in Immunology at the University of Edinburgh Medical School.