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## Editorial Essay

# Parapsychology in the 1990s: Addressing the Challenge

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**Abstract:** Parapsychology has several characteristics that create problems for it and that must be addressed if we are to become more than at best an intriguing protoscience. Parapsychology has been linked to metaphysical and occult traditions in the past. Acceptance of psychic phenomena (psi) has been exploited by charlatans. Acceptance of psi can easily contribute to delusional systems. Parapsychology threatens the precision and tidiness of traditional scientific methodology. It forces us to re-examine concepts such as consciousness and volition that have been largely ignored within science. It challenges fixed ideas, both materialist and non-materialist, about how the world works. Ethical considerations arise when designing research programmes. Parapsychology involves the study of complex, open systems. It has difficulty in generating and testing theory-based hypotheses. For these and other reasons, parapsychology has often been labelled a pseudoscience by philosophers and sociologists of science. At the Koestler Chair of Parapsychology, we attempt to address these issues by setting our research within the wider context of society as a whole, by developing models for understanding how we can be deceived by ourselves and others into exaggerating the role that psi may play in our daily lives, and by pursuing the best forms of evidence for psychic functioning. We seek to enhance its availability under methodologically sound yet ecologically valid conditions, through several lines of research. In this way we try as best we can to confront the problems raised earlier, with some success but with much room for improvement. Projecting to the future, parapsychologists need to address these issues more systematically than in the past; our own programme is offered as an example of such an attempt, to prompt discussion.

As recent political, environmental and technological developments remind us, the world is rapidly, irreversibly changing. Our understanding of brain and mind is also undergoing considerable modification, expanding in many directions. But what about the parapsychological research community? Are we participating fully in this change? And if not, as many would suggest, what can we do about it? John Palmer's recent PA presidential message indicates that Parapsychological Association membership is declining slightly overall; it is declining in the US, but expanding in the rest of the world. We are acquiring more diversity, an important characteristic for the survival of any population in times of change. Within the European Commu-

nity there are organized parapsychology groups in almost every country. Popular interest and involvement is high, according to a variety of social indicators.

How can parapsychology participate more fully in the current climate of global change, in the inevitable knowledge explosion that accompanies us as we move toward the 21st century? In the remainder of this essay I will try to identify some of the factors that make our progress difficult, and then describe the general strategies we have been adopting with some success here in Edinburgh, in hopes of encouraging discussion of how we might all proceed together to improve our research and its impact upon society.

## Some Hindrances to Parapsychology's Progress

### *Parapsychology is linked to problematic metaphysical origins*

It is helpful at the start to draw a distinction between parapsychology and psychical research. Psychical research was an emergent movement in the late 1800s, initiated by intellectuals who were driven by concern that the materialist, reductionist, clockwork model of the universe was acquiring a dominance it did not deserve. They felt that mind and consciousness were being left out, ignored by science or at best consigned to the role of trivial epiphenomena, incidental byproducts of brain physiology. The psychical researchers organized themselves to develop research strategies for the examination of mental and spiritual life, to query the nature of mind and its relationships to the physical body. Specifically, they focused on areas of human behaviour and experience that were most troublesome for the reductionist view: evidence for survival of bodily death, psychic ability in the living, hypnosis, volition, various psychopathological states such as hysteria and multiple personality, and so on. Psychical research tended to operate from a 'top-down' perspective, starting with major metaphysical issues and grappling with the nature of evidence bearing on those issues. It had its origins in various traditions, including both spiritualism and diverse occult systems.

Parapsychology, on the other hand, developed in the early 20th century, emerging from portions of the body of scientific research that the psychical research societies had offered. The focus was on evidence for psychic ability in living individuals, particularly on the experimental evidence. Parapsychology was organized more from a 'bottom-up' approach, drawing from a sizeable body of quantitative and qualitative data suggesting that individuals can in fact interact with their environment more fully and perhaps more directly than merely via the standard psychomotor means so well understood by the main-

stream scientific community. The parapsychologist's remit was to examine the nature of these data, to assess whether there truly are genuine anomalous abilities, and to develop programmes of process-oriented research to build an understanding of the basis for these abilities. Parapsychologists were well aware that genuine psychic ability could be regarded as evidence for a non-physical, non-reductionistic aspect of self. Some worked hard for this interpretation, noting that the results seemed to indicate that psychic ability was not constrained by biophysically relevant variables such as distance, time, sensory shielding or informational complexity. Others preferred a paraphysical interpretation, and explored extensions of modern physical theory that seemed to allow for non-local, transtemporal influence. And still others were neutral, open to a variety of interpretations, preferring to build a more solid data base, a more concrete empirical foundation, before attempting to construct extensive theoretical edifices.

In some sense, psychical researchers tended to be theorists looking for data; parapsychologists tended to be data collectors looking for theory. The 2 groups are not a tidy dichotomy, and they have much overlap of interest and endeavour. One of the problems parapsychology faces, however, is that it is generally identified with the spiritualist aspects of psychical research, in which it had its roots, and with occultism, with which it is indirectly associated; the public tend to regard parapsychology as an attempt to use the tools of science to prove the existence of a non-physical soul, or to prove that we all have special occult powers. Parapsychologists are seen as people who have already made up their minds, who are now attempting to use the tools of science to persuade others that parapsychologists' view of the world is correct. Thus we acquire enemies that we haven't earned and don't deserve. Some are from a neo-reductionist, rationalist, secular humanist tradition, perhaps exemplified by many of the formal sceptical groups that now also have organizations in most major countries.

Others come from more orthodox religious traditions, readily linking parapsychology with its heterodox metaphysical precursors. Both views are fed by the present-day linkages that the practitioners of various current, spiritistic, occult, New Age traditions often make with parapsychology. The findings of psychical research and parapsychology are frequently cited in support of various beliefs and practices of these traditions, and often incorporated in a host of bogus claims for scientific validation.

*Parapsychology is linked with concepts that have been exploited and misused in the past*

A central tenet of parapsychology is that we humans (and perhaps animals as well) appear to have access to certain mental abilities above and beyond those presently acknowledged by orthodox bodies of scientific knowledge. Unfortunately, special mental powers are surprisingly easy to fake and have been incorporated into exploitative practices both by individual frauds, who seek financial, personal or political gains, and by fraudulent groups such as religious cults, whose leaders demonstrate special powers to validate the cult's philosophy and practices. Sometimes such frauds can be harmless or even beneficial, as in the case of the psychic or medium who serves as a relatively inexpensive therapist or bereavement counselor. But such benefits are available through other means without the need for deception, and in the hands of unethical practitioners considerable psychological and socioeconomic damage can be inflicted upon innocent clients or cult group members. For those who attempt to provide legitimate counselling for the victims of psychic fraud, it is extremely inconvenient to have parapsychology around as a provider of scientific support for psychic claims.

The sophistication of psychic fraud has additional negative effects upon the scientific community, including those members who may be open to serious parapsychology and who are considering becoming

involved. First, it raises the possibility that any specific strong evidence for psychic ability produced by one or a small number of apparently talented individuals may turn out to be fraudulent, and there have been well-publicised examples of this in the past. Thus, researchers who are aware of these examples and who are dealing with an ostensibly talented performer who starts doing well under controlled conditions, may find that their initial hopes for effective research with a reliable source of psychic functioning plummet as suspicion of fraud sets in. That's no way to do business; it has no intellectual or emotional appeal to the researcher, and may lead many to minimise their involvement. Second, scientists and academicians in general hate to be fooled or held up to ridicule. They have made careers out of being knowledgeable and clever, and have no desire to risk being caught out. There is much more intellectual and emotional safety in being a sceptic, especially a sceptical commentator who does no actual research. If a particular anomalous event does not readily admit to an orthodox explanation, then those wishing to be regarded as good scientists have long since learned that it is safest to label the event a likely fraud, albeit a clever one. Such assertions may be a safety net for the researcher's (or commentator's) reputation, but, unless a viable fraudulent scenario is offered, these attitudes do little to advance our understanding.

*Parapsychology can easily be linked with delusional systems*

The possibility that we ourselves may have special mental powers, or may be influenced by the special powers of others, can lead us to develop problematic belief systems about how we interact with the world around us. Some are short-term and drug-induced: under the influence of a hallucinogen we become persuaded we can fly and so we attempt to do something dangerous such as jump out of a high window. Other beliefs may be the product of brain dysfunction: we hear voices and, unable to find a conventional explanation, decide that

a powerful psychic or supernatural entity is attempting to communicate with us; or our thoughts periodically get scrambled and we decide that someone must be deliberately interfering with our mental activities. Still other beliefs may just involve isolated anomalous experiences that cannot readily be explained without recourse to some paranormal interpretation. If we notice a strong correspondence between some specific thought, such as an impression or an intention, and some unusual external event, we may look for an association between the two. If other such coincidences arise, even undramatic ones, they may prompt us to search for patterns, for meaning in the resemblance. This may lead to a search for new coincidences, not difficult for an intelligent and creative person to find, with consequent testing of various hypotheses. After a while, a bizarre theory may emerge, that accounts for all the 'facts'. I may decide that I have special but poorly controlled mental powers. Or, it may seem that some other entity has singled me out for special attention. If no such 'paranormal' interpretation suits me, I may settle instead for a conspiracy theory, for example, that for some reason a group of people have conspired through complex but ordinary means to produce all these coincidences in my life. Any list of the presenting symptoms of schizotypic personality or schizophrenia contains several that are related to distortions in the perceived relationship between one's own thoughts and the outside world, that can be construed as increases or decreases in mental competence of some sort. Once again, many counsellors and mental health specialists find the existence of parapsychology very inconvenient; to the extent that we succeed in verifying the existence of psychic ability, even to a limited extent, we appear to give credence to distorted beliefs such as those described above. If someone is confused about their own mental activities, and knows of parapsychology's positive findings, they can readily form beliefs based on some of the more exaggerated or speculative interpretations of psychic functioning. The task of the mental health specialist who

accepts our evidence as valid can be made still more complicated by the need to tease out the legitimate from the bogus psychic events that their clients may present.

In general, these first 3 problem areas all relate to the fact that parapsychological findings can readily be seen to be related to beliefs and practices that have been largely discredited by the advance of science, and that are well known to be linked to various forms of fraud, deception, exploitation, human error, erroneous belief, and mental dysfunction. Parapsychologists can easily be regarded as at worst exploitative, colluding charlatans; and at best as earnest but misguided researchers whose sincere endeavours have muddied the waters for years and are quite troublesome for the efforts of real scientists and mental health professionals. This isn't a pretty picture for us, but we must acknowledge these concerns as having some validity, and as deserving of our attention. We cannot afford to ignore them or dismiss them as unfair and uninformed. The next 3 closely related areas deal less with the social implications of our work and more with its awkward implications for the scientific enterprise itself.

#### *Parapsychology threatens the tidiness of our scientific methodology*

If scientists in various disciplines take seriously the possibility of an indefinite set of additional means by which organisms are capable of interacting with their environments, then they would see that much of their experimental methodology would appear to need modification and improvement. Sciences that study organisms generally need to control the range of influences between organism and environment that transpire during the course of an investigation. Otherwise, interpretation of their results is rendered uncertain, due to the possibility of unmonitored, unwanted environmental influences. Scientists like to study relatively simple, closed systems, that are sheltered from all but the influences of interest to the researcher. The

problem is quite evident in psychology, where most of the research can be construed as the study of interaction between organism and environment. How do you study sensation and perception in subjects who have ESP? What about studying problem-solving or interpersonal communication? How do you examine psychomotor skills in subjects who may have psychokinetic abilities? How do you keep subjects blind to experimental conditions, to the investigator's hypotheses, to the researcher's hopes and expectations for their performance?

In analogous fashion, how do we take into account the possibility of psychically mediated experimenter effects? Such effects have already been proposed within the parapsychological literature, and involve either direct psi influence upon experimental conditions and outcomes, by the experimenters or any other interested parties, or more indirect influences, such as psychically mediated interactions between researchers and subjects.

One indication that the possibility of such influences has occurred to members of the scientific community is that the apparent absence of such influences is occasionally offered as evidence against the existence of psi. If psychic abilities truly exist, they argue, why don't non-parapsychologists see more evidence of them in their own experiments? Shouldn't experimenters much more often get experimental results in accordance with experimenters' own hypotheses? Shouldn't people succeed at ordinary experimental tasks in psychology, for example, much more so than researchers have noticed? Some scientists feel that the apparent absence of detectable psi in their (non-psi) experiments counts as evidence against psi's existence. At the same time, they are likely to have some emotional resistance to the idea of developing psychic functioning in the public as a whole, because that would make the business of conducting controlled scientific experiments extremely problematic, in ways already partly acknowledged by parapsychologists struggling to interpret all

the variance in results within and between experiments.

*Parapsychology forces us to look at some theoretical concepts that science has found problematic in the past*

By its very nature, parapsychology focuses on the nature of consciousness and experience, on imagery, a variety of altered states, and volitional mentation. The last includes both free-choice behaviour in the apparent absence of biasing information, as done in restricted-choice ESP tests, and conation or striving as is done in PK tests. Some of the theoretical possibilities put forth to explain consciousness are suggestive of the notion of vitalism, currently held as unnecessary by biologists. Within psychology and neurobiology, consciousness and intentionality are controversial topics, yet they are vital to understanding the phenomena studied by parapsychology. We cannot afford to ignore them if we are to explore our subject-matter fully. Conventional scientists may thus feel additionally ill at ease with our subject matter.

Because these topics have been difficult to conceptualise and research experimentally in the past, little is known about them. It is only relatively recently that experiential topics such as imagery have become actively researched. Volition has largely disappeared, replaced by motivation and, in a handful of studies, simple intentional acts. The qualitative aspects of conative mentation that are involved in PK studies are essentially unexplored within cognitive or experimental psychology. Thus parapsychologists have received little help from orthodox science in these areas so far, although the situation is improving.

*Parapsychology threatens fixed beliefs about how the world works*

By suggesting that we may interact with our environments through some unspecified new means, parapsychology threatens to reintroduce considerable uncertainty for those who have come to espouse very specific world-views. For those holding a

reductionistic, materialistic, secular humanist interpretation of the world, we appear to raise the possibility of some sort of direct, non-physical influence, perhaps even a spiritual one, of the sort advocated by various religions and held in disdain by traditional science. Some critics such as James Alcock have clearly sought in their writings to identify parapsychologists as researchers in search of the soul.

On the other hand, many theologians are also troubled by parapsychology and its implications. Some regard us as secularising sacred experiences, as raising the possibility that religious experiences, including supplicatory prayer, visions, ecstasy, and so on, will all be explainable as a combination of known psychobiology plus some additional mental force that is not necessarily spiritual in nature. They can cite various researchers who prefer to regard psychic phenomena as part of the natural world and who thus deny the existence of supernatural causes. Other religious leaders may regard us as probing in supernatural areas, but probing totally inappropriately, and even fear that we may awaken potentially negative or evil forces.

In short, because we are building a case for new means of communication or influence, without yet any kind of consensus about the nature of this influence, we are introducing fresh uncertainty into the worlds of those who have regarded themselves as certain of their core metaphysical assumptions. As a result, such people hope we will fail or, if their faith is quite firm, they know we will fail and regard us as temporarily dangerously misleading. Of course, some of them assume that we will succeed in verifying their own view and are thus more friendly, regarding us as buttressing their own arguments. This latter group are often disappointed to learn that we ourselves still debate the meaning of our results.

The next set of issues shifts the focus to the problematic nature of the research techniques in parapsychology.

*Parapsychology's most obvious potential research projects often raise ethical issues*

Much of parapsychological research as currently done seems bland and not to the point. If we take as our starting point the patterns that seem to run throughout the most striking spontaneous cases, we should be doing much more of our ESP research with participants in altered states of consciousness, including some fairly extreme ones; our target material should be highly arousing, emphasizing strong emotions and realistic emotional environments for agents; and our entire experimental milieu should be consistent with the first 2 points. Our PK research should follow analogous patterns, involving circumstances of strong need for our agents, and target material dramatically relevant to those needs. Many of our studies should involve strongly emotionally charged situations, with outcomes that are truly important for our participants. But such circumstances may raise strong ethical concerns for the physical and psychological well-being of our participants, researchers as well as subjects. Procedures for altering states may have side effects, both during the study and outwith the experimental situation.

Research on training techniques to help people enter psi-conducive states more readily and under more of their own volitional control, and to respond to milder target situations, would be a step in the right direction. However, it inevitably involves inducing considerable change in participants because they will be given new mental tools to explore, about which we know relatively little and for which sizeable individual differences undoubtedly exist. Also, participants will now be inclined to regard themselves as increasingly likely to possess genuine psychic skills, of the sort that, as discussed earlier, may readily become part of distorted, exaggerated views of reality. As they lead their daily lives outside the experimental setting, they will be tempted to apply psychic skills and abilities, to discuss the progress of their abilities with those people who are important to them, perhaps to interact with oth-

ers who make similar claims to have psychic ability, and so on. Both our participants and those around them are thus likely to be undergoing change, with the degree of change directly proportional to their success in our studies.

Many metaphysical and spiritual development traditions offer specific warnings about the use and misuse of psychic ability, and caution that participants who are not sufficiently spiritually advanced should not embark upon the path of psychic development. People who are involved in spiritual development are often even warned against becoming too emotionally involved with the psychic powers that will come their way in the course of their development, and are encouraged to ignore them. Yet on the other hand, in recent years an extensive psychic development industry has emerged, which appears to be offering psychic techniques to large numbers of lay-people who have made relatively little complaint. Whether these techniques are strong enough to produce bona fide psychic development remains to be seen; they may primarily be encouraging people to expect increased psychic functioning, and leading participants to misinterpret and read extra meaning into the relationships between their own mentation (mental activity) and environmental events. Whichever it is, the bottom line is that if we do training research with participants, we must confront a host of ethical issues affecting both the participants themselves and those with whom they come in contact.

Yet another sensible strategy is to do research with participants who have already had sufficient time to become psychologically comfortable with the notion of having psychic skills themselves because they have already completed psychic training programmes or have for some time appeared to manifest these abilities naturally. Many researchers have adopted this strategy, occasionally with success, but in some respects one set of ethical problems has been solved at the expense of allowing others to come forth. Training people to develop psychic skills and claiming to have voluntary control of such skills oneself can

be big business and can easily exploit people, as noted earlier. The researcher needs to guard against being fooled by individuals or groups who may have developed sophisticated deceptive techniques to guarantee a steady stream of satisfied customers. Anyone (be they genuine or fake) working with a respected researcher may choose to exploit that connection in later public promotional material or in private personal recruitment of new clients. One bogus psychic performer advertised that he had been officially tested at the parapsychology laboratory at Duke University; what he neglected to mention was that he had been tested only once and had scored at chance.

Researchers thus have 2 ethical issues to iron out when working with claimants who may be motivated to cheat or exploit connections with respected researchers. First, researchers need to ensure that any procedures in a study are sufficiently fraudproof that a claimant who attempts fraud will not succeed and will, ideally, be detected. This is necessary both to prevent or at least minimise fraud. Second, it is important to protect both the researcher's reputation and the reputation of any successful claimant. As researchers, we owe claimants the security of using procedures with them that will allow us to take successful results seriously and gladly, and that will protect claimants against unfair charges of fraud by opponents of legitimate parapsychology. Given the sophistication of fraud techniques and the difficulty of recreating the exact conditions of a successful test after it's over, the researcher is confronted with no easy task.

Unfortunately, there is probably no real way to guarantee absolutely that everyone who participates in one's research programme will not misrepresent the nature of their participation and what can be concluded from the results. Attempts to build in anonymity and privacy safeguards are helpful, and serve to safeguard those participants who wish to avoid the attentions of the media. However, well-known psychic claimants may make a case that the public deserves to know the results of any serious investigations with them. Negotiat-

ing when to talk about results, what to say about them, and to whom, has been and will continue to be a difficult issue when working with psychic claimants.

*Parapsychology involves the study of complex, open systems*

Parapsychology in some sense is the study of what really happens when somebody appears to have observed or experienced a psychic event. At least one and generally more than one observer or experiencer is involved. A whole host of alternative interpretations of the observed events must be considered and objectively evaluated. Often the researcher or other evaluators themselves are physically present during the crucial events and thus become part of the picture, needing to be described and taken into account. If they are not able to be physically present, then they must engage in some sort of reconstruction of the past event, be it a spontaneous case or a controlled experimental study. The former will be harder than the latter to reconstruct, because the former occurred under circumstances in which the details were not yet known to be important. Because there is such an abundance of alternatives to consider, many details are known to be important and quite a few others may conceivably be relevant as well. If we are taking seriously the idea of new means of exchange between organisms and environment, then it is hard to draw the line as to where the experimental (or spontaneous case) environment ends; what is a part of it, needing to be described, varied, held constant, and so on; and what can be safely ignored. For these reasons, and for reasons to be developed more fully later, it seems appropriate to regard parapsychology settings, be they the natural settings of spontaneous cases or the controlled environments of experiments, as complex, open systems. A system is a set of interactive parts; an open system is a system whose boundaries of influence cannot be precisely delineated. Scientists have their tidiest

results when they study systems that are small, with few interacting parts; simple, whose known interactions are relatively straightforward and well understood; and closed, such that the full set of relevant parts can be readily specified. Physics has great problems at very small and very large levels of interaction, where the systems are harder to observe and inaccessible for experimental purposes; biology has problems with its most complex and open systems, those studied in ecology; and psychology has them when it considers social communication and complex mental processes. In parapsychology, our studies become more artificial and sterile as we try to simplify and close off the systems under scrutiny, and it is difficult if not impossible to place the researchers guaranteeably outside the system of study. Such considerations are especially germane when attempting to evaluate the importance of a failed replication attempt.

*Parapsychology has difficulty in generating and testing theory-based hypotheses*

Largely as a consequence of the above factors, parapsychology has not been able to reach a strong consensus about its domain of enquiry; the range of phenomena, of genuine events and experiences it is studying. As a result, it has been unable to specify the range and strength of phenomena that any theoretical system is obliged to explain. This makes theory construction difficult. Need we account for macro-PK phenomena, or can we settle for explaining information-based effects, disturbances in the randomness of large sets of events? Must we explain ghosts, poltergeists, reincarnation, and the healing power of crystals? Also, as a result of the factors discussed in earlier sections, we have had difficulty in producing any psi phenomena under adequately controlled conditions consistently enough to allow for effective systematic hypothesis testing.



*Parapsychology has often been labelled a pseudoscience by philosophers and sociologists of science*

Due to the frequent abuses of science in areas of strong popular interest, philosophers of science have long been interested in the demarcation problem: can we evolve criteria to help us all (including the public) demarcate between competent and incompetent science, or between real science and pseudoscience? Some writers, such as Andrew Lugg, have advocated that the focus should be on examining scientific practices, rather than on labelling entire areas of research defined by their subject matter to be science or pseudoscience. For various reasons, such as those mentioned in earlier sections, however, many find it convenient to regard the whole of parapsychology as a pseudoscience, because they see it as having a subject matter that is obvious nonsense with a methodology that produces only chance results when properly administered. Such writers tend to reject the subject matter out of hand, confusing the problem area (of why such phenomena occur) with speculative interpretations (e.g., such phenomena prove the soul). Or, they may acknowledge the possibility that the phenomena are legitimate but argue that if there truly were new principles of nature at work here, even if purely mental ones, then we should see much more evidence of these principles around us, we should have mastered these abilities a long time ago, and practitioners who are obviously successful should be in abundance and readily available to sincere researchers. Any controversy should long ago have been resolved favourably. This hasn't happened, so parapsychology's subject matter is obviously non-existent, they argue, and we should close the book on it.

Once the subject matter has been so conveniently dismissed for whatever reason, such writers find little need to examine the actual research methodology and published research reports in any real detail. Any positive evidence is seen as having flaws somewhere, and it's too much work to read the original reports in sufficient

detail to ferret out the difficulties. Sometimes, misrepresentations of the research procedures are offered up (as has been shown by Irwin Child for descriptions of the Maimonides dream research) and so a false public perception of the strength of the methods used is fostered. Or, poorly designed studies will be presented, and well-designed studies conveniently ignored. Lines of research may be inadequately described, yet held up to public ridicule. In short, writers who see fit to label parapsychology as a pseudoscience tend to be poorly informed and to pass on their ignorance to their readership. Those critics who do take the trouble to read the experimental reports in more detail, such as Ray Hyman and Marcello Truzzi, are more inclined either to regard parapsychology as a protoscience, in its early stages of development but with the potential to become a true science if it continues its path of development; or to focus more on individual practices, *à la* Lugg, noting that parapsychology contains a wide range of methodological sophistication, some woefully inadequate and some state-of-the-art.

The writings of sociologists and philosophers of science can be both blessing and curse. When well done they can be productive, helping ourselves and others to discriminate better between effective and ineffective practices, keeping our own thinking sharp. When done cursorily, or with an *a priori* bias, or with insensitivity to the complexities of working with humans rather than inanimate objects, they can do considerable damage, especially if they resort to rhetorical strategies such as ridicule and *ad hominem* attacks. They discourage popular support, potential funding sources, creative and intelligent students, potential colleagues and collaborators with badly needed expertise, and so on. If well trained researchers are chased away, the field is more likely to be populated largely by creative and innovative workers who do sincere research but do it poorly, due to a lack of training; or by amateurs with points to prove, whose research will also be of poor quality.

Much of the criticism directed toward parapsychology is, of course, legitimate and useful. We can learn from it and derive constructive feedback for our own ideas about our strengths and weaknesses, and about how to improve. Our topic has some very difficult problems associated with it, socially, philosophically, and methodologically. Taken together they are a fairly unique constellation, calling for unique and creative strategies for solution. Our participation as a discipline in tomorrow's world will be directly related to our efforts to confront and overcome these challenges. Only if we face them directly can we become a sufficiently active discipline, integrating with existing bodies of knowledge and extending them, producing the level of understanding that is needed to be both philosophically meaningful and practically useful to members of society.

### The Koestler Chair Research Approach

At the University of Edinburgh, we have a group that averages between 10 and 12 people, including postgraduate students. We are evolving our own strategies for addressing the issues raised earlier, which I would like to put forward as starting points for discussion on how best we can all proceed. Some strategies work better for us than others, for some it's too early to tell, and all of them could stand considerable improvement.

### *The particulars of the Chair*

The Koestler Chair came formally into being in 1985, and I assumed the post in December of that year. It is housed physically and administratively within the psychology department, and all of our students are psychology students. We are supported by the interest earned by the Koestler Trust, plus the earnings of the literary estate, plus small grants from a variety of sources. Prior to the Chair, parapsychological research had, for 15 years, been conducted at the department by Dr John Beloff and his students.

I do some undergraduate teaching and supervision of 3rd and 4th year undergraduate research projects, on parapsychology and related topics, in addition to coordinating our unit's research, supervision of postgraduate students, and various administrative and public relations activities. Dr Deborah Delaney is a full-time postdoctoral research fellow, who shares administrative activities, supervises some research projects and pursues independent lines of research, primarily in the areas of free-response ESP training, target variables and individual differences. Ms. Caroline Watt is currently a full-time research associate but will shortly become a postdoctoral research fellow when she completes her doctoral thesis. She is involved in our training research and in looking at individual differences in perceptual defensiveness and vigilance in response to emotionally salient ESP targets. Mrs Helen Sims is a full-time secretary/administrator. Dr John Beloff is a retired senior lecturer, now honorary senior research fellow, who participates in our activities, writes on historical and theoretical issues in parapsychology, and edits the *Journal of the Society for Psychical Research*. Dr Julie Milton serves currently as an honorary consultant and specializes in free-response judging procedures and spontaneous case evaluations. Alasdair MacLulich is a medical student working part-time to develop new computer-based psychokinesis procedures. Delaney, Watt and Milton share *EJP* editorial duties with myself and Dr. Sybo Schouten.

Four of my current postgraduate students are scheduled to complete their theses in 1992. Emily Cook, who took leave of absence from her work with Prof. Ian Stevenson at the University of Virginia, is doing a historical thesis on Frederic Myers' approach to the study of consciousness within the context of the past and present reluctance of the psychological research community to confront the problem directly. Richard Wiseman is working towards the development of a general theory of deception and has completed a set of experimental investigations of the role of prior attitude upon the recall of the details

of videotaped fraudulent psychic events. Robin Taylor is combining sports psychology with parapsychology, looking at the role of imagery in enhancing sport performance and in enhancing psychokinesis performance on a random event generator linked with a computer display. Caroline Watt, as noted above, is looking at perceptual defensiveness and vigilance as predictors of ESP performance.

Three others are expected to finish in 1993 or 1994. Shari Cohn is interviewing family groups within the Scottish Highland communities, looking to see if 'second sight' experiences show distinctive cultural or genetic patterns within family units. Chris Roe is looking at strategies used by fake psychic readers to be convincing to clients, including the use of statements designed to be regarded by most clients to apply uniquely to themselves. Last but not least, we are fortunate to have been joined for a 3 year period by one of the world's foremost parapsychological researchers, Charles Honorton, who is attempting for his doctorate to replicate and extend his successful automated Ganzfeld studies with us, using video clips as targets for people undergoing partial sensory deprivation. His approach, as described in various places later on, was developed at the Psychophysical Research Laboratories in Princeton, and his new research with us should be regarded as a joint endeavour between PRL and Edinburgh.

For the remainder of this section I will describe how our work attempts to address each of the problems described earlier: by setting our research within the wider context of society as a whole; by developing models for understanding how we can be deceived by ourselves and others into exaggerating the role that psi may play in our daily lives; and by pursuing the best lines of evidence for psychic functioning under methodologically valid conditions. In each of these we have had some successes and failures, with much room for improvement.

### *Problem 1: Parapsychology's linkage to metaphysical issues*

According to the terms of the Koestler bequest, parapsychology is taken to mean, 'the scientific study of paranormal phenomena, in particular the capacity attributed to some individuals to interact with their environment by means other than the recognized sensory and motor channels'. This definition makes no metaphysical presumptions. We are committed to study a capacity attributed to certain individuals, with no necessary assumption that such a capacity actually exists. And the capacity is for interactions through means other than the recognized sensory and motor channels, which definition avoids any presumption about the nature of any psychic interactions that we or others may uncover. This approach is consistent with my own, which defines parapsychology as 'the study of apparent new means of communication, or influence, between organism and environment'. It's a bottom-up approach, oriented toward building a more complete understanding of the phenomena, experiences, and experimental data that suggest that psi exists. It is not wedded to a specific theoretical approach, but is data-driven, seeking to develop models that will, we hope, come to link our empirical data with the various partly-developed theoretical systems that currently exist. In turn, such systems may eventually enable a firmer linkage with some of the main metaphysical questions that fostered the origins of psychical research, but such links will only form gradually, in good time. That linkage, once made, may serve to confirm, modify, or completely disconfirm. By focusing on communication as our central concept, we readily build bridges conceptually to a variety of disciplines for which communication in the broad sense is a natural component.

In addition to my own recent writings in this area, Emily Cook's thesis work

serves to compel us to re-examine the origins of psychological research and the dedication of its earliest researchers to the application of scientific method to the nature of mind and consciousness, while avoiding glib or trivially clever pseudo-solutions to the relationship of mind and experience to brain events. In the course of our work, we remain aware of basic metaphysical questions and expect eventually to develop top-down approaches as well.

Such an approach helps separate us from occult traditions in the minds of those who learn of our approach through our writings and presentations. We're not dealing with clandestine or hidden traditions and practices; our focus is on open, concrete evaluation. By studying psi training techniques and developing better techniques for evaluating them, we build toward a firmer understanding of how to evaluate any practices and procedures that come to our attention or that we may locate ourselves. By developing an understanding of fraud techniques and how to circumvent them, we enable eventual fair evaluation of claimants from esoteric traditions. Thus we don't automatically disavow the utility of any such traditions, but we do not seek to support them either. Our approach would focus eventually, when we feel our methods are sufficient, on their practical, empirical claims rather than any associated metaphysical system. For those procedures that appear to work, we can then build toward a fresh understanding, that may or may not draw from concepts already extant within the esoteric tradition.

Comparably, we neither espouse nor deny a spiritualistic interpretation of psychic phenomena. Our work is aimed more at building a fundamental understanding of the phenomena most suggestive of survival, using our knowledge of fraudulent and deceptive techniques and of the properties of various forms of psychic functioning. A researcher wishing to understand the basis of impressive displays of mental or physical mediumship would need to have a firm grounding in 'spirit theatre', the area of performance magic devoted to faking seance room phenomena,

as well as an understanding of the conditions favourable to ordinary psychic functioning. If mediumship is to serve as evidence for true survival of bodily death, these 2 major alternative sets of explanations must be made explicit, evaluated, and ruled out. Even when (and if) ruled out, the findings from mediumship and related phenomena would need to be related to specific models of survival, that posit the properties of what it is that survives, in what form it survives, and how any surviving entities go about communicating with or influencing ourselves and events in this physical world. Once again, we do not ignore the questions posed by spiritualism, but focus instead on building a firm basis for later, more effective, investigations. The work of Richard Wiseman in critiquing early evidence for the physical mediumship of Eusapia Palladino serves as a good example.

#### *Problem 2: Parapsychology's identification with exploitable beliefs*

We attempt to confront this problem directly by studying the techniques of exploitation and their social context, to build as detailed an understanding of them as possible. This information can then be used both to design and conduct better research on claimants of the sort that may be involved in public exploitation, and to help people who may have been exploited in the past, or are currently at risk. There are several aspects to this investigation.

(1) *Understanding physical effects.* This is done mainly through collection of the magic community's literature, including catalogues of available effects as well as manuals of techniques, such as Fitzkee's *Trick Brain*, modern writings on special visual and electronic effects, and so on. Some of these already attempt to order the effects conceptually, but we do this ourselves as well, synthesizing themes and patterns from groups of related techniques.

(2) *Understanding mental effects.* These effects are also best understood through

analysis of items from the existing literature, such as Corinda's *Thirteen Steps to Mentalism*. Included in these writings are techniques for simulating telepathy, clairvoyance and precognition, as well as other special mental skills such as 'lightning calculation', and mnemonic devices.

(3) *Linkage with the observer.* Much of the psychology of deception, about which much less has been written, involves understanding how to present effects to observers so that they will interpret them in the manner desired by the deceiver. The observers' schemata, their ways of organizing their perceptions and of making sense of them, play a crucial role, in ways that we are gradually coming to understand, thanks to Richard Wiseman's work. Schemata can affect expectations; expectations can affect what we select to observe, how we interpret it, and how we will recall it later on. Competent frauds understand the schemata of their intended observers or audiences; pseudopsychics succeed best when they understand the beliefs of their clients and of those who would do research on their apparent abilities. Such beliefs can lead to patterns of observation, which are then capable of being exploited.

(4) *The social context of the claim and its negotiated acceptance.* Another focus of Wiseman's work is the psychology of negotiated acceptance of psychic claims, and the strategies for their evaluation. This includes the linkage between: an initial claim; a proposal for testing it; a negotiation, either before or during the testing procedures, for alternative ways of testing the claim if the pseudopsychic feels they cannot beat the test, either before or during the testing procedures; re-negotiation of the rules for evaluation after the test; announcement of various excuses for failure; affirming to others the success of the test despite its actual failure; and so on. What appears to be a straightforward, consensually agreed-upon procedure can become distorted in the course of things, especially if the test presents the pseudopsychic with unexpected problems. We are attempting to

develop procedures to overcome these difficulties, to allow fair formulation and testing of a claim while preventing unfair reinterpretation after the fact. Wiseman's protocol for evaluating the SORRAT claims is an example.

(5) *The evaluation of written or audiovisual archival material bearing on claims.* Features of the areas described above can be applied in evaluating earlier spontaneous cases, field investigations and experimental studies, which must be reconstructed from existing records, generally written but occasionally audiovisually recorded as well. Detailed reconstructions of primary records can be time-consuming and often evaluators will rely on indirect or secondary sources, including other evaluators, thus propagating any errors present in the secondary sources. By understanding the problems of evaluating archival material, we can learn how better to conduct our present investigations such that when we convert them into archival material that material will itself be more effectively evaluated by future researchers. Wiseman, for instance, noted that the writers of the Feilding Report on Palladino described in great length how they prevented her from physically cheating by restricting her own body movements, but they apparently gave little attention to the possibility of there being an accomplice. As observers, their schemata were organized primarily around an understanding of a specific set of tactics that Palladino was known to employ to cheat, and that's what shaped their strategies for conducting and reporting their observations.

(6) *The techniques of the verbal reading.* Much of the simulation of psychic ability occurs within the context of the psychic-client interaction. Once again there is a considerable literature, by writers such as Robert Coultie and Barton Jones, about fake psychic reading techniques. Chris Roe has developed an organization of the general groups of strategies that pseudopsychics can use: to gain information in advance about clients; to glean information

from their appearance and nonverbal behaviour; to make statements that represent sound advice or promise exciting future events; and to make so-called Barnum statements, that by their nature appear to any client to be uniquely descriptive of only themselves. Roe's experimental research focuses on the nature of Barnum statements themselves and their processing by the client, because that is one of the least understood features of pseudopsychic readings. By understanding the techniques of fake psychics, we can help spot fakes earlier and avoid wasting time on them, and can design more effective tests for those people who seem to have genuine talent.

(7) *Developing a general model of deception.* Parts of all of the above are being combined with the deception literature in other areas, such as military and commercial deception, to develop an over-arching general theory of deception. This is designed to help us understand the range of psychic simulation techniques at various levels, from the specific tactics to general strategy, so that we can relate our work and needs to comparable circumstances in other areas and thus have a broad range of application in areas beyond just parapsychology. Our work in this area is still in its early stages.

(8) *The pseudopsychic as confidence artist.* One of the most difficult aspects of psychic fraud to organize conceptually is the emotional side: the techniques by which a pseudopsychic can persuade others so completely of their sincerity (gain their confidence) that the client will allow the pseudopsychic to work under much more casual, informal conditions than they would if the client were sceptical or on guard against possible tricks. Deborah Delaney has published a vivid description of her own interactions with such an individual, and is interested in developing a more complete understanding of how the confidence artist works.

(9) *The social context of such exploitation.*

We are only gradually beginning to build a picture of the use of such techniques in exploiting public interest, such as in recruiting people to cult groups, misleading members of the public through fraudulent practice, and so on. We have informal, indirect contact with groups concerned about these kinds of abuse, but this aspect of our work is not extensive and we view ourselves primarily as a resource; a source of information for cult counsellors, law enforcement officials and others who must deal with actual or potential victims.

One product of this work is the development of a manual for parapsychological researchers, written by Richard Wiseman and sponsored by the John Björkhem Memorial Fund of Sweden. The manual will be distributed to the major research centres and individuals later this year, and should be a valuable resource for improving research techniques, especially with psychic claimants. Included is information about various products designed for the security industry that will help us ensure that our research protocols are not readily violated, and that will allow us greater freedom in the strategies we can use to test people under more natural circumstances.

A feature of our work that should also be mentioned is that, largely through Richard Wiseman's efforts, we have very solid contacts within the magic community that we value greatly and hope to maintain.

*Problem Three. Parapsychology and delusional systems*

Our field's social responsibility includes helping people who have active delusional systems that involve what seem like psi components, to link up with the expertise they need to help them, if in fact it exists. That can include medical expertise, psychological expertise, social expertise (especially for isolated individuals) and parapsychological expertise. We also have a responsibility to help people who are at

risk of forming delusions; who are acquiring beliefs that could be detrimental to themselves or others, e.g., who are making ill-founded, misinformed attributions of psychic causality to themselves, others, and physical events. Our efforts extend to include helping people who are presently merely puzzled or somewhat fearful about their own experiences or someone else's, distressed by uncertainty or by potentially troublesome implications of these experiences.

We are addressing this responsibility in both general and specific ways. The deception work described earlier includes the study of self deception. The models we are developing are useful for describing human error, and can be readily linked with models from other areas, such as social attribution theory and human factors research in industry and technology. Caroline Watt's paper in this issue of *EJP* summarizes recent approaches in psychology as they relate to the study of attributed coincidences, and she has written earlier on the assessment of pattern in clusters of spontaneous experiences. Shari Cohn's research involves in part understanding very vivid spontaneous experiences, their phenomenological characteristics, and their integration into their sociocultural setting. My own recent writings and presentations to public and professional groups (including various medical groups) have dealt extensively with models of what's not psychic but looks like it.

At a more specific level, we are working to build concrete links to the public and professional communities, pacing ourselves as best we can, bearing in mind our limited resources. Our administrative secretary, Helen Sims, has taken training in counselling skills to enable her to deal more effectively with those who phone or come by in person with specific questions or problems to do with their personal situation. She attempts to learn the basic details of their circumstances and then either provides them directly with relevant information or else arranges for them to be linked with the appropriate sources of information, advice, or counselling. Often this must be done

through their existing medical contacts, so that we do not appear to be bypassing their own medical authority or colluding with their belief system. This is often difficult and our present arrangements are not always able to provide satisfaction. Additionally, we have clinically-oriented staff meetings approximately 8 times per year, attended by 2 psychiatrists (one also a minister), a clinical psychologist, and a liaison to community groups. At these meetings we review case material, discuss matters of proper legal and ethical procedure, liaise with other counsellors, and have presentations on relevant topics. The aforementioned mental health professionals provide limited volunteer short-term counselling, where appropriate, to people who have contacted us and are in difficulty, and they help those people seek any more extensive aid that they may require. Because our staff are not qualified medical professionals and our colleagues are volunteers, we are not in a position to serve as a true counselling centre such as has been available elsewhere, for example in Holland and Germany. Fortunately, at present there does not appear to be a major problem in Scotland, despite public awareness of our existence, and we hope to help keep it that way, emphasizing prevention rather than cure.

Although we are just in the very early stages, we are beginning to relate our work to existing models of mental dysfunction, including delusion formation, that have been developed within the psychiatric and clinical psychology communities, and it is our hope to contribute productive, fresh insights into these areas. Such contributions may involve helping counsellors assess the likelihood of genuine psychic functioning in their clients. If the likelihood is high, counsellors need to know how to help their clients deal with the possibility that the client will occasionally have experiences about which we know very little at present. They may also need to be able to advise clients who are tempted to increase or enhance psychic functioning; thus our psi-oriented research in general and specifically our study of training techniques and

individual differences in psychic functioning become relevant.

If the likelihood of genuine client psi is low, we hope to contribute techniques to help clients work through their past experiences and explore alternative interpretations of them. Much of our contribution may involve helping people understand how their unusual experiences interact with their belief systems. Some theorists, such as Brendan Maher, argue that people who have dramatic anomalous experiences may regard those experiences as inherently meaningful and that these people then function like rational scientists, attempting to form hypotheses and look for confirming or disconfirming events. Eventually they may evolve beliefs that have stood the tests of time and may well therefore have properties that render them unfalsifiable. Examples include: (1) I have special mental powers but they are hard to control; (2) I have been selected by a powerful external entity for special attention, either good or evil; (3) I have become the focus of a major conspiracy by an organized group. Each belief can easily accommodate a wide range of coincidences between internal and external events.

Some disturbances may involve exaggerations in one's perceived volitional mentation, or intentions. If my perceived intentionality is high, I may regard myself as responsible for everything; all events are in accord with my own wishes. If my intentionality is low, I may feel that my thoughts and actions are not my own, and that they therefore must be due to the intentions of others. Our psychokinesis work has led us to explore the nature of volitional mentation, including the notion of volitional styles and strategies, in ways that may be germane both for the understanding of delusional systems as noted above, as well as for areas such as habit management and performance enhancement, which also have clinical implications.

Finally, we need to help counsellors assess the likelihood that they themselves may be using psychic functioning, intentionally or unintentionally, in the process of providing therapy. This may show up in

interactions between therapist and client, as many have argued; or in the process of achieving clinical insight itself. Our work is only indirectly related to this issue at present, and there are many therapists in Europe as well as elsewhere who are addressing these issues.

#### *Problem 4: Parapsychology and current scientific methodology*

Science's existing standard methodologies are excellent for some purposes but greatly impoverished for others, as is being increasingly recognized. As parapsychologists, our job in part is to help point out areas where science's current tools do not work so well, and to suggest and implement improvements in methods so that we may more richly explore a wider range of areas of potential inquiry. As mentioned earlier, such areas can include those that involve complex, open systems, as well as areas especially susceptible to experimenter effects.

One specific way we are attempting to deal with these issues is to apply the general concepts of systems theory to our work: to regard spontaneous cases, field investigations and experimental studies as complex systems, themselves part of larger systems and yet having many subsystems as well. Our efforts are not at the level of sophistication of Walter von Lucadou's work; nevertheless, in constructing our models and designing our studies we try to think in terms of systems. My model for organizing the factors involved in evaluating psychic claims views the observer as a subsystem, which combines with the subsystem observed to constitute a larger system. The previously cited work of Wiseman, Roe and Watt, regarding deception and the evaluation of claims, can all be regarded in systems terms. We study open systems, because by the nature of our work we are exploring communication systems whose boundaries we cannot completely regulate. It is important for us to liaise with other disciplines that have similar topics; in the past, researchers doing systems-related work in fields as diverse as epidemiology



and accountancy have found thematic similarities between their problems and our own.

By its nature, parapsychology compels us to regard individual researchers, as well as larger segments of the research community, to be part of the overall system in which our work is done. This can be seen both in dealing with experimenter effects and in coming to grips with the nature of replication attempts. How we might best take extraneous (e.g., observer and experimenter) psychic effects into account in our studies remains to be seen, and is likely to emerge only after considerable additional research. Certainly this issue is at the heart of the observational theories. At present our research programme has no features aimed directly at this question, save for the considerations of the observational theories in the RNG-PK research of Gissurarson while he was with us. Any research is potentially relevant, to the extent that it contributes to a fuller understanding of the nature of psychic functioning. In various of our studies, perhaps especially in our training work and in Honorton's automated ganzfeld research, the contributions of the research planners as well as those who actually conduct the experiment are both explicitly acknowledged. Honorton's most recent work has specifically incorporated direct measures of the degree of homogeneity of effect sizes, to enable us to assess the robustness of various effects beyond the idiosyncratic contributions of individual experimenters. In my own writings, I have tried more fully to develop psi-liberal versus psi-conservative models for daily psychic functioning. The former envision psi as pervasive in daily events but generally at a low and undetected level; the latter assume true psychic functioning occurs only sporadically, governed largely by the convergence of a small number of psi-conductive factors. Each way of regarding psi suggests different strategies for the design and conduct of overall research programmes as well as individual experimental studies.

A systems approach may help us understand why psychic functioning isn't more manifest in non-psi experimental

studies. Psi-liberal models would posit that psi functioning may be present but not detected, especially by researchers not oriented toward looking for it. Psi-conservative models would posit that psi functioning occurs relatively rarely, because sufficient convergence of psi conducive factors would rarely occur; when they did, they would tend to be discarded as bad data or anomalies to be ignored, if they were non-recurrent. Both kinds of models would allow for multiple observer effects that may either cancel or reinforce each other. To be useful, any such model needs to be developed sufficiently to generate testable hypotheses, a process with its own difficulties.

#### *Problem 5: Parapsychology and the problem of consciousness*

Our work intimately involves human experience, be it the conscious expression of information in ESP or the volitional mentation that accompanies PK. Parapsychology also embraces a variety of transpersonal experiences, and suggests a host of direct ways that consciousness may interact with the environment. Science has difficulty enough in exploring the psychological features of the brain states associated with such experiences, let alone making any real progress in understanding what produces the frequently vivid, complex and even bizarre contents of such experiences. Psychobiology and cognitive psychology are turning their attention increasingly in these directions; our own work as parapsychologists should ideally complement these more mainstream endeavours, both adding to them and benefiting from them in turn.

Much of our work explores aspects of consciousness as they relate to psychic functioning, and may contribute to our general understanding of these elements of experience and of how to study them. Imagery, in visual as well as other modalities, is an important part of several lines of research. Robin Taylor's thesis looks at imagery in both a PK and a sport performance context. Many athletes use mental

rehearsal to aid them, a set of techniques involving visual or kinaesthetic imagery of the actions being learned or perfected. Taylor's thesis explores imagery training procedures and internal versus external imagery perspectives, as they affect mental rehearsal and athletic performance. He is also looking at ways to build better controls into such research, that would take into account increased expectation of success when mental techniques are used to enhance performance. The psi training research by Delanoy, Watt and myself also explores techniques for training or improving imagery abundance, vividness and controllability. The research also looks at the use of directed and nondirected guided imagery procedures for linking with psi targets or for other forms of creative activities, problem solving, information retrieval and so on. Imagery training is combined with training in relaxation and attention regulation (concentration) techniques, that reduce external noise and allow internally generated mentation to dominate. Charles Honorton's research employs techniques such as auditory and visual sensory reduction, to enhance imagery production. All these projects are interested in individual differences in natural imagery production and in other cognitive/personality variables, and all are essentially exploring relatively mild techniques for producing altered states of consciousness. We hope to build up a firm understanding of such mild states before proceeding to more intense ones, of the sort reputed to be better able to facilitate psi functioning and transpersonal experiences, and that in general are more challenging for orthodox psychobiological explanations.

Intense transpersonal states are relatively less common in industrialized cultures such as our own, having had their origins in early shamanistic and contemplative traditions. It becomes important for us to understand the functioning of such states in other societies so that we can help them to be of use to us in our own style of society. Shari Cohn's exploration of imagery in 'second sight' traditions, in the Highland areas of Scotland, focuses in part on the

function of such experiences in those cultural systems. Additionally, I have supervised a series of advanced undergraduate projects looking at the use of mild versions of imagery, concentration and relaxation exercises within a stress management context, to learn how members of more orthodox segments of Scottish culture respond to such procedures, and to help us learn better how to introduce them and to whom to introduce them.

An additional area of exploration is in the area of volitional mentation. Loftur Gissurarson's doctoral thesis paved the way for exploring individual differences in volitional mentation through the use of interviews, questionnaires, behavioural indices and assigned volitional strategies. Early writers on volition such as Charles Spearman divided it into choice (or decision-making), and conation (or striving). Both are important for our understanding of volitional mentation in PK situations, because both are linked to the 2 main schools of thought about the linkage between mental activity and the biasing of probabilistic outcomes in PK tasks. The hypotheses based on a 'choice' model of volition, such as those championed by Edwin May and others, posit that success is the result of effective decision-making, of choosing psychically to initiate each trial at the proper moment. The conative hypotheses posit that the intentions of the PK agent matter, rather than the choices, that it is the direct willing or wanting that is important. Observational theories would be included here.

Gissurarson's work has involved questionnaires designed to elicit attitudes towards PK, usage of volition in daily life, volitional styles or strategies, auditory and visual imagery, and so on. He has interviewed his participants about their volitional strategies and catalogued their responses. In his PK research he has compared different assigned volitional strategies, and different sets of instructions about what kind of imagery to use in attempting the PK task. Finally, he has measured the delay time between consecutive trials, as an indicator of how long it takes participants

to implement their assigned volitional procedures each time they make an effort. This delay time has correlated significantly with assigned strategy, thus providing both an objective indicator that the assigned strategies were in fact being carried out, and a way of indicating which kinds of instructional differences matter for participants' mentations and which do not. This behavioural measure of inter-trial mentation time may be useful in studying differences in volitional strategies in a variety of other contexts as well, thus giving the study of volition within orthodox psychology a potentially valuable new tool, to be used alone or in tandem with other measures.

In addition to Gissurarson, who received his doctorate for this work, a medical student, Alasdair MacLulich, has been helping us develop volitional styles questionnaires to be used in a variety of contexts, including other volitional anomalies, habit management (e.g., smoking, drinking, use of other drugs), anomalous medical recuperation rates, and so on. His own experimental results have been quite encouraging so far.

It seems evident to us that parapsychology should not be seen as problematic for psychology and psychobiology because it compels us to re-examine concepts, such as consciousness and volition, that have been difficult and perplexing in the past. Instead, we should strive to be seen as colleagues, offering additional avenues for pursuing such questions. After all, part of the public's seeming indifference or antagonism to psychology may well stem from psychology's obvious reluctance to address the many aspects of human experiences that are truly of most interest to the lay community.

*Problem 6: Parapsychology and our current understanding of the laws of nature*

Parapsychology, like all other studies of extensive sets of anomalies throughout history, suggests that our present understanding of the world is seriously incomplete. We do not know yet where parapsy-

chological research will lead; it may appear at various times to support first one interpretation or world-view and then another, and may even come to suggest directions quite beyond those with which we are currently familiar. As noted earlier, we do not ally ourselves with any specific metaphysical view or theoretical system, and prefer a bottom-up approach. Although we don't completely ignore metaphysical concerns, we do maintain that none of the present world-views seems acceptable as it is; some modification is inevitably needed. It seems important to reaffirm that parapsychologists as a group are not engaged in some major spiritual quest, just as we are not dedicated to debunking spiritual interpretations. Secular humanism, on the other hand, should be seen as a major world religion in many respects, with its own set of metaphysical positions; as with other religions, we neither support nor disavow its main tenets. The question of survival of bodily death is a completely legitimate question, not resolvable within the evidence currently available, but amenable to systematic investigation nevertheless. This is not fence-sitting; it is merely the most honest, accurate picture we can offer, given the present softness of the data.

*Problem 7: Parapsychological research and ethical issues*

We are working to develop research procedures that will allow us to explore unusual experiences that have strong, meaningful messages. Our progress is very gradual, because we are aware that there are complex ethical concerns. There are several general features of our work which are designed with such considerations in mind. This process starts in our initial participant recruitment stage; we recruit through word of mouth, courses and lectures, as well as through screening the various people who contact us. Each candidate is sent a Participant Information Form, which helps us to identify those who are clearly goats, have had mental difficulty with psi in the past, are uncomfortable with the notion of exploring internal events or

displaying psychic functioning, or would be otherwise unsuitable. Also, it enables us to match participants' specific interests and past experiences with the study that should have most appeal for them, and gives us various individual differences measures that can then be correlated with participants' results. Researchers needing participants can select potential candidates based on their responses, contact them, explain the study to them, and let them decide whether or not to participate.

In the experimental settings themselves, we try to spend extra time so that we get to know our participants, their preferences, how they are reacting to their participation, and so on, and can take this into account in our interactions with them. We also try to keep people eager and excited, suggesting that we hope for and expect positive, interesting results, yet we try to convey a sense of balance; if the results of a given session are negative, that's no problem because we can learn from whatever happens. Some of our lines of research are aimed specifically at introducing intensity and meaningfulness into the research sessions:

(1) In the training project, participants are screened to be positive in attitude and interested in improving their level of psychic functioning, but not involved with the media or other commercial activities related to psi. We help participants develop mental skills in relaxation, imagery production and concentration, and they practice responding to pictorial targets previously selected to be visually interesting. Each week we discuss their progress with them, to exchange feedback. Attitudes towards developing psychic ability are explored in some detail, ideally in a positive way, allowing people to express and work through any concerns. It is made clear at the start that they should think through the personal consequences of their involvement before they commit themselves to the 12 sessions of the study proper. Although they know they are free to drop out at any time if they wish, we realize that there is an inevitable sense of obligation to finish something once it's been started. In the ses-

sions themselves, people are introduced to simple, and then to more elaborate and involving exercises, and are allowed to choose the exercises and psi testing procedures they wish to emphasize and explore more thoroughly in the later sessions. Most of the learning takes place in home exercises between sessions, which are then discussed during the next session. This allows us to understand the impact of the exercises in more detail and to ensure that no problems arise, as best we can. This is designed in part to let us gradually work toward more intense exercises and testing situations in later studies. We've tried to explore devising exercises to follow up on any target domain declared meaningful by the trainees, but have not yet had much luck, because they so far have not readily identified areas of interest that are amenable to experimental procedures. The training research is designed both to study the psi training process itself and to help us evaluate many of the claims made for various techniques, as well as to help us build up a pool of potential participants for our more theoretically oriented research. It is important for us to be able to work with people who are already familiar with us and comfortable with the idea of participating in process-oriented research. Those who have participated fully in the training sessions hopefully will have developed a good sense for the internal states, target types and other conditions that work best for them.

(2) Caroline Watt's perceptual defensiveness-vigilance work is aimed in part at locating people who readily respond to emotional material, allowing it to manifest itself readily in conscious impressions. In later stages, this work will move towards physiological monitoring and the exploration of emotionally powerful target material.

(3) Charles Honorton's automated Ganzfeld research has focused on recruiting participants who have already had a variety of psychic experiences and have a positive attitude toward psi. The target ma-

terial includes emotionally salient film clips, presented to senders of the receiver's own choosing. The Ganzfeld procedure itself is designed to facilitate a reduction of external noise, from the environment as well as bodily sources. Additional instructions are designed to help minimize internal sources of noise as well. With the care put into conducting each session, the participants are given the opportunity to have a fairly intense personal experience, while in a supporting, friendly social environment and in an informal and pleasant physical location.

(4) Our psychokinesis work has focused in part on helping people pursue a variety of volitional mentation strategies, eventually to allow them to select those they prefer, so that they can explore those strategies in more detail. Gissurarson's and Taylor's work explores individual differences and imagery training with take-home exercises. Gissurarson specifically encouraged people to relate the target displays to goals that they found important in their personal lives, but he let each participant select their own goals. Taylor's work focuses on athletes as naturally goal-oriented, motivated people, whose PK target-displays featured graphics relating specifically to the sporting activity they were working on with their mental rehearsal techniques. Alasdair MacLulich has focused both on individual differences and volitional mentation strategies, and has devised a PK display that allows a variety of motivation to come into play, including health-related imagery, habit management and gambling strategies. Konrad Morgan earlier completed a doctoral thesis with us, looking at evidence for PK in the real-world setting of novice and sophisticated computer users learning about problem-solving routines. The PK element came from the presence of noise inserted into the problem-solving algorithms, which could enhance or degrade users' performance. As our work progresses, we will continue to develop increasingly salient PK target material that is readily amenable to various imagery-related volitional strategies, as well as

being easily related to strong needs and motivations.

(5) Shari Cohn's work looks at vivid spontaneous cases, having strong emotional impact upon the people involved. Her interviews are building up a rich picture of such experiences from a phenomenological perspective, and also in terms of sociocultural and familial factors.

(6) We are developing take-home tests that are adequately safeguarded from tampering so that we can turn them over to participants to work with on their own, without external supervision. Such a procedure allows more flexibility for participants to explore techniques that they may wish to keep private, or that call for special environments, or that need to be paced over a longer time than would be convenient in a scheduled, supervised laboratory experiment. This pertains both to the impression period itself as well as to the blind judging process, which can also be an artificial situation when done in the laboratory. Part of our interest comes from the dramatic successes our training participants had in their informal take-home exercises, which we unfortunately could not count because they were not adequately safeguarded from deliberate tampering. Part also comes from the often repeated complaint made by potential research participants, that they do not feel comfortable interacting with a target in the sterile laboratory environment. We realize that, by increasing the flexibility of our tests in this way, we also yield some experimental precision in terms of not being able to specify in great detail the environmental variables that may be responsible for whatever successes may occur.

There are additional ethical issues that need to be considered, by different labs in their own ways. It is important to have research procedures that are adequately safeguarded, to enable researchers to feel positive regarding successes without becoming concerned about whether good results are simply indicators of fraud or a

flaw in design. The participant also deserves to be protected, by having the procedures sufficiently well controlled that any legitimate successes cannot be easily dismissed. Privacy safeguards enter here as well, to protect participants from becoming public figures against their wishes, as well as to discourage potential participants who merely wish to exploit the public relations aspect of working with a respected experimental team.

Such ethical concerns are not always clear-cut. Richard Wiseman's Guidelines for Testing Psychic Claimants, when published, will make recommendations for various aspects of privacy safeguards, fraud prevention and detection, and matters of protocol when preparing to work with persons making strong psychic claims.

*Problem 8: Parapsychology and the study of complex systems*

We are still proceeding gradually in this area, because it represents a more complex, and in some respects less precise way of doing research. The usual strategies of controlled experimentation, with independent and dependent variables, may often be quite inappropriate. We may need to focus more on strategies for evaluating the output of definable psi conducive systems, foregoing at the start the systematic exploration of specific causal linkages. This is especially true of studies done in other cultures, or in evaluating training techniques or individual claimants with idiosyncratic procedures, and so on. Our efforts to apply a systems approach in our work have already been described above and there is no need to elaborate them here.

*Problem 9: Parapsychology's difficulties in generating theory construction*

There are several aspects to the problem of improving the construction and testing of theory in parapsychology. First, it is important to define our domain of inquiry. Ultimately, we all strive towards a 'theory of everything', but to arrive at that stage we must first do business in more manageable

areas of human enquiry. Earlier I defined parapsychology as the study of apparent new means of communication or influence between organism and environment. We are thus not obliged, as parapsychological theorists, to account for areas of anomaly such as ball lightning, UFO observations, crop circles, sightings of other species and the like, unless and until the data from those areas indicate a strong thematic overlap. Within parapsychology, we can further refine our domain of obligation by learning how to eliminate observations that involve fraud and other deception, or that can be accounted for by more sophisticated models of self-deception, human errors of observation and judgement, and mental or physical pathology. Our own involvement in these areas is in its early stages, but some progress here has been made.

Secondly, we need to generate more complete descriptions of the phenomena that do seem to be genuinely parapsychological. Such clarification is important for spontaneous cases and recurring natural phenomena. The models mentioned above for orthodox explanations can be applied to aid in data collecting and archival evaluation. For fieldwork, there is no substitute for full, rich description. We cannot say today what range of factors will be of interest to tomorrow's theorist, but we must do our best to anticipate. New data-gathering techniques are needed (and are emerging within the social sciences) to allow large-scale data acquisition, so that the data reduction process is either speeded up or is done selectively, as needed, with the remainder available archivally to future researchers.

Clarification is also needed of the patterns of experimental findings that have shown up with reasonable consistency under adequately controlled conditions. We are now in a much better position to do this than ever before, thanks to recent advances in meta-analysis techniques. The leading researcher in their application to parapsychological data bases has been Charles Honorton, who has continued his work in this area since joining us. Meta-analysis allows us to examine overall effect

sizes for specific experimental procedures, to see how strong and how consistent they are from study to study and from researcher to researcher. This enables us to identify psi-conducive procedures, such as Ganzfeld stimulation, as well as procedures that consistently produce weak results, such as group ESP testing. The latter often may be convenient in terms of resources, but appear to be wasteful of resources given the small effects they produce. Effect sizes can be calculated for differences between conditions as well as for each condition, thus allowing identification of the kinds of patterns in results that tend to show up most consistently, such as the difference between dynamic and static targets in the Ganzfeld, defensiveness correlates of ESP performance, and so on. Additionally, meta-analysis can be used to assess the effect of methodological adequacy, by coding studies for specific flaws and seeing which flaws are in fact correlated with effect size. When this has been done in the past, many flaws have turned out to have less impact upon effect sizes than was expected; and some flaws did seem to affect results more than others. Flaws seemed to have relatively little influence upon random number generator PK studies, but were correlated with success in dice-based PK studies, suggesting that the basic soundness of the RNG procedures blunted the impact of flaws that ordinarily might have artifactually inflated results.

Once we have a picture of the patterns in our data, we can: (a) compare them with existing models as well as existing theoretical systems, where those systems are sufficiently refined to generate predictions; and (b) develop new models based on the patterns observed. Such new models can then be compared with existing theoretical systems, and can be tested by new data. Some researchers have been very active in the construction of theoretical systems and of testable models, such as Bierman, Houtkooper, Millar, Sheldrake, and von Lucadou in Europe; Braud, May, Schmidt, and Walker in the USA, and so on. Their models have led to programmatic research in the past, with varying degrees of success,

and each is capable of making predictions testable by new patterns in old data as well as by the generation of new data.

To establish firm links between theory and data collection, however, we need tools for collecting the most valid data we can, in forms that allow it readily to be linked with theories and models. This is a major portion of Shari Cohn's work, in interviewing her informants in depth and reducing the data from the transcripts into theoretically usable form; and it was Caroline Watt's concern in her review of the value of spontaneous cases and their use in formulating and testing hypotheses.

For the experimental data, the issues are straightforward: as with any other scientific endeavour we need results that are as valid and reliable as we can make them. Our efforts in this direction have already been described, and can be summarized as a plan with the following features:

(1) better initial selection of participants, based on better knowledge of what subject characteristics are most desirable for the specific testing situations at hand;

(2) use of training procedures, to help individuals learn to produce results sufficiently consistently to be of use in process-oriented studies;

(3) use of emotionally powerful targets, to increase the strength and meaningfulness of the message;

(4) use of testing procedures that can be self-administered, yet are secure from tampering;

(5) development and use of cognitive models to determine best when and how to tap into psychic functioning before the information has become unrecognizably distorted. The testing of such models would include psychophysiological as well as behavioural monitoring;

(6) more effective use of noise reduction models, including techniques such as the Ganzfeld, designed to dampen external

noise, and progressive relaxation or autogenics to dampen internal body noise, to permit more psi-conductive internal states;

(7) more intensive involvement with participants during the testing sessions themselves, and more care given to understanding their individual needs and interests;

(8) use of more motivating, absorbing PK target material;

(9) exploration of volitional strategies, to provide PK participants with the opportunity to evolve their own most effective volitional mentation styles.

Brian Millar once noted how boring it was to read original research reports that simply looked for evidence of psychic ability, but that made no attempt to test any hypothesis derived from theoretical considerations. His observation is important, because far too much research has been done in a theoretical vacuum, aimed solely at obtaining evidence of psychic functioning, to persuade oneself and others that it actually exists. It is equally boring, however, to read a study based on elegant theory-driven hypothesis testing, incorporating a clever research design, that nevertheless obtains such weak effects, so little evidence for psychic functioning, that we learn nothing at all about the theory in question. An effective research programme incorporates research procedures likely to produce effect sizes sufficiently strong that serious testing of models, of theory-driven hypotheses, can be done.

*Problem 10: Parapsychology is used as an example of pseudoscience by philosophers and social scientists*

This problem stems in part from the other problems, and is addressed in the same ways. However, this one can have advantages as well as disadvantages. As students of science have attempted to separate science and pseudoscience, good and bad science, they have proposed demarca-

tion criteria to distinguish them. Such criteria can be helpful to us, as indicators of the criteria by which we may be able to judge our own progress. Some criteria may be misapplied to parapsychology, the result of misinformation about us, in which case we have become aware of a misconception that needs to be corrected. Often this may be a matter of distinguishing in the public eye between serious parapsychological research and frivolous or exploitative occult practitioners. Other criteria may have some partial validity, such that awareness of them provides us with useful guidelines for where we need improvement, how we can best proceed beyond being a proto-science.

**Toward the Future**

The above problems, and the description of our strategies for addressing them, have been offered up for discussion and to provoke thought about how best we can proceed in our work, both individually and collectively. Our research must proceed with both sensitivity and rigour, using flexible strategies combining both theory-driven and data-driven programmes. It must also be set within the contexts of our cultural systems. Cultural diversity gives us both the challenge and the opportunity to explore many ways of doing this, for comparing perspectives, and for seeking balance and commonalities while retaining our important uniquenesses. The accompanying symposium on cultural differences in parapsychological style indicates some of these areas, where we may have much to learn from each other. If our endeavours can be set more effectively within our cultures, our societies, we will be more likely to address important social issues in ways that will be meaningful to those involved. Society badly needs and wants a firm understanding of psychic experiences. Other scientific institutions have let people down by ignoring these experiences or belittling them, dismissing them with arbitrary, simplistic, glib explanations. It's up to us to pull together to help rectify this failure of mainstream science. It is hoped that the specifics and their attendant issues



will be explored more fully in the pages of this journal and in the related journals of our community of countries.

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### Parapsychologie dans les années 1990: Aborder le défi

**Résumé:** La parapsychologie a plusieurs caractéristiques que lui créent des problèmes et que l'on doit aborder si l'on veut qu'elle devienne plus qu'une curieuse protoscience. On a relié dans le passé la parapsychologie à des traditions métaphysiques et occultes. L'acceptation des phénomènes psychiques (psi) a été exploitée par des charlatans. L'acceptation du psi peut facilement profiter à des systèmes d'illusion. La parapsychologie menace la précision et l'ordre de la méthodologie scientifique traditionnelle. Elle nous force à réexaminer des concepts comme ceux de conscience et de volition qui ont été largement ignorés par la science. Elle défie les idées reçues, matérialistes ou non, sur comment le monde fonctionne. Des considérations éthiques apparaissent dans la mise au point de programmes de recherche. La parapsychologie comprend l'étude de systèmes complexes et ouverts. Elle a des difficultés à générer et tester des hypothèses basées sur une théorie. Pour ces raisons et d'autres encore, la parapsychologie a souvent été qualifiée de pseudoscience par des philosophes et des sociologues de la science. A la Chaire de Parapsychologie de Koestler, on tente d'aborder ces questions en plaçant notre recherche dans le contexte plus large de la société prise comme un tout, en développant des modèles pour comprendre comment l'on peut se tromper soi-même ainsi que les autres en exagérant le rôle que le psi peut jouer dans notre vie quotidienne, et en recherchant les meilleures preuves de fonctionnement psychique. Nous cherchons à augmenter sa disponibilité sous des conditions méthodologiquement solides et néanmoins écologiquement valides, par différentes lignes de recherches. De cette façon nous faisons de notre mieux pour aborder les problèmes soulevés principalement, avec un certain succès, tout en accordant plus de place à l'amélioration. Dans le futur proche, les parapsychologues seront amenés à aborder ces questions de façon plus systématique que par le passé; notre programme est offert en exemple d'une telle tentative, afin de provoquer la discussion.