SCIENCE, PSEUDO-SCIENCE OR SUPRASCIENCE?

Some Observations on the Anomalous Status of Parapsychology

by

Eric Carlton

In 1969, the American Association for the Advancement of Science accepted the Parapsychological Association as an affiliate member. Until this time, parapsychology had been regarded by many as, at best, misguided, and, at worst, as the pursuit of tricksters and charlatans. The view that it is, in fact, a kind of fledgling science is only now being seriously entertained. In the last thirty years or so, many scientists have shown an increasing open-mindedness on the subject of extra-sensory perception (ESP), and have given greater credence to the apparent human capacity for the paranormal experience (PSI).

Parapsychology involves the study of a wide variety of phenomena which are not amenable to normal scientific investigation. These range from psychical investigations of mediumistic activities, ghosts, poltergeists, apparitions and out-of-body experiences, all of which are held by some to support the survivalist hypothesis, to research into telepathy, clairvoyance etc., and even to such fringe phenomena as unidentified flying objects. The allegation that ESP is preoccupied with the far-out and the bizarre has given rise to a growing concentration on controlled experiments which have, at least, the gloss of scientific respectability. Hence the now famous laboratory-based work of Professor J.B. Rhine and his wife who pioneered work on precognition from the Thirties onward at Duke University, North Carolina (1).

In the 'trade' there has been a great deal of debate as to exactly what the term ESP should signify. As it stands, it has a number of not always compatible connotations. It may be regarded as prejudicial in that it is thought to relate vaguely to phenomena "outside of the senses" (2), yet, atthe same time, it is said to be radical in that it does not appear to allow for alternative explanations in terms of physiologically based mechanisms. Furthermore it is judgemental in that it implies a form of unconscious communication or perception which is not conducive to other accepted modes of cognition. It can also be seen as anachronistic inasmuch as it is "antagonistic to the (modern) conceptions of psycho-biology and self-regulation" (3). Obviously, some observers would welcome a more neutral term which allows for the possibility for naturalistic explanations which, as

yet, have not been convincingly formulated or generally accepted. Perhaps a suitable working definition would be that ESP concerns "information acquired about the external world other than through any of the known sensory channels" (4). This allows for hypotheses which are consonant with accepted scientific parameters whilst, at the same time, leaving the door open for explanations of a more speculative kind.

The problem of definition immediately raises the whole question of parapsychology as a science. The natural sciences are usually taken as the models of what a 'proper' science should be; but should a science be defined in terms of its aims, its methods, or its content? Scientific investigation, as normally understood, involves the classification of one's materials, the framing of testable hypotheses and the capacity for measurement, verification and prediction. Such criteria inevitably raise doubts when applied to parapsychological research. Furthermore, the entire issue of the control and repeatability of experiments, which is particularly pertinent to parapsychological investigation, is very much open to question. Indeed, where attempts are being made to establish the reality of paranormal phenomena, it is disputable whether the usual scientific canons of evidentiality are even appropriate.

The key problem is that paranormal phenomena rarely conform to regular patterns. They are usually 'spontaneous', and occur without prior planning or preparation for observation, control and experimentation. Researchers have to depend upon the **witnesses** to these phenomena to describe as carefully as possible what they believe occurred - something which is very evident, for example, in numerous UFO reports (5). Indeed, it is only after all the evidence has been analysed, and all 'normal' explanations have been rejected, that the judgement can be made that a particular phenomenon can be reasonably categorised as paranormal. In most cases there is inadequate supporting evidence, and it has been estimated that out of every hundred reports received, only one or two are found to be worthy of publication (6).

It could be convincingly argued that the problem of scientific credibility is even more acute for parapsychology than for other 'marginal' pursuits as in, say, the behavioural sciences. Paranormal concerns are so outre that they probably require **more** evidential support than orthodox investigations; their very implausibility makes them that much more suspect (7). It is a matter of record that many claims to the possession and exercise of psi have been shown to be fraudulent, and in a number of notable instances controversy still rages as to whether particular individuals have this capacity or not. This is evidenced, for instance, by the debate that still continues over the spoon-bending and kindred displays of apparently supranormal powers by the controversial Uri Geller, which is still not resolved (8). Similar mysteries surround the activities of even the best known mediums. But many of these have undermined their own claims

because of their unwillingness to consent to scientific examination under controlled conditions. Nevertheless, there are still some remarkable unexplained cases (9).

The "paranormal" covers a very wide range of phenomena which may be simplistically classified as either physical or mental, and the documentary or witness evidence which is held to support either type may be flawed for several combinations of reasons. There are questions about the quality and quantity of the witnesses themselves involving problems of reliability and faulty recollections; there is the matter too of the conditions in which the incident(s) occurred which may preclude accurate reporting; and then there is the interpretation of the data - which is often no easy matter. Such phenomena are normally neither repeatable nor statistically measurable; they are not always controllable, and are rarely free from some degree of - albeit unconscious - human bias or error. To complicate matters further, reports are often subject to sensationalism and trivialisation (10), and - as we have seen - they can provide the bases for downright fraud and deception. It is therefore little wonder that the whole grey area of the paranormal is treated with some scepticism by the scientific community. Consequently this has resulted in a move away from anecdotal reports and witness-dependency generally to an increasing reliance on controlled laboratory experiments which, it is hoped, will give parapsychology a greater scientific respectability (11).

The intriguing debate concerning what is science and what is pseudo-science, especially in relation to parapsychology and its associated themes (12) is related to the more general discussion about science, per se, and the emergence of a new order of 'companion' sciences such as the behavioural and social sciences. Any aspiring science will be assessed by the standards of scientific conventionality. All disciplines have their own 'reception systems', and the scientific community is no exception. A reception system constitutes the criteria whereby one discipline, in this case science, judges an alien or intrusive discipline to be worthy of consideration either of inclusion or simply of credence. Parapsychology makes implicit and explicit demands for recognition, if not for actual acceptance. How then, is it received?

There are two reception models which may help us to conceptualise the problem (13). The first we may call the **Rationalistic Model** and represents the position of scientific orthodoxy with its emphasis on scientific method as the exclusive determinant of scientific development. 'Truth' is arrived at by empirical procedures which are based upon the verification principle. The stress is on controls, quantification and prediction. All findings must be open to investigation and falsification, and these should be available for applications which are themselves a form of further validation of the procedures employed.

In relation to parapsychology, this model of positivistic orthodoxy is

well represented by the eminent scientist Francis Crick, Nobel prizewinner in 1962 (with James Watson) for his work on the structure of DNA. Crick writes, "The most striking thing about the work of the last thirty years on ESP has been its complete failure to produce any technique whatsoever which is scientifically acceptable . . . Not one truly reproducible experiment has been devised although the record is thick with fakes and sloppy experimentation . . . We must conclude either that the phenomenon does not exist or that it is too difficult to study by present methods . . . " (14).

By implication, therefore, a discipline such as parapsychology must remain suspect, if not actually outlawed, because much as it respects the scientific approach, it also holds to the possibility of other, extra sources of knowledge.

Publication and investigation are also constituent parts of this model. Science is a communication system for the advancement of truth. Findings must therefore be made available for critical comment. (To some extent the superordinate nature of the discipline can be seen in the international conferences of Sovient and U.S. scientists where the unifying ideology of science will sometimes supersede that of the political system). Honesty and fairness are enjoined within the intellectual community, as is also radical innovation and open discussion. The assumption is that science is a universal medium of exchange,a known conceptual universe, which can be appraised by all who have the requisite academic training and are tutored in the correct scientific codes.

This has several implications for parapsychology. By definition, much that is subsumed by the term 'paranormal' is outside the scientific orbit of debate. Its theories are not always open to validation and its assumptions are largely a priori and unfalsifiable. Of course, they are open to a level of discussion, but even this is circumscribed because scientific language - the recognised mode of discourse -is not accessible to the uninitiated. Yet, despite this, the **concerns** of parapsychology, - as opposed to the **methods** whereby these concerns are addressed - are in a real sense open to all. In fact, it might be said that they have a universal and simplistic appeal. The questions they raise are not difficult to understand. Indeed, given their ubiquity in all ages and in all cultures, unlike the closed esoterics

to understand. Indeed, given their ubiquity in all ages and in all cultures, unlike the closed esoterics of science, they have a common experiential currency.

The Rational model must also include the question of acceptability by the scientific establishment. Nothing will be accepted which threatens the power base of the scientific community. Everything will therefore depend upon the credentials of the intrusive discipline. Competing cognitive systems will not simply be judged on the basis of their 'truth' or otherwise; their explanatory possibilities are not the sole criteria for acceptability. What also matters is whether or not they disturb the academic status quo; if

the verities of the scientific community are questioned, the establishment may well unite to resist innovation. Theoretically, they are open to challenge, but in practice there is a reluctance to disturb the air of canonical certainty. Parapsychology presents science with a counter-vailing or, at least, complementary ideology. It is doubtful whether it can ever be fully accepted because it undermines orthodox science as a total - or potentially total - explanatory system.

In considering the relative imperviousness of the scientific establishment, it is worth noting that many respected academics have been traditionally associated with parapsychology, from philosophers such as Henry Sidgwick and C.D. Broad to medical practitioners such as D.J. West, and natural scientists such as A.J. Ellison and Sir Alister Hardy. But esteemed as these and many other devotees are, they still only represent a tiny minority, and their views - which are by no means unanimous - are little more than tolerated eccentricities. Their voices are insistent but hardly strident, and, as such, are unlikely to disturb the entrenched positions of the scientific hierarchy.

The second reception model may be termed the Indeterminacy Model. This is quite a different kind of construct in that in it there are no prescribed scientific procedures, only 'creative hypotheses'. Science fiction, magic and the occult, astrology, and certainly parapsychology, all find their place alongside logico-empirical acts and procedures. 'Success', as such, is largely a question of popularisation and chance; what really matters is the creation of an intellectual environment from which practical accomplishment emerges. The system is 'open'; everything is feasible. Meanings about the 'state' of the universe are extended and simplified, joining the pool with other cosmological possibilities such as, say, Hoyle's panspermia thesis concerning the origins of life on Earth (15).

In such a model where there are no certain rules; men order their own realities. The phenomena that are the concern of parapsychology cannot, therefore be lightly dismissed, and the hypotheses which are provisionally held to account for them can be included among the melée of contenders for 'meanings' and explanation. But their reception will still not be easy because the overarching claims of scientific orthodoxy will almost certainly relegate them to supernumery status. As one writer has ably put it, "So long as the pursuit of psychical research is given, neither the economic resources nor the basic academic respect that any field of knowledge needs in order to flourish, it cannot possibly flow and develop like a subject not in that predicament" (16).

It should, however, be pointed out that parapsychologists are not always the best advocates of their own interests. In order to promote the credibility of their discipline, they can on occasions have recourse to statements which are both obvious and banal. For example, it is pointed out by some ESP theorists (17) that it is possible to formulate certain kinds of testable hypothesis linking psi with particular modes of

observed behaviour. Using the idea of "cohesion" as an independent variable, it is hypothesised that "psi occurrances are more frequent between individuals whose relationships have been cooperative than they are between individuals whose relationships have been competitive". Furthermore, it is then hypothesised that "psi occurrences are more frequent in egalitarian than in authoritarian groups". This leads to an unremarkable third hypothesis that "psi occurrences are more frequent between people who like each other than between people who do not". And so it goes on. Mind you, it is readily admitted that testing these hypotheses is not easy as certain "correction factors" must be introduced to account for bias etc. What is not so readily conceded is how highly dubious such an exercise was in the first place. The high-sounding quasi-scientific phrases do little to dispel the impression that the enthusiasts are clutching at consolatory straws. Scientific authenticity is not achieved by having the mundane masquerading as academic 'truth'.

Not only are parapsychologists on the defensive vis-a-vis their physical science counterparts, they are also rather wary of those social/behavioural scientists who - one might think - would be more favourably disposed to their endeavours. Indeed, it is not uncommon for them to be accused of not really getting to the heart of the matter and minimising the real significance of the paranormal. This is reminiscent of the somewhat analogous reactions by some theologians to sociological studies of religion. They maintain that many sociologists rarely display any true appreciation of the content of religion, and that they are merely skirting the subject when they just concentrate on the social determinants of religious **forms**, and ignore the implications of belief (18). A similar kind of essentialist apprehension is often very evident among parapsychologists who allege that sociologists, qua sociologists, have little real understanding of what ESP is all about (19), and are simply trivialising it by their 'investigations'.

These suspicions are even more evident - indeed, justified - when the social scientists in question are markedly relativistic in their approach to parapsychology. By the very nature of their training they find the tendency to reduce parapsychological phenomena to psychological states or social circumstances virtually unavoidable. A case in point would be the recent very interesting work on "entity" phenomena and UFO's by Hilary Evans (20). Here the author has adopted a Kuhnian stance (21) and argues that belief in the paranormal is not primarily a matter of evidence and objective evaluation, but is largely influenced (determined?) by cultural factors such as political and religious ideologies, and the prevailing ethos of acceptability in the societies concerned. The author maintains that psychic phenomena are largely rejected by science for much the same reasons that they are rejected by society in general. New ideas must accord with the normative expectations of intellectual elites in particular and society in general. A further issue that is also raised by

Evans' work is that of the disparities not just between parapsychologists and others, but between contending parapsychologists who can be just as reactionary about unsettling findings within their own subject-area(22). The cognoscenti themselves are not always agreed about what can and cannot be explained naturalistically, or even what is or is not to be regarded as suitable material for investigation. It is, therefore, hardly surprising that their critics often have a field-day at the expense of this fascinating but uncertain discipline which after all these years is still struggling for recognition.

This entire issue is vitiated by the problem of knowledge. How is knowledge derived, fashioned and authenticated? Presumably it must derive from experiment and experience, but what **counts** as 'knowledge' is very much a social construct (23). 'New' knowledge or 'proper' knowledge will be conditioned by the intellectual ethos of the culture concerned. The climate of opinion will influence the generation and reception of new knowledge, and - not least of all - the mode of legitimation of that knowledge. Cognition is a social concern, and the entire issue of plausibility is bound up with social acceptability. Certainly what was regarded as valid knowledge was once culturally relative, but with increasing convergence, the dominant paradigms of science are coming to be regarded as the only legitimate forms of knowledge.

This all raises an interesting and contentious issue. Is there a highly qualified sense in which all knowledge - and implicitly all values, can be seen as objective, that is, as having **some** meaning or rationality? There are three related poitions or perspectives that can be taken here. The first is that explanation is elusive simply because we are confronted with the problem of conflicting rationalities, different frames of meaning which are 'true' in their respective ways for those who formulate them. Different theorists are locked into their own paradigms which, in effect, comprise a set of incommensurable logics. Yet these have their distinctive rationalities no matter how bizarre or extreme they appear to be. So, for instance, witchcraft - although having little appeal for the modern western realist - becomes a closed and unassailable system for those that are prepared to accept its basic presuppositions (24). This comes dangerously close to maintaining that any thought-system which has its own internal coherence must qualify for social recognition. Needless to say, this could encompass such questionable pursuits as, say, astrology or scientology and is reminiscent of some defensive treatments of theology where attempts are made to present an apologia for theology as a legitimate scientific enterprise simply because it can claim to frame and use its own categories (25). This independent rationalities position is also endorsed by those who advocate an extreme social reductionism in terms of "self-contained socio-cognitive systems" (26). Substantially, such theorists are arguing that different people have different meaning-systems, and as long as these make explanatory sense to

those who endorse them, then, ipso facto, they have their own special kind of validity.

The second position maintains that 'truth' is not so much paradigmatic as relative. This can mean relative to social experience - a la Durkheim (27) - where collective social life is the primary reality, and ultimately determines all modes of cognition. Or it can mean relative to **differences** in social experience - a la Marx (28) - which are conditioned ultimately by the pattern of socio-economic relations. Such views are restrictive for all sorts of reasons. Inevitably they lead to what might be termed the "Hall of Mirrors" problem. If all knowledge and values are socially derived, and social consciousness is simply a function of specific relations and situations, then so are all theoretical formulations that express those relations and situations. The relativist becomes enmeshed in an endless circularity. With no point of reference, there is neither beginning nor end. Nothing can ever be certain. If all truth is relative, no statement can be known to be true - including the statement that nothing can be known to be true (29). Not only can total relativism run the risk of total anarchy, it can - under given conditions - run the even greater risk of endorsing a form of doctrinal tyranny (30). The main difficulty with relativism is that it can be infinitely regressive, and is frequently guilty of confusing the ends with the means.

The third position, which is really a variant of the first, is simply that all 'truth' is complementary. All knowledge is valuable; different perspectives incorporate a range of useful insights. Perhaps all are partly right - so no one can really lose. Thus parapsychology is not to be seen as a discrete paradigm, but as an additional avenue to understanding and explanation; "another voice in the conversation of mankind" (31).

A reasonably impartial consideration of the evidence suggests that parapsychology is best seen in terms of a complementary perspective. It is not an alternative to orthodox science because it does not encroach upon the areas of scientific preserve or presume to pronounce on matters outside its particular sphere of competence. Although - as we have seen - orthodox science, understandably, ventures into ESP territory not only to verify its procedures but also to try to explain paranormal phenomena naturalistically. Parapsychologists are prepared for this and often actually welcome it as a necessary preliminary exercise. Indeed, where possible, they are wholly in favour of utilising the methods and technology of science if it will help to further their own investigations. But essentially, they are exploring a dimension of experience which is largely outside the scope of accepted scientific parameters. They are using increasingly sophisticated techniques to investigate age-old concerns. Despite the present uncertain currency of their findings and the recognised limits of their success, they are at least addressing themselves to what many regard as intriguing and fundamental issues.

Some years ago, when some critics asked Bertrand Russell why he

bothered to study philosophy, he replied that such remarks might be expected from "a historian or a scientist, but not from a soul facing the prospect of cosmic loneliness". Uncharacteristically, he was suggesting that ultimately the metaphysical must matter. And whatever the scientific status of parapsychology, it is interested in some important facets of man's perennial quest. The reductionist sciences portrayed man as little more than passive automata, a view that was encouraged by the emergent activities of the behaviourist psychologists. But this approach will no longer do (32). Men are moving away from purely mechanistic orientations, and groping for new syntheses and new meanings. We are still confronted by the fundamental question of being. A cognitive vacuum still remains. Natural science - as we now understand it - will only take us so far, and behavioural science can only complement this by examining the phenomenological implications of the problem. In all this, parapsychology surely has a place. To rephrase Marx, "science has changed the world, the problem now is to understand it".

References

1. SEYMOUR MAUSKOPF and MICHAEL McVAUGH **The Elusive Science:** Origins of Experimental Psychical Research John Hopkins University Press 1980
2. VERNON NEPPE **Extraordinary Perception:** an Anachronism and Anathema Journal of the Society for Psychical Research Vol 52 No.798 Oct.1984
3. GARY SCHWARTZ **Biofeedback and pattern self-regulation in Biological perspective** Rip 1974
4. JOHN BELOFF Historical Review in B. Wolman (Ed) Handbook of Parapsychology Van Nostrand Reinhold 1977
5. See, for example, ROBERT SHEAFFER **The UFO Verdict:** Examining the Evidence Prometheus Books 1980
6. See the excellent discussion in ROBERT ASHBY **The Guidebook for the Study of Psychical Research** chapt.1 Rider Books 1972
7. Note the views of the psychologist ERNEST HILGARD in **Science Digest** Nov.1965
8. CHARLES PANATI (Ed) **The Geller Papers** Houghton Miffin 1976
9. See, for example, ANITA GREGORY **The Strange Case of Rudi Schneider** Scarecrow Press 1985
10. Obviously in the popular press, and often in relation to "the occult", an area which tends to be abjured by serious students of ESP.
11. Note the work of R.A. McCONNELL **An Introduction to Parapsychology in the Context of Science** University of Pittsburgh 1983
12. RACHEL LAUDAN **The Demarcation between Science and Pseudo-Science** Working Papers Virginia Polytechnic Institute and State University 1983
13. In a quite different context and in somewhat different forms, note the work of ALFRED de GRAZIA The Scientific Reception System, in Alfred de Grazia (Ed) **The Velikovsky Affair** Abacus 1978
14. FRANCIS CRICK "Of Molecules and Men", **Real Time** pp.232-3 Picador 1973
15. SIR FRED HOYLE **Lifecloud** (with N. Wickramasinghe) Dent 1078 **The Intelligent Universe** Michael Joseph 1983
16. ANITA GREGORY Unpublished letter to Nature 30th Jan 1983, SPR Archives Gregory Papers.
17. L. LeSHAN & H. MARGENAU **An Approach to a Science of Psychical Research** Journal of the Society for Psychical Research Vol.50 No.783 March 1980
18. See, for example, the work of J. MILTON YINGER **The Scientific Study of Religion** MacMillan 1970

19. For instance J. GRATTEN-GUINNESS's review of JAMES McCLENON **Deviant Sciences:** the Case of Parapsychology Pennsylvania 1984 in JSPR Vol.53 No.800 1985

20. See particularly HILARY EVANS **Intrusions** - Society and the Paranormal RKP 1982, and **Visions:** Apparitions; Alien Visitors Thorson 1984

21. See THOMAS KUHN **The Structure of Scientific Revolutions** Chicago 1970 particularly in relation to "paradigm shift"

22. See D. SCOTT ROGO's review of Intrusions - Society and the Paranormal JSPR VOl.51 No.792 Oct.1982

23. One of the most stimulating treatments is still P. BERGER and T. LUCKMANN **The Social Construction of Reality** Penguin 1967

24. See the excellent article by PHILIP MAYER "Witches" in Max Marwick (Ed) **Reader in Witchcraft and Sorcery** Penguin 1970

25. Compare ALAN RICHARDSON **Christian Apologetics** SCM 1947

26. Note H. COLLINS and T. PINCH **Frames of Meaning. The Social Construction of Extraordinary Science** RKP 1982

27. See particularly EMILE DURKHEIM **The Elementary Forms of the Religious Life** (1915) Allen & Unwin 1968

28. See the discussion in RAYMOND ARON **Main Currents in Sociological Thought** pp.109-180 Penguin 1965

29. See ERIC CARLTON **The Autonomy of Values Problem.** The International Journal of Sociology and Social Policy Springo 1982

30. See the critique of Collins and Pinch, op.cit.by ANITA GREGORY JSPR Vol 15 No.791 June 1982

31. The phrase is MICHAEL OAKESHOTT's, but, in this case, he is writing philosophy.

32. A. KOESTLER & J.R. SMYTHIES (Eds) **Beyond Reductionism:** New Perspectives in the Life Sciences MacMillan 1970