



THE EFFECTS OF HUMAN VALUES ON SCIENTIFIC OBJECTIVITY

by

Carl Becker
Professor, Integrated Human Sciences
Kyoto University
Kyoto, JAPAN

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This paper discusses the ethics of scientific change, using the response of the scientific community to parapsychological research as a case study. There is no space here to argue the pros and cons of specific research, nor is this intended to advocate a credulous or uncritical approach to much fringe research which is indeed flawed or even fraudulent. Rather, it accepts that there exists some good evidence for phenomena such as telepathy, out-of-body-experience, precognition, and psychic healing. (Some of this evidence is presented in the author's presentation to the IRFWP Religion and Healing group.)

Despite the evidence for paranormal phenomena, and despite the empirical and scientific methods of collecting such data, many scientists still insist that such data must be illusory or nonexistent. The dogmatism of empirical scientists on this point seems to contradict our images of scientists as impartial objective observers of experience.¹ Truzzi² and McConnell³ have made long catalogues of the objections often leveled by scientists against evidence of paranormal phenomena. Even scientists of the status of Helmholtz, considering the sorts of phenomena we have discussed, asserted: "Neither the testimony of all the Fellows of the Royal Society nor the evidence of my own senses...would lead me to believe in the transmission of thought from one person to another independently of the recognized channels of sense."⁴

Surely such a statement is as unscientific as it is philosophically untenable. What could lead such a competent scientist to such a narrow and headstrong assertion? Scientists' non-rational objections to paranormal evidence classify broadly as (1) psychological, (2) intellectual, (3) religious, and (4) sociological. Let us examine the origins and validity of these beliefs, and in so doing, contribute a case study to the current literature in the history and philosophy of science.

1) *Psychological Resistance to Cognitive Dissonance*

In the early 1950's, Bruner and Postman conducted a number of famous experiments in which subjects were asked to identify playing cards which they saw flashed for a small fraction of a second in a tachistoscope. Among the cards were "impossible" anomalies, such as red sixes of spades and black queens of hearts. This difference is known as cognitive dissonance. Some subjects became very disturbed emotionally by the difference between these cards and their expectations. The vast majority of subjects, however, identified all the cards as *normal*; for example, they would call a red spade either a heart or a spade, and not even recognize that these cards combined features of two incompatible suits.

These remarkable experiments led their authors to conclude that humans instinctively dislike anomaly to the extent that they will unconsciously misperceive reality--forcing their perceptions to conform with their ordered expectations--rather than to accept incongruities within a system.⁵ Kuhn cites these same tests in arguing that "data will be beaten into line" to conform with previous theories about the nature of things.⁶

This same concept of cognitive dissonance, or intuitive elimination of incongruent perceptions, can be found in the mind's treatment of memory and interpretation of experience. As one example, we may read William James' own account of a spiritualist session, conducted in bright light and good test conditions. After the description, he quite selfconsciously adds: "Now, after four days' interval, my mind seems strongly inclined not to 'count' the observation, as if it were too exceptional to have been probable....I should be as one watching an incipient overflow of the Mississippi of the supernatural into the fields of orthodox culture. I find, however, that I look on nature with unaltered eyes today, and that my orthodox habits tend to exclude the would-be levee-breaker." ⁷

James was intellectually honest enough to recognize the psychological repression which had taken place within himself--although not strong enough to resuscitate the memory and force it to take a place in his view of the universe! A more recent instance is given in the account of

Ernst Rodin, a Detroit physician who had a Near-Death Experience (hereafter NDE) with an euphoric vision of heaven in 1953. At the time, he was convinced that he was going to heaven and begged to be allowed to die. A quarter of a century later, however, he has reinterpreted his experience in terms of his medical beliefs, and no longer believes that his experience has any inherent reality nor meaning.⁸ Here again, we find a scientist suppressing cognitive dissonance by denying his experience rather than changing his mind. This is indeed a vivid documentation of the strength of conceptual systems!

Preconceptions actually dictate the way that objects are perceived more strongly than do contradictory sense-impressions. Eminent psychologists and doctors can totally discount the importance of their own personal experiences, reinterpreting them in accord with their more comfortable and traditional world-views. How much more then, would people who had *not* personally experienced such paranormal phenomena as telepathy or NDE's be inclined to discount such theoretically dissonant reports as delusion, nonsense, or fraud--anything to preserve their systems of thought. Concerned with consistency, scientists find the inconsistencies posed by paranormal data intolerable, and therefore eliminate them from their world-views by vigorously denying their existence and even possibility.⁹ We might call this the psychological reaction to dissonance. It does not really change the truth of the situation, but it provides a psychological mechanism whereby the person can avoid being too upset.

2) *Intellectual Resistance to Re-education and Paradigm Shift*

In the courses of their educations, philosophers are expected to learn a wide range of theories, from ancient to modern, and to perceive the important truths or fatal flaws in each system. By contrast, scientists seldom study the history of their discipline. When they study it at all, they study only those particular branches of science which directly contributed to and became accepted within their own particular traditions.¹⁰ The contributions of alchemy and astrology to science, for example, are only mentioned in their rejections, but are not examined

seriously as alternative world-views. Thus scientific education tends to be monolithic, mono-valent, and to emphasize the superiority and correctness of its own peculiar metaphysics.

In the words of philosopher-of-science Thomas Kuhn:

"Scientific education inculcates what the scientific community had previously with difficulty gained--a deep commitment to a particular way of viewing the world and of practicing science in it....Preconception and resistance seem to be the rule rather than the exception in mature scientific development....They are community characteristics with deep roots in the procedures through which scientists are trained for work in their profession." ¹¹

Scientists learn not just facts and experiments, but a whole world-views and approaches to their world, which we may call a paradigm. Once a paradigm is learned, through textbooks and repetition of that one paradigm to the exclusion of all others, it becomes invested with strong emotional value, as the best, if not the only way of looking at the world.¹² The chosen paradigm becomes an extremely emotional, rather than a rational, affair; it has never been viewed with philosophical objectivity, and the idea that it might be inferior to some other paradigm is rejected by the entire scientific community.¹³ Changing paradigms does not simply involve "changing one's mind," rather it entails a conversion experience--a new way of looking at the world.¹⁴ It is little wonder that scientists would rather ignore conflicting evidence than modify their long-reinforced pet world-views.

The responses of scientists themselves to such breakdowns of their world-views further documents this theory. One mathematician said of psychic or paranormal evidence, "If that were true, ...it would mean that I would have to scrap everything and start again from the beginning."¹⁵ Of course, there is no inherent conflict between mathematics and paranormal evidence, but this shows how much some scientists connect their personal world-views with their disciplines. As LeShan has observed: "Ours is a culture that has made a tremendous investment in the mechanistic concept of the cosmos, in Descartes' 'clockwork universe' --we are terribly threatened in our very being [if it is challenged]." ¹⁶ Whately Carington and others

have connected the rejection of paranormal phenomena with the beliefs that they would break down our traditional notions of causality, thought to be the framework within which the sciences have grown up.¹⁷

These attitudes are not rational. There is nothing in paranormal research which demands either the sacrifice of mathematics, causality, or even of Descartes (except where he was pretty clearly mistaken, as about animals, billiard balls, or the pineal gland!). The fear expressed here is born of ignorance and reluctance to revise one's ideas. Moreover, many physicists have already abandoned or substantially revised both their commitments to Cartesian geometry and to traditional notions of causality in exploring the atom and the cosmos. Thus people like Heisenberg are no more threatened by paranormal research than by the inherent uncertainties of scientific empiricism. Survival could also prove to be compatible with special cases of dimension theory or energy fields. The majority of the resistance to survival studies, however, comes from the biological, psychological, and social sciences, themselves on weaker theoretical grounds than physics. The violence with which they reject survival "may prove to be an index of its importance."¹⁸

Paradigm shifts are not from error into truth, nor are battles between paradigms possible to paint in such black-and-white terms. Rather, a paradigm switch is more analogous to a religious conversion, or to changing jobs, for the new way of looking at the world may redefine terms and re-orient problems for-the "converted" scientist. The new paradigm may answer some questions better than had the old one. But it may leave other questions, which had been purportedly understood under the old paradigm, unanswerable. It is a major step for some scientists even to admit that there might be important fields of knowledge whose investigation requires tools or methods utterly different from those now employed by science. It is even a more difficult step for a scientist to try to change his world-view mid-stream, and be "converted" to an utterly new methodology for investigating the world.

3) *Religious Resistance to Heretical or Occult Forces*

Paranormal phenomena ranging from spirit possession and telepathy to resuscitation of the dead have been known for thousands of years in Europe as well as Asia. They have been consistently banned and suppressed by the Christian church, not because their reality was doubted, but because they were feared as dangers--opening the gates at least to heterodoxies, and at worst to hell itself. Scientists' commitments and presuppositions in some cases reject paranormal phenomena as impossible or unimportant; in others, consciously segregate them from open scientific inquiry. The notion that empirical studies might yield evidence that humans are more than material is a mind-shaking proposition to many people, who quickly anathematize it.¹⁹

In his survey of scientific attitudes towards the paranormal, Prince concludes that there is an "enchanted boundary," which deprives scientists of their objectivity and reason in dealing with such phenomena. He documents in painful detail how great scientists such as Faraday, Tyndall, [Thomas] Huxley, and dozens of others simply refused to believe such evidence. Some stooped to name-calling and *ad hominem* attacks; others to deliberate distortion of the material they chose to ignore.²⁰ In another study, a questionnaire was sent to a large number of scientists asking them how they would interpret a hypothetical example of a psychic phenomenon *if* it had occurred in such-and-such a manner. The majority of respondents were unable even to entertain the hypothesis, much less to answer the questions.²¹

In survival research particularly, scientists now find themselves in good company with some orthodox churchmen who have other reasons for not wanting people to believe that afterlife could be proved. Churchmen fear that people may think that church membership and sacraments are not necessary to attaining heaven; others argue that proof of heaven might justify a rash of suicides or atrocities like Jim Jones' "Guiana massacre."²² The men making these statements are committed to objectivity and inquiry in other departments of their lives, but this does not seem to affect their religious fears. Nor is this resistance new:

"Consider the violent antagonism encountered by the theories of Copernicus and Galileo in astronomy, Buffon and Hutton in geology, Darwin and Huxley [!] in biology--most of them theories which are now almost unanimously accepted. In these cases, the resistance, as has so often been remarked, arose largely out of the time-honored metaphysical preconceptions or prejudices associated with religious beliefs." ²³

McDougall suggested that men of science fear the admission of paranormal phenomena might open floodgates of public credulity: "...for they know that it is only through the faithful work of men of science through recent centuries that these distressing beliefs have been in large measure banished from a small part of the world." ²⁴

We cannot yet suggest that paranormal research will at some point become an independent science rivaling biology or geology, for we cannot foresee the future. But the symptoms of metaphysical resistance are visible in full strength. Religious objections are neither logical nor scientific reasons for rejecting evidence of survival. However, we must recognize that they play an important role in shaping what is believed acceptable by the scientific community, and thereafter by the public.

4) Social Resistance and Fear of Ridicule

We have seen that the real motives for rejecting the evidence of survival may be psychological and metaphysical rather than scientific. Thus the neglect of paranormal research may be more attributable to sociological reasons than to any inherent flaws in its methods.²⁵ As Heywood analyses the situation:

"Practically all scientifically educated persons found that fear of ridicule, plus their own very reasonable recoil from the seemingly irrational, was more powerful than alleged facts which did not fit into the scheme of things; so, humanly enough, like the man who refused to look through Galileo's telescope for fear that what he saw would not suit his views, they safeguard themselves by ignoring the evidence." ²⁶

Darwin postponed the publication of his *Origin of Species* for twenty years because he feared to challenge the Biblical account, and even more because he "hesitated to defy public opinion."²⁷ William James privately expressed the fear that his name might be discredited for his interests in psychical research.²⁸ Nor is such fear totally groundless. Nobel laureate Sir John Eccles has been blasted for his unorthodox attempts to reinstate mind-brain interactionism.²⁹ Wilhelm Reich was incarcerated and his books destroyed when his theories became too radical.³⁰ In survival research, Doctors Elizabeth Kubler-Ross and Raymond Moody have come under repeated attack as popularizers or even "loonies." It required courage of Dr. Ian Stevenson to publish detailed psychological studies of reincarnation in the *Journal of Nervous and Mental Disease*.³¹ In short, fear of ridicule may not be a logically legitimate reason for avoiding paranormal research (or for refusing to sail west across the Atlantic!) but it may be very effective in suppressing scientific interest in survival until the tide of public opinion slowly turns to accept the legitimacy of such investigations.

In summary, there are a number of non-rational origins of scientists' objections to research on survival and paranormal phenomena. Taken together, they amass a strong, sometimes almost impenetrable barrier between the world of real experience and the world recognized by science. Such attitudes of scientists in fields outside of their own in no way refutes our evidence or conclusions. At most, it demonstrates the dogmatic conservatism and mechanism of many scientists. At the same time, we should do well to understand the methods and channels through which scientists manage to denigrate the importance and deny the legitimacy of paranormal research.

A MODEL OF RESISTANCE AND CHANGE IN THE SCIENCES

Science traditionally has been viewed as a process of growth and accretion, of accumulating facts to fit into an ever more complete picture of the universe. Contemporary philosophers of science have thrown serious doubt on this pattern. Advocates of "fallibilist

pluralism," such as Feyerabend, see scientific change as a matter of discarding whole world-views, sometimes including both the premises and questions which they had taken to be important. This process is fraught with psychological and social trauma. Nonetheless, the new paradigms which gradually replace the old are not necessarily superior to their predecessors. They may be slightly more economic, more efficient, more aesthetic--but ultimately they are seen as equally incomplete and temporary. This view gives cultural and historical factors preeminence over logic and fact in the growth of science, and so threatens the pedestal of "objectivity" upon which scientists are wont to stand.

We must be careful, however, to distinguish between replacement of paradigms and mere replacement of facts. Viewing the world as a sphere instead of as a plane was largely a correction of a matter of fact. Theories of gravity and heliocentricity replaced earlier teleological explanations, and led to new ways of looking at everything, new sets of questions and answers, in short, to paradigm shifts.

Our study of paranormal research contributes some important insights to this historic debate about the nature of scientific change. We can note several phases in its development; (A) rejection, (B) suppression, (C) independent growth, and (D) assimilation and acceptance. Next let us examine how little paranormal research has come towards being recognized as a legitimate empirical study.

A) Rejection of the Evidence

1) Refusal to Consider

Rejection of paranormal evidence takes several forms. One rejection published in *Science* magazine said, "not a thousand experiments with ten million trials and by a hundred separate investigators," could lead the individual to accept survival.³² This particular scientist clearly put blind faith in his materialistic metaphysics over any objective empiricism which his scientific training should have imparted to him! Others, more sophisticated couch their

objections in the logical-sounding language of analytic philosophy, such as Flew's discussion of "insurmountable initial obstacles." ³³ This is no more than a thinly-veiled way of saying that "I just can't bring myself to believe a set of investigative results."

Still others charge fraud. George Price used the Humean argument that "it is more probable that a few people out of the world's billions would lie than that nature would change," (presuming that we already have a complete knowledge of nature) to accuse some of the greater names in modern psychology of conspiracy or fraud.³⁴ Price withdrew his criticisms after honestly studying the subject himself, but they re-emerge again in Hansel (1966) and Gibson (1979).³⁵ These accusations of fraud are not based on knowledge or even on a legitimate doubt that such conspiracy really happens. They are simply using "the fraud hypothesis as a soothing addendum to some version of the *a priori* [impossibility] argument. Though ESP is seen as *a priori* impossible, the phenomena explained by the parapsychologists must still be explained away. The fraud hypothesis fills this lacuna." ³⁶

2) *Discrediting by Association*

Another tactic to impugn paranormal research associates it with the more incredible sides of the "occult lunatic fringe," casting doubt by implication on the integrity and sanity of its researchers. This may be a more or less conscious ploy. McConnell argues that "much of the reluctance of orthodox scientists to endorse extended support for ESP research arises from their failure to make a clear distinction between popular and scientific belief." ³⁷

Both believers and non-believers in psi tended to agree with a statement in a survey to the effect that increasing popular interest in parapsychology damages its scientific reputation. Scientists and critics of paranormal research are equally aware of this phenomenon, and deliberately use it to their advantage where possible.³⁸ By associating survival research with the occult fringes, which lack respectability in the eyes of most Americans, Christians, and scientists, critics can insinuate that the evidence found by OBE or NDE research does not deserve further serious study.³⁹

3) *Criticism by Authority*

Another manner of rejecting the evidence for survival has been alluded to in our discussion of claimed memories of past lives. Adults often criticize children's statements which do not neatly coincide with the adults' world-view. This tends to suppress vocalization of such memories and eventually to stifle them altogether, as being of no value in this world. Garrett describes a childhood situation when she clairvoyantly "saw" the death of a relative and described it to her guardian. The response was, "Don't ever speak of things that you see like that, for they might *again* come true!"—as if the child were somehow causally responsible for the tragedy because she had foretold it.⁴⁰ The irrationality of this response is obvious, but that hardly helps the child being criticized, who is unable to defend her experience from adult criticism. The effect is simply to suppress discussion of paranormal experiences altogether, as the child lacks the authority to reason with its elders.

Similar criticism takes place on a broader scale from intellectual authority-figures. A large public readership may hesitate to speak of parapsychology when an authority-figure like the ex-director of the U.S. Bureau of Standards uses the *Bulletin of the Atomic Scientists* to pontificate in this way: "There used to be spiritualism, there continues to be ESP.... Where corruption of children's minds is at stake, I do not believe in the freedom of the press or freedom of speech. In my view, publishers who publish or teachers who teach any of the pseudo-sciences [should] be publicly horsewhipped, and forever banned from further activity in these usually honorable professions."⁴¹ The Bureau of Standards did not like deviations from visible norms!

This writer knew almost nothing about the field he was condemning, much less of democratic political and penal theory. The net effect of such statements in respectable publications is to suppress free expression of experiences, ideas, and dialogue which might otherwise lead to a better understanding of what really does or does not happen. Blatant rejection of paranormal evidence by authority figures constitutes an irrational but head-on

repression of non-traditional information. Other methods of suppression are more indirect.

B) *Suppression*

1) *Limiting Opportunities for Publication*

An even more effective method of suppressing "undesirable" evidence of paranormal experiences consists of controls over the channels of legitimization. Leading journals of science and medicine systematically avoid material that questions the paradigms under which the majority of their authors conduct research. Before social controls and sanctions of knowledge became of interest to philosophers, there had been no empirical studies of when and why scientific journals published what articles. Their opposition to non-traditional sciences remained clandestine, for other alibis could always be found for rejecting articles of "inappropriate subject matter."

Allison shows that the low number of articles in traditional journals "was not due to lack of submissions." ⁴² There can be little doubt that "the refereeing system frequently operates to suppress the publication of new and important material that happens to be personally distasteful to the referee to whom it is referred." ⁴³ Even when readers agree, Collins and Pinch document cases in which papers submitted to leading publications like *Science* were rejected despite recommendations by a majority of readers and referees.⁴⁴

Of course, this may well be the case in other fields as well. Unlike philosophy, where journals may specialize in positivism, monism, humanism, idealism, or other views of the nature of things, scientific journals seldom represent opposing viewpoints or methodologies. Rather, the sciences are dominated by a few journals whose presuppositions uniformly preclude contrary or paradigm-shaking material--and there are few alternative publications open to investigators of paranormal experiences.

The other alternative of the journals is to grant publication to an occasional article on survival, and then devalue it by emphasizing the critical reactions to it.⁴⁵ This even takes the

form of collusion between several journals, so that several critical articles appear simultaneously with one favorable article. It is the tacit policy of other editors to publish only articles which demonstrate the limitations and inconclusiveness of paranormal research.⁴⁶

Established scientists avoid the increasing evidence relating to the non-mechanistic aspects of human being by these unwritten and normally invisible policies. Many who are interested in the field may get the impression either that nothing is being done, or that it all lacks scientific respectability. Professionals who might be stimulated to think about other approaches to their research are spared the distractions and the challenges by the editors who screen such material from their reading.

Naturally, when material on psi research fails to appear in leading scientific journals, it cannot be excerpted for a broader public audience by potential popularizers such as *Scientific American*, *Psychology Today*, or even *Time* and *Newsweek*. It does not find its way into the printed and computerized indices of scientific or periodical literature, making literature reviews and bibliographic searches immensely more difficult. So the implication that paranormal research is unscientific or illegitimate is quietly conveyed to the reader without the need for offering reasons or risking strong counterarguments. At least through the 1970's, this means of rejecting survival evidence was widely practiced and apparently highly effective. It was only in the late 1970's that *Psychiatry*, the *New England Journal of Medicine*, and the *Journal of Nervous and Mental Disease* began to give space to interpretations of psi research--and even here, with only the most circumspect and tentative of articles. However, this suppression of publishing channels is easy to quantify and document; other means of suppression are subtler.

2) *Suppression of Academic Fraternity, Opportunities and Funds*

Modern science depends on close-knit social structures which Kneller calls "invisible colleges." These may be small groups of fraternal scholars working together to solve a particular problem, trading views and interacting with the larger scientific community through

conferences, letters, summer sessions, and even camps.⁴⁷ "Getting ahead" in science is due not only to good ideas and careful experimentation, but on personal connections with the right people and groups. Psi researchers have generally been excluded from this scientific community, or if admitted as somewhat off-beat members (like Charles C. Tart), they may be restricted in the topics they are allowed to present at conferences of "straight" scientists.

Harder to document, but even more critical, is outright discrimination against parapsychologists. In a Master's thesis at the University of Wisconsin, Allison surveyed members of the Parapsychology Association to find 183 instances of discrimination because of interest in parapsychology.⁴⁸ Over half of these cases concerned hiring, promotions, or facilities, and they tended to come from those already within academic environments. This may also be an unintentional byproduct of the conservatism of funding sources. It is relatively difficult to win funds, grants, or positions to research or teach subjects which are outside of traditional departmental lines of demarcation. The problem becomes even more complex in parapsychology, because it potentially bridges (or falls into the chasms between!) disciplines as disparate as neurophysiology, physics, electronics, psychology, and philosophy of religion. In an era of recession and cutbacks in academic funding, radical departures from traditional structures are unlikely to find sanction. This in turn endangers funding to proposals researching the borders of present knowledge.

3) *Reinterpretation*

Reinterpretation to "explain away" the data is yet another approach of scientists to rejecting survival research. The most traditional approach is to say that the phenomena in question are no more than manifestations of an already well-known condition, such as Dewhurst's attempts to explain OBE's as heautoscopy,⁴⁹ or Siegel's reduction of NDE's to hallucination.⁵⁰ Such tactics are only made possible by ignoring some of the unique and crucial features of the OBE's or NDE's, but the impression given to the uncritical or uninformed reader

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is that "nothing new is happening here."

The situation becomes humorous if not absurd when opponents of one particular paranormal interpretation attempt to replace it with something apparently more scientifically reputable. We recall, for example, Vasiliev's attempts to define a new condition called "parabiosis" between life and death to account for the fact that some people revive after all of their bodily functions had terminated.⁵¹ Then there are the attempts to define NDEs as projections of Jungian archetypes. And the "Super-ESP" hypothesis is widely used by Ayer and Chari.⁵² There is a double irony here. Parabiosis, archetypes, and even ESP are all in themselves but the grossest of hypotheses, whose functions and even existence are more in doubt than the phenomena being studied. Somehow the ascription of an authoritative or scientific-sounding name is adequate to "explain away" the phenomena and demote them from further serious consideration. The existence of the data is not denied, and the "explanations" proffered are more uncertain and mysterious than that which they are to explain. Yet such subsuming of new evidence under traditional rubrics somehow absolves researchers of the need to study the issues further, and brushes them under the rug.

C) Independent Growth

1) Publications

When a community believes that the existing scientific paradigm is inadequate, among its first and most important counter-measures is the promulgation of its own non-traditional viewpoints in print. The survival topic represents an excellent example of this trend within the history of science. In the 1960's, there was only one serious scientist (Ian Stevenson) publishing material on reincarnation evidence, and only a couple (Toynbee, Kubler-Ross) working on NDE's. ⁵³ Their work was so guised in traditional forms that the revolutionary impact of their writings had not yet been felt, and they were completely unknown to others working in similar fields.⁵⁴ However, with the publication of Moody's *Life After Life* in 1976

and Osis and Haraldsson's *At the Hour of Death* the following year, the floodgates were opened. It is not that the scientific community recognized the legitimacy of the research and conclusions. Rather, individuals who had been previously interested in or working in related fields were at last emboldened to attempt publication of their own results. In the past decade, hundreds of books centering on the near-death experience have emerged, and dozens more are reported to be in press or preparation at present writing.⁵⁵ Extracts and interviews with their authors soon followed these early publications, in *Time*, *Life*, *Newsweek*, and *McCall's*.

Equally or more important is the creation of periodicals specifically designed to deal with the survival problem. It was this issue which first inspired the creation of the Societies for Psychical Research in London and Boston. More recently, new journals on death and dying, such as *Death Education*, *Theta*, *Omega*, and *The Journal for Near-Death Studies* have rapidly populated thanatologists' bookshelves, and a significant portion of each of these is concerned with issues of survival.

2) Professional Organizations

Behind many of these new publications are new associations of people interested in the evidence of survival, outside of the old framework of mechanistic materialism. These organizations are of several types. Some, like the Connecticut-based International Association for Near-Death Studies (IANDS), the Temple University Center for Frontier Sciences, the International Society for the Scientific Study of Electrical and Energy Medicine (ISSSEEM), and Japan's Mind-Body Science Association, have affiliation with and support from recognized university departments, and stress the scientific nature of the research being conducted, although accepting contributions from other sources. Others, like Lumena and ERICALAL (European Research and Information Center About Life After Life) encourage participation from those who have had near-death experiences, and may be more or less committed to survivalist interpretations of the evidence. Thus, we can discern two stages in the development of

counter-paradigm societies. First there are those which are simply devoted to the objective study of phenomena which have not yet been adequately studied under the old paradigm. And then there are those which advocate new and somewhat defined platforms to replace the old paradigms.

Survivalist scientists may also join forces with existing anti-paradigm organizations, such as the Parapsychology Association. This foundation holds annual conferences, usually in Europe, of the leaders in parapsychology and a number of related fields, from physics and statistics to neurophysiology and psychokinesis. In recent years, an increasing participation and interest is observed by scientists studying NDE's and OBE's as well.

This approach says to the traditional scientific community: if you don't think our work is valuable or worthy of consideration, we shall congregate and organize with those who do. Thus, in addition to publishing books as individuals, these counter-paradigm scientists can publish conference papers and reports, and set up their own research groups, which over time can take on the forms of legitimate science.

3) *Grants and Funding*

In order to establish journals and hold conferences, substantial funding becomes necessary. Some of this may come from the pockets of the participants, particularly if they are strongly devoted to their particular survival-related organization. More importantly, legitimate funding from government and private foundations not only enables research but also confers the aura of legitimacy on its investigators. Collins and Pinch observe the trends towards legitimate funding in parapsychology:

"The strategy of the parapsychologists has been that of metamorphosis--of becoming scientists. Thus they have acquired university posts (at many American universities [also Freiburg, Utrecht, Andhra, Jaipur]), PhD. studentships (in three British universities), chairs (Surrey), and government funding for research. Similarly, in the area of survival research, a

chair has been established at the University of Virginia specifically for such investigation; faculty of many universities are spending part of their time studying and teaching about death and survival of death, and dissertations on survival are becoming acceptable today when a decade ago they would have been unthinkable."⁵⁶

One of the problems with funding in this area is that some of the sources have less than academic connections: viz. the famous court case in which Arizona prospector James Kidd left \$300,000 to anyone who could prove the survival of the human soul with photographs! Scientists among parapsychologists are concerned to "launder" their funds; to appear to receive them from respectable sources.⁵⁸ Thus the sociological process of scientific recognition takes into consideration both the funds and their sources in according prestige to new entrants.

D) *Assimilation and Acceptance*

In the course of "becoming scientific," anti-paradigmatic groups slowly win acceptance from organs and individuals within the traditional establishment. The process of "becoming scientific," is not achieved simply when the methods and thinking of the investigators has become scrupulous and objective. It is rather a matter of taking on the forms and trappings of an accepted science, of gaining social recognition within the limited community of established scientists. Acceptance of the members and findings of an "out-group" by "in-group" scientists takes several forms, including (1) recognition without conversion; (2) paradigm conversion by personal persuasion; and (3) supercession of an old paradigm by a new one. Let us examine each of these cases, with reference to the growth of paranormal research as a scientific discipline. First, however, it is crucial to review the nature of paradigms briefly.

1) *Recognition Without Paradigm Conversion*

For decades, parapsychologists have tried unsuccessfully to gain recognition from the scientific community without success for decades. Douglas Dean documents some of the

problems involved in this process. The first step was to form the professional Parapsychological Association (1957). Over the following decade, the PA repeatedly tried to win recognition from the American Association for the Advancement of Science. Finally, it was admitted in 1969, following an enthusiastic endorsement speech by Margaret Mead at a meeting of the AAAS membership. Dean reports on the AAAS summary: "The [AAAS] came to the conclusion that it [the PA] is an association investigating controversial or non-existent phenomena; however it is open in membership to critics and agnostics; and they were satisfied that it uses scientific methods of inquiry; thus that investigation can be counted as scientific. Further information has come to us that the number of AAAS fellows who are also members of the PA is not four as on the agenda, but nine."⁵⁹

We may note several interesting factors in the legitimization process. First and perhaps most obvious is that the AAAS sanctioned neither the findings nor the conclusions of the PA, but simply their methodology and objectivity. Secondly, the role of Mead's appeal cannot be overestimated. Her personal stature and persuasion had a strong effect on the membership who had voted to keep out the PA for so long. Mead's comparison of the PA to anthropologists, who also claim to be scientists while not claiming to believe the myths of the people they study, was a card in the PA's favor. Furthermore, we can notice the appeal of loyalty to one's own membership. If "not four, but nine" members of the AAAS program were already PA members, this bespoke an acceptability and legitimacy not previously recognized. Needless to say, the PA had worked hard to get nine of its members on the program, concealing the fact that it was seeding the group heavily, until it was already a *fait accompli*, when prejudices could no longer remove them!

AAAS admission simply acknowledged that parapsychologists use scientific methods. This admission to the AAAS, however, made it substantially easier for later parapsychological researchers to gain admission to other professional organizations and conferences. In particular, sections of recent national conferences on religion, psychology, and psychiatry have devoted

themselves to discussions of NDE's, and similar sections will appear in medical and philosophical conferences in the near future. Of course the fact that such national organizations may admit the existence of interesting problems in the area of survival by no means implies that they agree with either the ultimate importance of such problems, the survivalist answer, or the necessity of revising their own paradigms.

Kuhn analogizes the interactions between traditional and paradigm-challenging scientists to a breakdown in communication. He proposes that gradual participation in the same community demands translation of problems which exist for both communities from one language game to another: "Taking the differences between their own intra- and intergroup discourse itself as a subject for study, they can first attempt to discover the terms and locutions that, used unproblematically within each community, are nevertheless foci of trouble for inter-group discussion.... The availability of techniques like these does not, of course, guarantee persuasion. For most people, translation is a threatening process, and it is entirely foreign to normal science." ⁶⁰

The increasing use of compatible terminology--or at least learning to see the world through rival terminologies--is part of paradigm change in survival research as well as elsewhere. We can see examples in the use of terms coined by Moody, such as 'life-review,' "figure of light;" Osis' "mood elevation," and the acronyms OBE and NDE. These terms are now widely used even by the scientific community critical of the survivalist interpretations of such phenomena.

An example of an individual's gradual conversion process may be seen in the case of Marcello Truzzi, who started the *Zetetic* magazine to criticize paranormal literature scientifically. After five years of studying the material, Truzzi considerably modified his own position. Truzzi then abandoned the *Zetetic* to a hard-core group committed to rejecting all paranormal phenomena as unreal, and he started a new publication, the *Zetetic Scholar*, to take a "critical but objective look" at survival and other central issues in parapsychology. Truzzi's experience

shows that we can rarely change science by convincing the skeptics, who are not open to such conversion in the first place, but rather by slowly persuading the more liberal and open-minded of the scientific community.⁶¹

2) *Paradigm Conversion by Personal Persuasion*

There are not many cases in which trained scientists have actually switched their allegiance from an old paradigm to a new one, but they are all the more striking for their rarity. One famous example of a drastic switch in world-view, occasioned by persistent study and persuasion, is the Conan Doyle/ Harry Price case. Doyle himself had been a critic of spiritualism until he began studying it, after which he became increasingly convinced of its importance and of the truth of personal survival of death. In his later years, he wrote less fiction, but devoted almost full time to this subject until he died. Harry Price, the scientist who spent most of his time debunking mediums, was hostile to the whole idea of survival. But after "Doyle himself" appeared to Price in a seance, and other information inaccessible to the medium through normal means was revealed about the ill-fated crash of the R-101 dirigible in 1930, Price too became a believer in survival.⁶²

A softening in anti-survivalist posture may be noted by chronological surveys of the writings of individuals such as Broad, Murphy, Dommeyer, and Flew. After decades of studying survival research in order to criticize it, they became less able to declare categorically that "it just can't happen," and in Broad's words, to feel more disappointed than surprised if survival turns out to be the case. The most striking conversion is undoubtedly that of George Price, who corresponded with J.B. Rhine and his associates at Duke over a period of more than 10 years. In the end, Price became convinced of their integrity, and concomitantly, of the actual existence of forces which apparently contradict mechanistic paradigms.

3) *Non-conversion and Supersession of the New Paradigm*

The other half of the "conversion" coin is that many scientists are simply never able to re-view their world through new paradigms. Kuhn's books on scientific revolutions are littered with examples of scientists famous in their day, who died in staunch opposition to theories which were becoming increasingly acceptable and would ultimately replace their own completely. Prince's *Enchanted Boundary* also lists a great number of scientists who would not change their minds on the survival issue even in the face of strong evidence. Physicist Max Planck summed it up in his autobiography:

"[Boltzmann's triumph over Ostwald] gave me also an opportunity to learn a fact--a remarkable one in my opinion: A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die off, and a new generation grows up that is familiar with it." ⁶³

Coming from a leader of 20th century physics and philosophy, this statement is a surprising denial of the widely touted "objectivity" of scientists, and a strong confirmation of the reasons for theory rejection being more psychological and educational than theoretical or scientific. As another example, many logical positivists and Skinnerian behaviorists of a former generation who have neither converted nor consented to the new waves of psychology now find themselves supplanted by a new breed of scientists who have themselves experimented with meditation or mind-altering drugs, who no longer accept the mechanism of the 19th century, and who are much more open to the possibilities of psychic phenomena.⁶⁴ The next century may see an increasing liberalism in this area, coinciding with an increasing interest of "legitimate" scientists in alternate paradigms.

4) *Public Opinion and Scientific Change*

One further factor, more important in free than in totalitarian countries, is the effect of public opinion on scientific investigations and determination of the boundaries of "legitimate

science." We have already noted that the scientific community may use charges of "playing to the vulgar crowd," or "occultism" to discredit paranormal research. A growing number of philosophers of science in the West are beginning to recognize public interest as an important element in the decision of scientific legitimacy. Paul Feyerabend, in particular, is outspoken against the tyranny of traditional scientists. He upholds the public interest in UFO's, astrology, and survival as probably having important glimpses of psychological truth. He repeats that the public should be the ultimate arbiter of what science studies, because in America, most of the money of science comes out of the pockets of the taxpayers.⁶⁵ Even more importantly, common people have adequate shrewdness and logic to see through the "monumental ignorance behind the most dazzling display of omniscience."⁶⁶

Scientists are disagreed as to whether such issues should be left completely in the hands of laypersons. Whether of apathy or of worship, the mood of a country towards its sciences may have a tremendous impact upon the support they receive.⁶⁷ There can be little doubt that the public awareness of near death experiences and OBE's (visible in a growing literature of death, even in fiction) has substantially influenced the legitimization of survival research as a field of study--regardless of its final outcome and conclusions.⁶⁸

This paper has considered some of the apparently rational objections to paranormal research: psychological, educational, religious, and social. These types of objections do not stand as real reasons for rejecting new areas of research, but they do explain some of the origins of dissent among those who have not studied carefully the issues and evidence. The gradual legitimization of parapsychological research can serve as an interesting case study in the history and philosophy of science. We demarcated four separate phases in the growth of paranormal studies, showing a transition from rejection or suppression to independent growth and finally to assimilation or acceptance from traditional science.

Ethically speaking, the point is that the ideals of commitment to truth and "objectivity," which are widely respected throughout Western society and thought to be most epitomized by

the the scientific community, are in fact subverted by more selfish personal desires, such as for power and preservation of one's own established worldviews. Brought to light, such unethical practices may be the basis for court cases or ethics committee reviews. But the more important ethical message is to all of us who purport and indeed desire to be objective as well as ethical. Our conservative desires to deny new movements which upset our worldviews is constantly affecting our judgment, speech, and actions, conscious as well as unconscious. If open-mindedness to people and ideas is indeed an ethical ideal (as we believe it should be) then we must work doubly hard to assure that personal convenience and preference do not blind us to the claims of unusual ideas and new movements.

NOTES

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2. Marcello Truzzi, "Paul Kurtz' Analysis of the Scientific Status of Parapsychology," in *Journal of Parapsychology*, XLIV, no. 1 (1980), pp. 39-41; 89-90.

3. R. A. McConnell, "The Resolution of Conflicting Beliefs About the ESP Evidence," *JPP*, XLI, no. 1 (1977), pp. 199 ff.

4. quoted by Rosalind Heywood, "Notes on Changing Mental Climates and Research into ESP," in *Science and ESP*, ed. J. R. Smythies (London: Routledge & Kegan Paul, 1967), p. 48.

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6. Thomas Kuhn, *The Structure of Scientific Revolutions*, 2nd. ed. (Chicago: University of Chicago Press, 1970), p. 135.
7. originally in *Journal of the American Society for Psychical Research*, III, no. 2 (Feb. 1909), reprinted in *William James on Psychical Research*, ed. Gardner Murphy and Robert Ballou (New York: Viking Press, 1960), p. 92.
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9. cf. D. Bramel and L. Festinger, "The Reactions of Humans to Congitive Dissonance," in A. J. Bachrach, ed., *Experimental Foundations of Clinical Psychology* (New York: Basic Books, 1962), p. 256.
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11. Thomas Kuhn, "Function of Dogma," p. 357; these same ideas are also found in his *Structure of Scientific Revolutions*.
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13. Charles C. Tart, "States of Consciousness and State Specific Sciences," in *Philosophical Dimensions of Parapsychology*, ed. Hoyt L. Edge and J. M. O. Wheatley (Springfield: Charles C Thomas, 1976), p. 444.

14. Thomas Kuhn, *Structure*, pp. 114, 151.
15. in Rosalind Heywood, p. 50.
16. Lawrence LeShan, "Some Psychological Hypotheses on the Non-Acceptance of Parapsychology as a Science," *International Journal of Parapsychology*, VII, no. 3 (1966), p. 378.
17. Whately Carington, *Telepathy* (London: Methuen & Co., 1946), p. 45.
18. Brian MacKenzie and S. L. MacKenzie, "Whence the Enchanted Boundary?" in *Journal of Parapsychology*, XLIV, no. 2 (1980), p. 127.
19. *ibid.*, pp. 149-152.
20. W. F. Prince, *The Enchanted Boundary* (Boston: Boston SPR., 1930), pp. 20-120, *passim*.
21. *ibid.*, pp. 210-220.
22. cf. Ernst Rodin, "A Reply to Commentaries," in *Anabiosis* II, no. 3 (Feb. 1981), p. 15.
23. Burt, in Smythies (see note 4), p. 64.
24. William McDougall, "President's Address to the Society for Psychical Research," in *Proceedings of the Society for Psychical Research*, XXVII (1914-5), pp. 157-175.
25. J. M. O. Wheatley, "Reincarnation, Astral Bodies, and Psi Components," *JASPR*, LXXIII, no. 2 (1979), p. 109.

26. Heywood, p. 48.

27. Kneller, p. 108.

28. William James, p. 64.

29. cf. George Mandler, "An Ancient Conundrum," (Review of *The Self and Its Brain*) in *Science*, CC (June, 1978), p. 1040.

30. cf. David Boadella, *Wilhelm Reich* (London: Vision Press, 1973) and Michel Cattier, *The Life and Works of Wilhelm Reich*, trans. G. Boulanger (New York: Horizon Press, 1971), p. 211.

31. cf. Harold I. Lief, "Commentary on Dr. Stevenson's 'The Evidence of Man's Survival After Death'," *Journal of Nervous and mental Disease*, CLXV, no. 3 (1977), p. 171.

32. quoted by Heywood, p. 57.

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34. George R. Price, "Science and the Supernatural," in *Science*, CXXII, no. 3165 (1955), p. 362.

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36. H. M. Collins and T. J. Pinch, "The Construction of the Paranormal," in Roy Wallis, ed., *On the Margins of*

Science: The Social Construction of Rejected Knowledge (Keele: Keele University Press, 1979), p. 251.

37. Paul Allison, "Experimental Parapsychology as a Rejected Science," in *ibid*, pp. 286-287.

38. Truzzi, pp. 90 ff.

39. This would explain the relative infrequency of reporting such memories in the West.

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44. Collins and Pinch, pp. 257-258.

45. R. A. McConnell, "The Resolution of Conflicting Beliefs About the ESP Evidence," *Journal of Parapsychology*, XLI, no. 1 (Sept, 1977), p. 212.

46. cf. Collins and Pinch, pp. 258-9.

47. Kneller, pp. 191f.; cf. Kuhn, *Structure*, p. 168.

48. Allison, p. 279.

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50. Ronald K. Siegel, "The Psychology of Life After Life," *American Psychologist*, 25, 10 (Oct. 1980), p. 923.

51. Leonid V. Vasiliev, *Mysterious Phenomena of the Human Psyche*, trans. Sonia Volochova (New York: University Books, 1965), pp. 200-202.

52. A. J. Ayer, *The Central Questions of Philosophy* (New York: Holt, Rinehart & Winston, 1974), pp. 124-125, and C. T. K. Chari, " 'Buried Memories' in Survivalist Research," *International Journal of Parapsychology*, IV, 3 (1962), p. 40.

53. cf. Elizabeth Kubler-Ross, *On Death and Dying*. (New York, Macmillan, 1969), and Arnold Toynbee, *Man's Concern with Death*. (London: Hodder and Stoughton, 1968).

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56. Apparently Paul Allison's, in Sociology at the University of Wisconsin at Madison in 1973 was among the first. Jeff Mishlove's dissertation at Berkeley in 1978 has since raised serious questions about the rights of the university to grant such degrees. Stevenson's chair at the University of Virginia Medical School is founded and funded by Chester Carlson, the legendary founder of the Xerox Corporation.

57. cf. John Grant Fuller, *The Great Soul Trial* (New York: Macmillan, 1969).

58. Collins and Pinch, pp. 254-5.

59. quoted in Collins and Pinch, p. 254.

60. Kuhn, *Structure of Scientific Revolutions*, pp. 202-203.

61. Truzzi, pp. 49; 89.

62. cf. John Grant Fuller, *The Airmen Who Would Not Die* (New York: G. P. Putnam's Sons, 1979).

63. Max Planck, *A Spiritual Autobiography*, (New York: Philosophical Library, 1949), pp. 33-34.
64. Charles C. Tart, "Emergent Interactionism and Consciousness," in *Brain/Mind and Parapsychology* ed. Betty Shapin and Lisette Coly (New York: The Parapsychology Foundation, Inc., 1979), p. 182.
65. Paul Feyerabend, *Science in a Free Society*, pp. 60-90 *passim*.
66. Paul Feyerabend, quoted in "News and Comment," *Science*, CCVI (Nov. 2, 1979), p. 537.
67. Kneller, pp. 226-232.
68. cf. Sandra Mertman, "Communicating with the Dead," in Robert Kastenbaum, ed., *Between Life and Death* (New York: Springer, 1979), esp. pp. 124-132.