

historical analysis of the development of Maxwell's field theory.

Siegel's achievement may be seen as having brought the Maxwellian disputes to a close. The task now facing historians is to comprehend the diversity and relationship of the different modes of representation that Maxwell advances in his papers on field theory; and to understand the synthesis attempted in his

*Treatise on Electricity and Magnetism* (1873) in terms of the innovatory mathematical physics. To place this intellectual titan's electromagnetic theory within the wider pantheon of his physical worldview is a challenge for future scholars. □

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## In sickness and in health

Arnold S. Relman

**Health in the Headlines: The Stories Behind the Stories.** By Stephen Klaidman. Oxford University Press: 1991. £19.50, \$24.95.

THE public's appetite for news about science and medicine seems boundless and the popular media devote an increasing amount of attention to the two subjects. Sometimes, the news is straightforward and, except for the technical details, reporters have no special problem in telling it. But often the issues are complex and controversial and, to make things even more difficult, of great importance to people's health. Although the public clearly has a large stake in knowing the facts, they are usually not at all obvious, or they are strongly debated by the experts.

Stephen Klaidman, an experienced journalist, recounts "the stories behind the stories" of seven health-related and controversial issues that have dominated the news headlines at various times over the past decade or two. He tells us in

### New Journals issue

This year, *Nature's* annual new journals review supplement will appear in the issue of 1 October. Publishers and learned societies are invited to submit journals for review, taking note of the following criteria:

■ Journals that first appeared during or after June 1990 and issued at least four separate numbers by the end of April 1992 will be considered.

■ Journals covering any aspect of science are eligible, although those dealing with clinical medicine, engineering and pure mathematics are excluded, as are publications of abstracts.

■ Frequency of publication must be at least three times a year. The main language used must be English. Translation journals in English are, of course, eligible.

■ Deadline for submission is the end of May.

When submitting journals for review, please send at least four different issues (the first, the most recent and any two others) of each title, together with full details of subscription rates (personal and institutional) and frequency of publication, to: Peter Tallack, *Nature*, 4 Little Essex Street, London WC2R 3LF, UK. For further information please telephone Peter Tallack on 071-836-6633 (011-44-71-836-6633 from the United States), extension 2414.

great detail how the media handled stories about the toxic pesticide ethylene dibromide (EDB); contamination of basements with radon gas; AIDS; the diet/cholesterol/heart disease controversy; the health hazards of nuclear power; the greenhouse effect and the consequences of global warming; and the effects of smoking on health.

In separate chapters, Klaidman painstakingly chronicles the events and personalities involved in bringing each issue to the public's attention. Each story is unique; there are only a few common threads. Reporters, we are told, are not always as well informed as they should be; editors and publishers are sometimes biased by commercial considerations or by their connections with powerful political figures. And, underlying it all, is the difficulty of making readers, who are often scientifically illiterate, understand the subtleties of epidemiological methodology and the limitations of results that are based largely on statistical associations.

The book is richly detailed. Klaidman is a careful reporter and he writes well. Disappointing, though, is his limited discussion of basic questions. How can reporters be trained to deal better with complicated science and health stories? Are there some general guidelines that would help both reporters and the public to understand the strengths and weaknesses of epidemiological research? (An editorial by Marcia Angell in the *New England Journal of Medicine* of 20 September 1990 provides an excellent start.) Should news stories about scientific research be handled differently from the usual news reports, and should there be different criteria for publication?

These and many other questions are raised in the book, but readers will look in vain for answers. Perhaps Klaidman can be forgiven because the answers are not obvious and will emerge only after much more discussion and reflection. In any case, he has written an interesting and informative book which breaks new ground in an area that clearly deserves a lot more attention. □

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## Belief in GAD

Michael Morgan

**The Lopsided Ape: Evolution of the Generative Mind.** By Michael C. Corballis. Oxford University Press: 1992. Pp. 336. £18.95, \$24.95.

A DOMINANT theme in philosophy, theology and science has been the nature of the difference between humans and other animals. Is the difference one of substance or just degree? Humans are distinguished from their nearest living relatives by attributes such as the possession of spoken and written language, cerebral hemisphere asymmetry for speech, a strong hand preference, skeletal and sexual adaptations to an upright gait, a considerable capacity for innovation in technology, science and art, and the absence of large canine teeth. It is tempting to link these attributes together into a panoptic theory of human evolution, and psychologists in particular have been drawn to cerebral asymmetry as possibly the most important underlying feature. Many theories have been proposed in which either speech asymmetry or handedness and the use of tools are the basis of human uniqueness. These theories attempt to explain why all the attributes peculiar to humans are associated, although it is probably fair to say that psychologists have not had a great deal to say about the canine teeth.

Michael Corballis, an authority on human brain asymmetry, argues that humans were created by GAD about two million years ago. GAD is the generative assembling device, a hypothetical left-hemisphere neural structure responsible for language, praxis (the ability to carry out complex series of voluntary motor acts), and the ability to form visual representations of objects consisting of several different parts, such as a telephone or chair. GAD evolved in relation both to tool use and technology, and to vocal language, the connection between the two being so intimate that it is difficult to separate them. GAD is specific to the dominant hemisphere (usually the left) and the minor hemisphere remains essentially pre-GADian and like that of animals. Popular hemispherology is not altogether incorrect in supposing that the left hemisphere is analytical and logical while the right is more 'holistic' and intuitive.

Corballis begins with a wide-ranging and erudite review of relevant findings in physical anthropology, psycholinguistics, neuropsychology and visual perception. He then reaches the core of his argument, introducing the concepts of praxis and generativity. Probably nobody has

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