

## Investigating the paranormal

SIR—David Marks' Commentary (*Nature* 320, 119; 1986) is a comprehensive presentation of the arguments that believers in the universal validity of scientific materialism could raise against investigation of the paranormal. But some of the arguments are circular in the sense that they are valid only if scientific materialism is taken as the only possible base.

Marks quotes the opinions of individual philosophers as definitive and accepted truth without indicating that others hold different opinions on the same questions which are more sympathetic to the paranormal cause and which cannot be dismissed as inferior.

For example, Marks quotes Flew's opinion<sup>1</sup> about the impossibility of an after-life without referring to the philosophical difficulties of that opinion (LeShan<sup>2</sup>) and without mentioning the existence of empirical<sup>3-5</sup> claims to the contrary. It may be true that the investigation of near-death experience (an example of paranormal investigations) can be interpreted on a materialistic basis just as in Marks' account of parapsychology, but to take Flew's argument as a solid conclusion is a serious misinterpretation of the philosophical standing of his argument.

Similarly, Marks quotes Scriven's<sup>6</sup> philosophical opinion about the impossibility of non-materialistic evidence, using this as a definitive and a settled argument against paranormal investigation. But other philosophers (for example, Polanyi<sup>7</sup> and Feyerabend<sup>8</sup>) have different opinions about both the feasibility and desirability of such *ad hoc* modifications of materialism.

Marks makes the surprising claim that there are no theories of paranormal investigation. Does he simply mean that there are no materialistic theories of the paranormal? There are, of course, philosophically cautious theories of the paranormal<sup>9</sup> and different models of objective transcendence<sup>10,11</sup>. Or does Marks mean that paranormal investigation has as yet no paradigm (in the Kuhnian sense) that would serve as an example to guide further paranormal investigation? This is true, but only because the investigation of the paranormal is not yet a mature science.

Such confusions arise because Marks does not distinguish between philosophical and scientific theories. There are many who will also reject his assumption that scientific thinking is necessarily analytical thinking<sup>12</sup> and that scientific analytical thought will inevitably replace other perceptions of the world. It is an open question whether such development is likely to be a permanent trend<sup>13,14</sup>, let alone whether it is desirable.

Because so many of Marks' assumptions are based on problematical philo-

sophical outlooks, his final conclusion is too severe. The interpretation of paranormal investigation is a promising endeavour in the pre-paradigm stage. The question of whether it is a scientific endeavour depends on our perception of what is science: was the investigation of electricity before Franklin properly called science?

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2. LeShan, L. *How to Meditate* 14th edn 19-24; 69-72 (Bantam, New York, 1984).
3. Moody, R. *Life after Life* (Bantam, New York, 1976).
4. Sabhom, M. *Recollections of Death* (Harper & Row, New York, 1982).
5. Ring, K. *Life at Death* (Coward, McCann & Geoghegan, New York, 1982).
6. Scriven, M. in *Philosophy and Psychical Research*. (ed. Thakur, S.C.) 181-194 (Allen & Unwin, London, 1976).
7. Polanyi, M. & Prosch, H. *Meaning* (University of Chicago Press, 1972).
8. Feyerabend, P. *Against Method* (New Left Books, London, 1975).
9. LeShan, L. *The Medium, the Mystic and the Physicist: Toward a General Theory of the Paranormal* (Viking, New York, 1974).
10. Smith, H. *The Forgotten Truth* 38-48; 63-73 (Harper & Row, New York, 1976).
11. Bentnov, I. *Stalking the Wild Pendulum* 3rd edn 95-142 (Bantam, New York, 1971).
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14. Toynbee, A. *A Study of History* (Oxford University Press, 1946).

## Systematics as science

SIR—J.A. Barnett (*Nature* 322, 599; 1986) exemplifies many users of the results of systematics who do not realize that systematics is a science in itself, not a mere service to others. If I worked on yeasts rather than on mammals, perhaps I could invert the usual request and ask Barnett, or someone else, for a small favour.

"My work on genus X has encountered difficulties that your techniques can probably ameliorate. I therefore request that you stop whatever you may be doing and sequence several genes from each of the 23 species for which I enclose samples with this request. This should, of course, be at your own expense. It does not matter if your own work is on something else and you have no interest in these species or genes; your knowledge of the techniques is what is important for my work. If you are especially cooperative I will consider mentioning you in the acknowledgements of my paper."

This is actually not an outrageous caricature of some requests to systematists. Systematists are seen as technicians because, indeed, identification and nomenclature are at that level and that is where interactions of systematists with others usually occur.

It is nevertheless true, and not "romantic confusion", that systematics deals with the underlying structure of evolution. As

with any living science, systematics makes progress. A by-product of this progress is that classifications and names, the results most visible to others but nevertheless only superficial manifestations of the real body of knowledge, can change. The changes affect other people. But so do advances in any science. They should be welcomed as advances of a dynamic and living science.

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## Wetlands research

SIR—In his review of our book, *Sweet Track to Glastonbury* (*Nature* 323, 120; 1986), G.J. Wainwright commented on the need for a Wetland Resource Centre to represent the broad range of scientific interests that wetland archaeology encompasses.

To meet this need, the University of Exeter has established a Wetland Archaeology Research Project to co-ordinate relevant work, to provide advice and to act as a central focus for the exchange of information about archaeological survey, excavation, analysis and conservation. Many archaeologists, environmentalists and conservators have already become associates of the project, and it is hoped to expand the list to include all those interested in the potential and the achievement of wetland archaeology, including those concerned with wetland conservation in its widest sense.

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## Trieste confusion

SIR—I would like to point out an error in John Maddox's article "New ways with interatomic forces" (*Nature* 322, 769; 1986). The reference to "... a group based at the University of Trieste (F. Ercolessi, E. Tosatti, M. Parrinello)" is wrong: these three scientists all belong to the International School of Advanced Studies in Trieste.

The school was created in 1978 and is independent of the University of Trieste; it is an "experimental" institution in the Italian university system inspired partly by the Scuola Normale Superiore of Pisa, the École Normale Supérieure of Paris and the Princeton Institute for Advanced Studies.

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