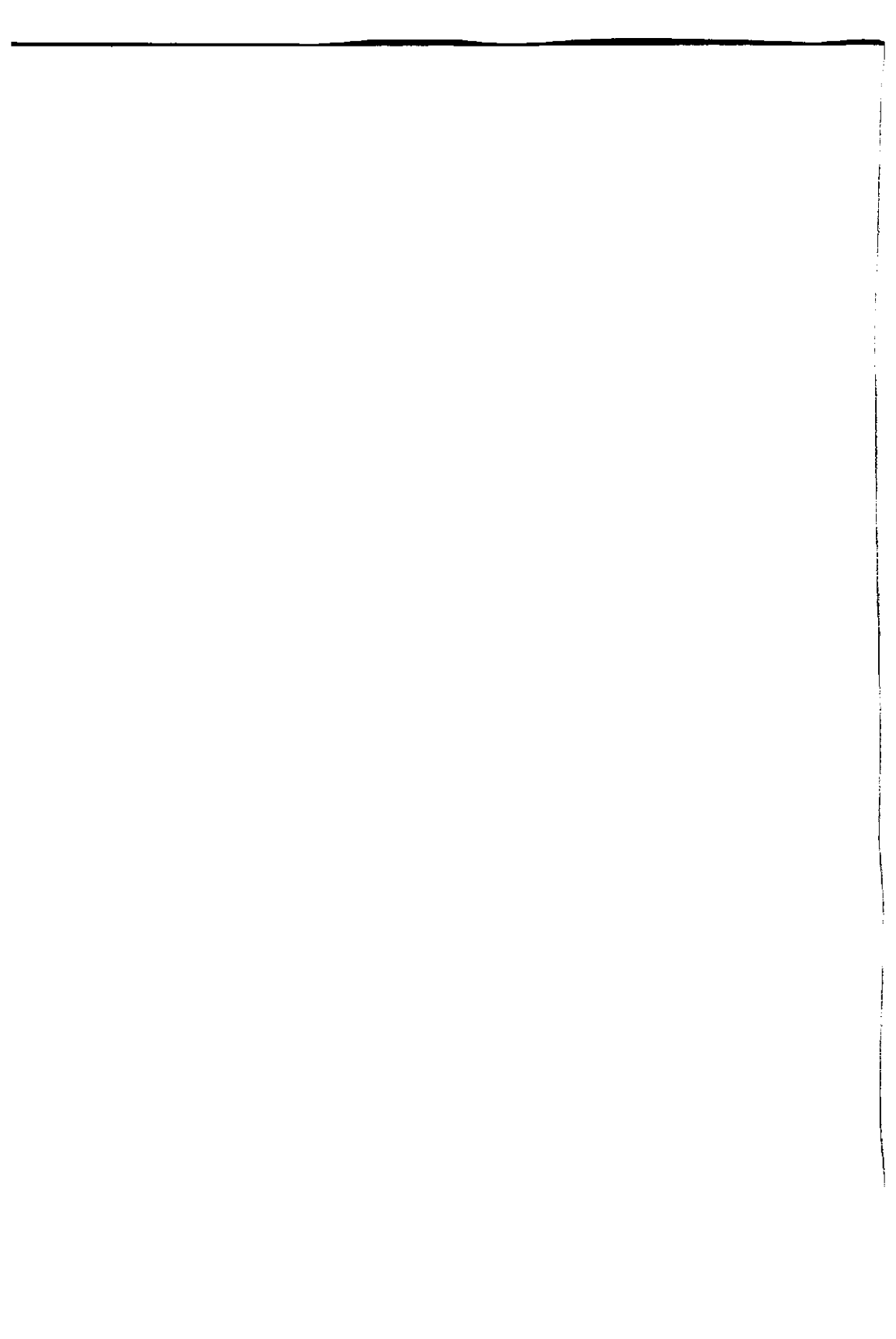


PARAPSYCHOLOGY'S SECOND CENTURY

PROCEEDINGS OF AN INTERNATIONAL CONFERENCE

Held in London, England

AUGUST 13-14, 1982



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Edited by
Betty Shapin and Lisette Coly

PARAPSYCHOLOGY FOUNDATION, INC.
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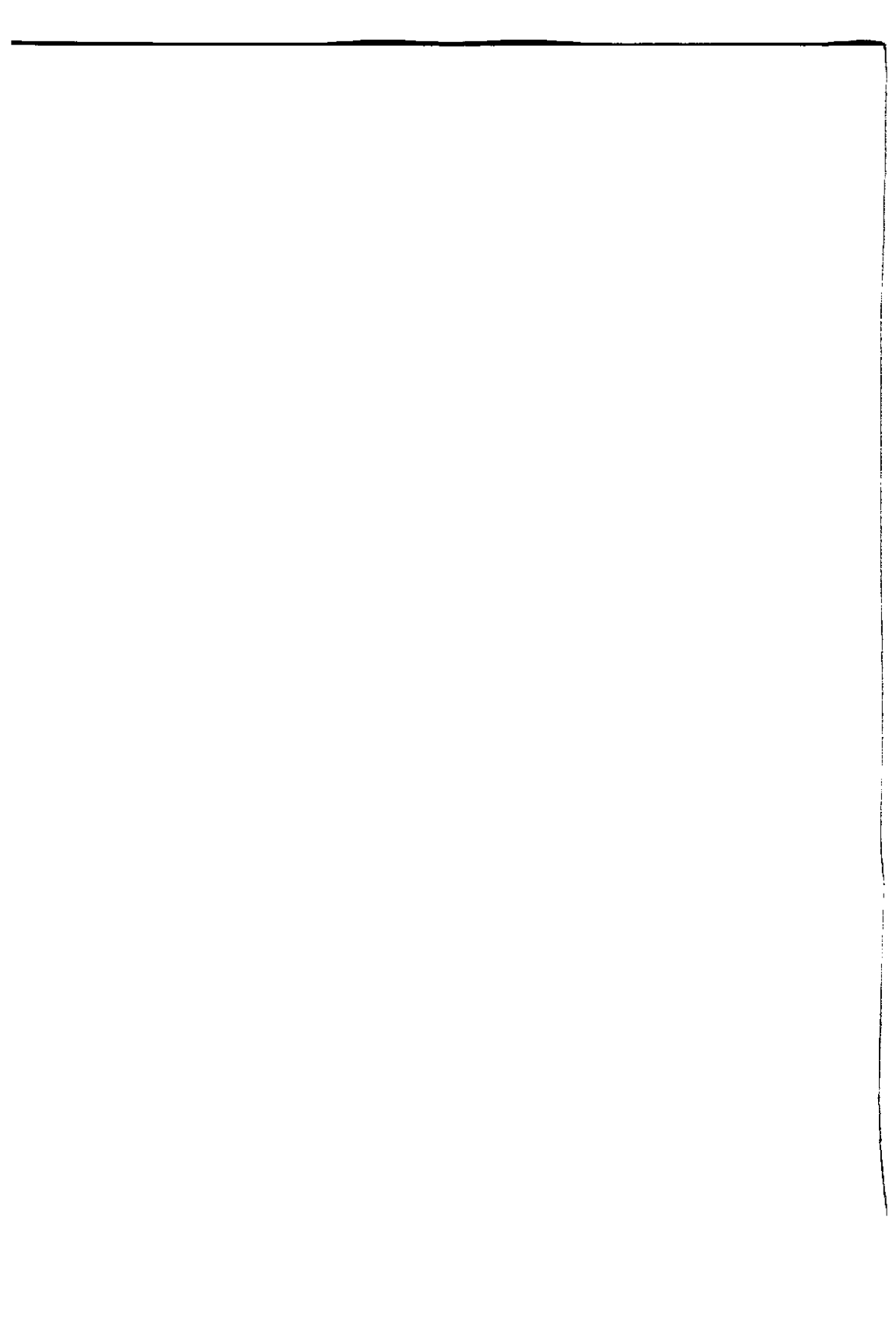
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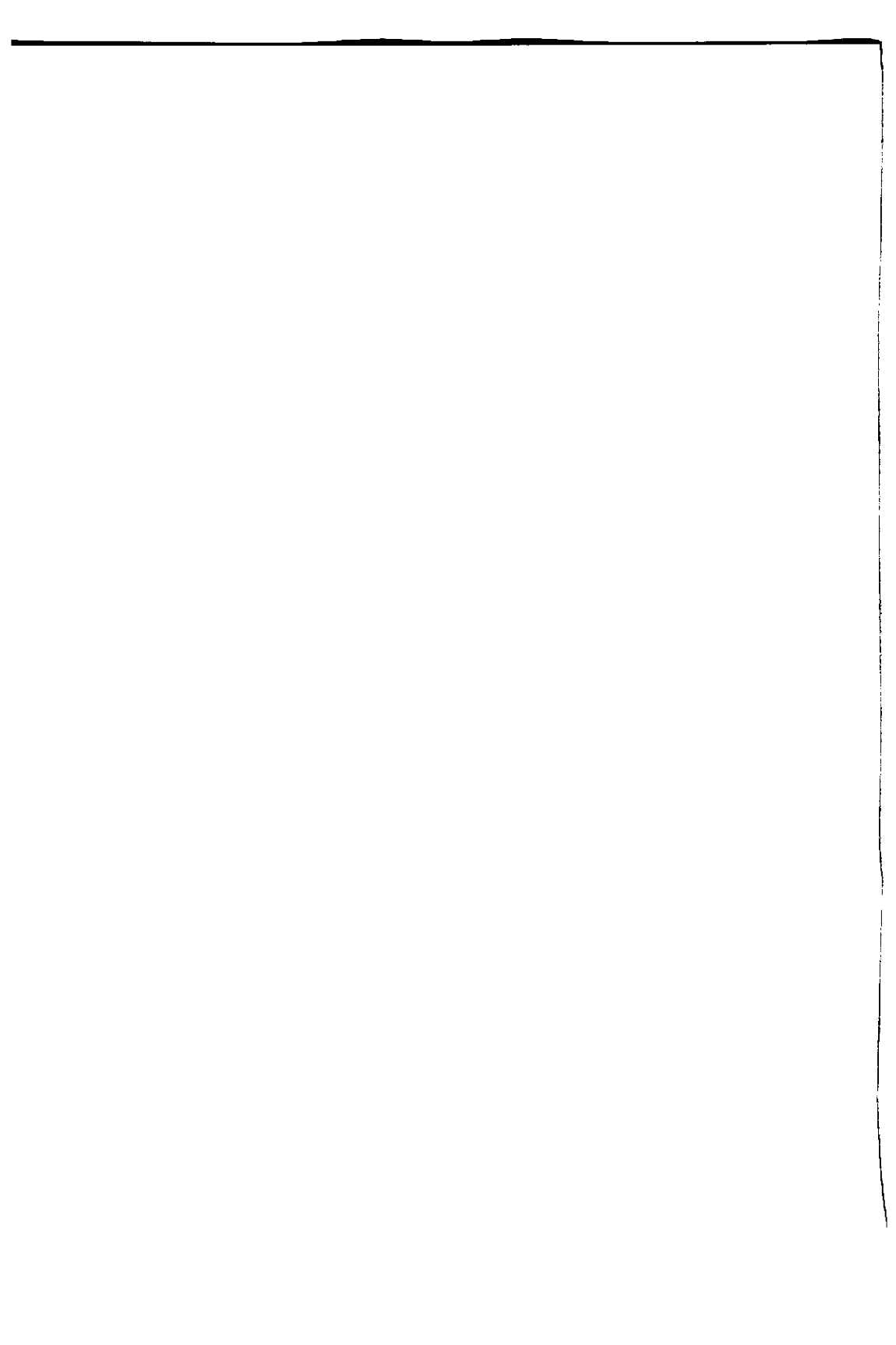
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INTRODUCTION

ANGOFF: Good morning. I am Allan Angoff of the Parapsychology Foundation, Inc. I call to order the 31st Annual International Conference of the Parapsychology Foundation. This conference is now in session.

We meet in London and we mark a historic event in the history of psychical research and of science itself. For it was here, in this city, one hundred years ago, that modern parapsychology began with the establishment of the Society for Psychical Research.

Today, as we honor the pioneer researchers of that era, as we remember the founders of the Society, and as we await the presentations of their successors who carry on in the scientific tradition, it is well that we recall one of the SPR's major founders, Frederic Myers, who said of psychical research in those early years that its "very *raison d'être* is the extension of the scientific method, of intellectual virtues, of curiosity, candor, care . . . into regions where many a current of old tradition, of heated emotion, even of pseudo-scientific prejudice, deflects the bark which should steer only toward the cold, unreachable pole of absolute truth. . . . We must experiment unweariedly; we must continue to demolish fiction as well as to accumulate truth. . . ."

Those prophetic words are ever before us. They constitute a valid credo for the deliberations of the 31st Annual International Conference of the Parapsychology Foundation.

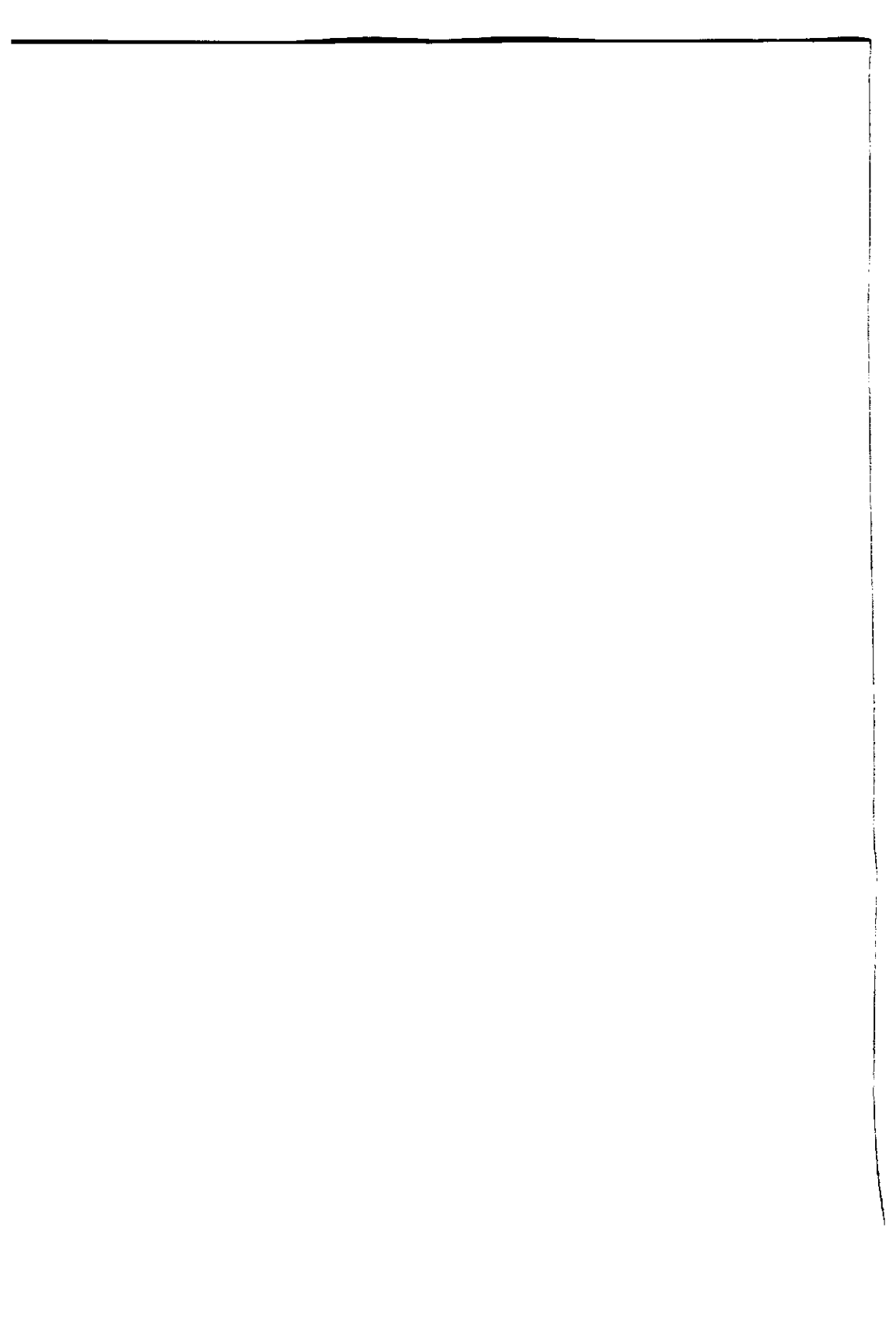
At this time, I am pleased to introduce the President of the Parapsychology Foundation. Ladies and gentlemen, Mrs. Eileen Coly.

EILEEN COLY: I am happy to welcome all of you—conferees presenting papers, observers and guests—to the Parapsychology Foundation's London conference in parapsychology's centennial year.

This conference, like all those which have preceded it, commemorates our founder, Eileen J. Garrett—my mother—who established the Parapsychology Foundation in New York after a long career as a psychical researcher, here in London where she often worked with members of the SPR and later in the United States. She inaugurated the Foundation's annual international conferences in order to end the isolation of so many parapsychological colleagues all over the world who, up to that time, had few occasions to meet and exchange ideas and scientific information.

Today, as we begin a new conference, we recall the contributions of Eileen J. Garrett, who would have been delighted to greet many here today who knew her well, as well as a new generation of researchers.

Thank you for joining us during these conference days and for taking part in the deliberations addressed to the conference theme: Parapsychology's Second Century.



TOWARDS A METHODOLOGY TO HANDLE NON-LOCALITY IN SPACE AND TIME: THE END OF REDUCTIONISM?

DICK J. BIERMAN

Please allow me to make a brief statement before I present my paper. It concerns the title of my contribution. As you probably know, the title had to be submitted a few months ago and I must confess that I did so without anything except the title, which read then: "Towards a methodology to handle non-locality in space and time: The end of reductionism."

While writing the paper a discontent with this title grew and I decided that the least I could do about it was to add a question mark. However, I would have preferred to change the word "reductionism" into "objectivism" for a number of reasons. The major reason is that my paper does not cover all three aspects of "reductionism." These aspects are:

1. The structural aspect. Or the question: Are all complex (living) systems reducible to a set of (non-living) systems?
2. The theoretical aspect. Or the question: Are biological laws explainable in terms of physical laws?
3. The methodological aspect. Or the question: Is the study of complex systems by studying a few selected parts or descriptors a valid method?

As you will notice it is mainly the methodological aspect that I will discuss. However, I will touch upon the theoretical issues near the end of the paper.

1. Introduction

It has become a cliché to state that scientific research into psi phenomena has shown hardly any substantial progress since its start a century ago. However, I would like to argue that its development, taking into account the limited resources and the difficult research conditions, has been satisfactory. While much of the energy of the researchers has been

spent convincing the skeptics that there even exists a subject matter to do research on, the process-oriented type of research has not succeeded in producing reliable results. This state of affairs is probably what the pessimists have in mind when complaining that little progress has been made. However, in the course of the last decade more and more researchers have begun to realize that the famous "elusiveness" of psi phenomena is not simply a frustrating factor, but the very core of the phenomena. Or in other words, that the unreliability reflects a fundamental property of the phenomena. And because, within the commonly accepted view of science, phenomena that cannot be measured reliably do not exist (are not real), these phenomena must be (if they are nonetheless real) "anti-scientific" in the traditional sense of the term. So the dramatic result of our 100 years of effort is that psi phenomena do not just question certain theories or models, but they question the fundamentals of science itself. With such a result in mind, I would not dare to speak about little progress. Of course, I realize that not everyone is yet persuaded that this result can be accepted.

2. The Basic Assumptions of Western Science

In an important article¹ that appeared in *Scientific American* a few years ago, the theoretical physicist Bernard d'Espagnat formulated the three premises of a classical or natural world view. These are:

"1. Realism: The doctrine that regularities in observed phenomena are caused by some physical reality whose existence is independent of human observation.

2. Induction: Inductive inference is a valid mode of reasoning and can be applied freely, so that legitimate conclusions can be drawn from independent observations.

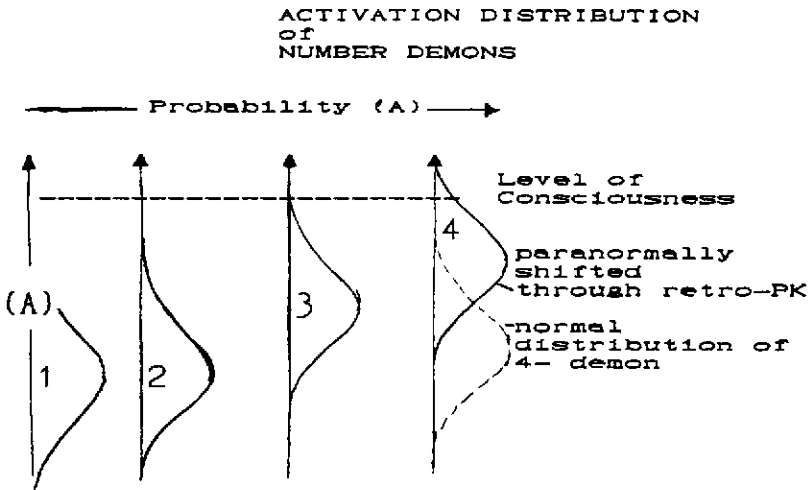
3. Locality: The third premise is called Einstein Locality and it states that no influence of any kind can propagate faster than the speed of light."

Let us consider a bit more closely these three assumptions, which are thought to be so trivial that they need no proof, and also pay some attention to the practical consequences that they have for the commonly accepted scientific method.

2.1 Realism

The realism assumption is actually a double one. The first part is that regularities in observed phenomena have some underlying physical real-

EXTENSION of O.T. s
with PANDEMONIUM model
(eg Number guessing)



call : 4

Figure 1

ity. This assumption of course is implicit in any definition of causality. It has resulted in a strong emphasis on the development of methods for research on recurrent phenomena in contrast to single phenomena.

The second part of the realism assumption is that this underlying (physical) reality is independent of human observers. I would like to call this objectivism. It implies, specifically, that the experimenter's contribution can theoretically be reduced to zero.

2.2 Induction

The second assumption that induction is a valid method is of course the essential assumption for allowing one to draw conclusions on the basis of statistical methods.

2.3 Locality

The third assumption, locality, is applied in empirical science through its logically somewhat weaker brother, which can be formulated as follows: The more distant in space-time two events are, the less likely is any interaction. For instance, the role of the experimenter in psychological studies is thought to be reduced by using taped instructions instead of oral ones.

3. Practical Consequences of the Three Premises

The practical implication of realism, induction and locality is that the use of the reductionistic method is warranted. This can best be illustrated by looking at a commonly used statistical technique, the analysis of variance. The underlying model is that an observed phenomenon in a system will show some regular variation depending on the variations of some characteristics (variables) of the system. However, these regularities might be obscured by uncontrolled variations of other variables. The technique thus in the end yields some unexplained regular variation, which is assumed to be "caused" by these uncontrolled variables. This last assumption in fact stems from the causality part of the realism assumption. The practical consequence is that for fruitful scientific study, this so called error variance must be, and according to the theoretical model can be, reduced so that the effect of the variations of the independent variables show up in a measurable way in the dependent variable. This idea, that we are in principle capable of describing a system, including the human subject in a psi experiment, by a finite number of variables is closely related to reductionism.

Note that objectivism can be considered as an extreme case of reductionism: the phenomena are thought to be independent of the observer, which amounts to eliminating one of the possible sources of error variance in our example with the analysis of variance.

One other straightforward consequence of the world view governed by our three premises is the demand for reproducibility of a phenomenon as a condition sine qua non for that phenomena to be considered as real. The only way out when faced with the elusive character of psi phenomena in the laboratory, within this world view, is to assume that the error

variance due to uncontrolled variables is so large that it obscures the reality of the psi phenomenon.

This common sense world view has been, implicitly or explicitly, the model used by the Rhinean school. Their explanation of non-reproducibility is that the (unknown) uncontrolled variables "cause" a lot of error variance. However, when the (Rhinean) mathematicians Greville and Greenwood² recently expressed their doubt about the mere existence of a distribution of psi, I think that they, in fact, doubted one or more of the premises that are so heavily related to the validity of the statistical method. The notorious unreliability of psi, the occurrence of new theories for psi phenomena which have strong analogies to and sometimes borrow their logic from quantum physics, and the empirical verification of retroactive psychokinesis³ and future observer effects⁴ all converge to a point where it indeed seems justified to question the assumptions themselves.

4. The Reality of the Micro World

In the forementioned article by d'Espagnat it is argued that in the world of the very small at least one of the three premises no longer holds. This implies that the reality of this micro world fundamentally differs from our commonly experienced reality. I will not give you the argument here, but will, instead, focus on the conclusion. After having shown, following an argument originally proposed by Bell, that all local realistic theories (thus theories that assume the three premises to be true) predict empirical results that (under certain conditions) differ from the quantum mechanical predictions and after an examination of the relevant data, he concludes that in the micro world non-locality should exist. Or to put it in his own words: "the violation of locality seems to imply that in some sense all these objects constitute an indivisible whole."

I am not quite sure if the scientific community realizes the danger of this development. Sure enough, by abandoning the least fundamental of the three premises, d'Espagnat avoids being put to the stake. After all, this funny nonlocality correlates atoms, not human beings! Nor does it correlate objects with human beings. Nowhere does d'Espagnat say that a token object might carry information of its owner.

Unfortunately for d'Espagnat and the scientific community not all problems are removed from quantum physics by accepting non-locality. First of all, the acceptance of non-locality implies some form of time independence, as space and time cannot be uncoupled. This time independence has recently received a lot of attention in theoretical approaches to psi phenomena. There, it has been commonly interpreted

as something that might possibly link any future observer to the experiment. I would like to argue that time independence in the micro world is by no means so far reaching as that put forward in the observational theories. To understand this, let us have a look again at non-locality in space. There, two particles A and B seem to communicate information unhindered by spatial distance. It is as if A and B have some link to each other before they are measured, but only after the measurement are A and B uncoupled. Hence time independence also has to break down after the measurement. I think that time independence here should be interpreted as: "It does not matter how long you wait before the measurement takes place, the link will continue to exist up to that moment." In terms of psi experiments this would account for PK on prerecorded targets, but not for extreme future observer effects. Secondly, the reasoning followed by d'Espagnat also implies that quantum formalism gives the most complete description of nature, because local hidden variable theories which could add something to quantum formalism fall in the same class of dismissed theories.

What local hidden variable theories seek to add is information that describes the outcome of the experiment after the interaction of the particles, but before the measurement. Such theories try to remove the problem that "God seems to play with dice," a problem that occurred when classical deterministic causality was replaced by a fuzzy form of it, a kind of probabilistic causality. However it won't work: we have to accept that the most complete theory does not give more than probabilities. The problem is, then, that we don't experience probabilities or fuzzy states. Where does the transition from the fuzzy state (which is a complete description) to a discrete state (which is what we experience) take place? Remarkably enough, d'Espagnat does not even pose the question, but the editor of *Scientific American* answers it! The subtitle of the article reads: "The doctrine that the world is made of objects whose existence is independent of human consciousness turns out to be in conflict with quantum physics and with facts established by experiments." This is, of course, the final blow to objectivism.

So if I postulate that, within the development of psi research, we have come to the point of questioning the fundamental premises of our world view and science itself, we are in good company. However, let me hasten to stress that this does not mean that psi phenomena are "just macroscopic quantum phenomena" or that a minor extension of quantum physics might yield a theory that incorporates psi phenomena. For instance, in the current psi theories that are closest to quantum physics it is not just assumed that it is the conscious observation that turns the fuzzy state into a discrete state (retroactively). This would be a close

analogy to the solution of the "measurement problem" as proposed by the editor of *Scientific American*. But alas, the observational theories add another postulate to this, namely that this process is not a passive, but an active one, during which a flow of information can go from the observer into the observed system. This, of course, is fundamentally different from even the most revolutionary interpretation of the quantum mechanical view. And before, I mentioned that there is also a fundamental difference between the time independence that accompanies non-locality in quantum physics and the time independence postulated in the observational theories.

I agree with some theoretical physicists⁵ that we should be extremely careful in discussing psi phenomena in terms of quantum mechanics. Of course using one theory as an analogy for the developments of others is quite legitimate, but we should emphasize that it is only the use of analogy and not the use of quantum physics itself.

5. New Methodologies

So let us assume that locality, objectivism and hence reductionism are invalid assumptions in a world with psi. As all our scientific methods are based upon these assumptions, we have to conclude that we need new methods to study psi phenomena—methods that deal with the possibility that ". . . in some sense all these objects constitute an indivisible whole . . ." This conclusion is by no means a new one. A few times before the need for a new methodology has been expressed.⁶ However, that is the easy job. Finding a new methodology is another and more difficult task. When I try to think about it, I find myself again and again trapped in the reductionalistic way of thinking. I have started to wonder if it is even possible for a western scientist to escape the fate that is impressed upon him by his culture.

5.1. An Example

For instance, consider the idea that the experimenter is part of the experiment itself and that there is no way to isolate him: large distances in neither time nor space will help to reduce the system. One could do a series of experiments in which the experimenter is an independent variable in order to control for his/her contribution to the results. In fact such an approach, though mainly based on other arguments, was proposed by John Palmer in his presidential address during the Parapsychological Association convention in 1978. Note, though, that this is by no means a revolutionary methodology. It is just another try to reduce the error variance. Objectivism is lost, but in this approach we

seek to control for it. Somehow there is something wrong with the logic. And it can be worse: let us suppose that future observers of our results do participate in our experiments. What we could do is formalize the procedure of distribution of our results to the outside world; try to control for these future observer effects as far as we can. But again, we fall into an extension of the commonly used methodology and not an essentially different one.

It has become a standard feature in my experiments that empirical data are split in two parts which will follow (in the future) a different observational history. In practice both parts are to be analyzed by different analyzers. If both parts happen to show similar results, one might interpret that as the psi effects being robust against psi contributions by future observers. The weakness of the argument, given that the psi strength of the analyzers might vary in magnitude and direction, is obvious, but again what more can we do? We can only hope that these small steps within the only available methodology, small steps that introduce non-locality in space and time, might be the first steps in the direction of a fundamentally different methodology.

5.2 The Multi-Experimenter Experiment

Currently underway is an experiment that combines these small steps sketched before. Eight experimenters in The Netherlands perform, more or less simultaneously, a precognition experiment. All the experiments are conceptual replications of each other, with the same hypotheses and procedures. After the completion of the data gathering phase, the results of each experimenter are to be split into two parts which will follow a different observational history controlled up to eight subsequent levels. Note that this enterprise is not done to convince critics that we are not frauds; it is based purely on the considerations that I have given above.

6. The Need for a Holistic Approach

6.1 Theories

The fact that the scientific study of the micro world has revealed the falseness of one of the basic assumptions of the natural world view and of science itself seems to be inconsistent. However, the quantum mechanical theory is not dependent on the assumption of locality. And it solved the apparent loss of objectivism by the assumption that the fuzzy state reflects the frequencies with which certain outcomes will be measured upon repeated measurements, giving up predictions concerning

singular measurements. The confrontation with a reality so different from our experienced reality could only be handled by the use of mathematical models. I am convinced that theoretical developments in psi research also will have to follow this route of mathematical modeling.

6.2. Extension of Observational Theories

The observational theories were the first to introduce non-locality in space and time explicitly in a theoretical framework and thus they indicated a reality that is reminiscent of the experiences of the mystics, who speak of a spaceless and timeless oneness. This wholeness, implied by the observational theories, contrasts strongly with the reduced picture of the human element in the theory. The psi source, as this human element is called, is represented by a single (in the hierarchical model

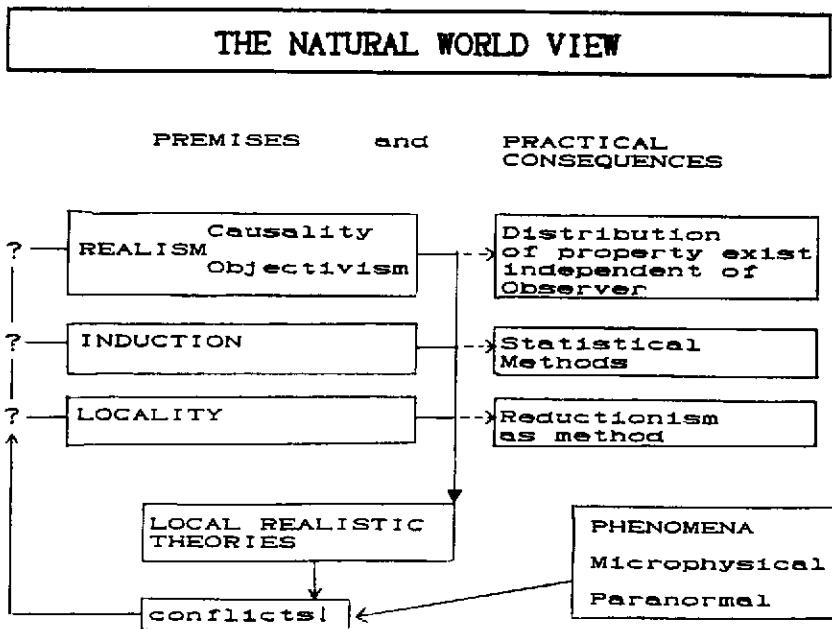


Figure 2

two) figure(s). In no way is the relation of this figure to other descriptors of the human personality discussed. If we want to make any progress at all, I think that it is necessary to extend the observational theories to personalize the psi source. I would like to propose that the class of "Pandemonium" like models of cognition are suitable candidates to link to the observational theories. These mostly qualitative models have in common that our brain functions as a huge number of parallel processors, each designed to "seek" in the input stream for specific patterns. As soon as a more or less similar pattern is detected, this processor, cognitive unit or "Demon" (as we will call it here) becomes more active. If its activity surpasses the threshold of consciousness, the ongoing conscious processing is interrupted to evaluate this highly activated Demon. Recently, I tried to specify quantitatively a set of activation and deactivation formulas. Also I tried to specify the rules governing the development of the representations of the patterns within the Demon and of the associations between them (learning). It turned out that it is virtually impossible to have a working Pandemonium model without the introduction of a random element in the activity levels and in the internal representation of the patterns. Note that this result was not obtained by considerations about human creative behavior and the like, it occurred as a logical consequence in the course of the development of a computer simulation of "learning."

This result sheds a new light on the meaning of the already known random firing of neurons in the brain. It has been generally assumed that these latter random processes were the target of retroactive PK within the observational theories. This could presently be replaced by the more meaningful assumption that psi works directly on the random component of activity levels of the Demons. In the Pandemonium-like models, most of the Demons have an activity level far below the level of consciousness. In this "world" of the subconscious, however, activations are continuously changing. For instance, subliminal perception is an activation just below the consciousness threshold. I propose that psi induces a shift of the distribution of activity levels of a given Demon. The combined theory suggests a research program with ties to subliminal perception research. For instance, I would predict that sensory threshold measurements where no feedback is given would yield different results than measurements where feedback is given (of course, we have to control for a learning artifact). The feedback is necessary to trigger the psi process, according to the observational theories. The random element in the activation level of the Demon that corresponds to the subliminal stimulus is the target on which the psi works (retroactively), according to the present extension.

This is only an example to illustrate the power of a more holistic theoretical approach. This approach is important because it might be an avenue to a better understanding of the specific forms under which psi appears when specific personalities are involved.

6.3 The Place of Psi in the Cosmic Scheme

The scientific study of any subject develops very quickly to a level of specialization where the original problems and questions are lost sight of. Most of the attention of today's psi researcher is devoted to the specific questions dealing with the optimal conditions for psi to appear and with the potential underlying processes. What I want to discuss now is: "What is the purpose of psi?" Those who adhere to the spiritualistic hypothesis would probably answer that there is not really a purpose, but that psi is a byproduct of the spirit world that once in a while interferes with ours. The more abstract dualists do not primarily consider psi in terms of purpose, but emphasize that psi reflects the non-material side of our being. Some researchers have proposed that psi is the vehicle through which the mind controls any original process in the brain. Its purpose is then supposed to be the "go between" of mind and (brain) matter. In this model, psi is quite normal in the sense that it is present in everybody.

None of these considerations really satisfy me. About 20 years ago, Randall⁷ proposed that psi played a role in biological processes and most notably in the course of evolution. It is well known that there is serious doubt that the (neo) Darwinian picture of evolution is the complete picture. The major problem is that the probability that a structure which contains as much information as our genes develops by a series of chance mutations is extremely small, even with the most optimistic estimates about the rate of mutations. Randall's proposal, however, was a mere guess, because he did not and could not give the mechanism for this postulated psi contribution to evolution. Following the empirical verification of retroactive PK, we know that chance processes in the past might be biased according to the "wish" of a future observer. Furthermore, it is generally assumed that psi is goal-oriented: in other words, the complexity of the chance process involved (e.g., a mutation) is unimportant. Therefore, it seems natural nowadays to specify Randall's missing mechanism as being "collective retroactive PK." This process should be very weak because large transfers of directed information into the genes would inevitably lead to oscillations in the development of the species. Within the proposed perspective of the purpose of the psi process, laboratory experiments and spontaneous cases should be inter-

preted as anomalies, centered around individuals instead of the group. I must confess that I have no idea what the purpose of such an anomaly (within the anomaly of psi) might be, but neither do I have an idea about the purpose of other "diseases."

It is remarkable how emotionally the scientific community reacts to any suggestion that group interests might play a role in evolution. However, this can be understood, because the real underlying threat factor is the loss of locality that is implicit when groups are considered to be a "causal" factor in evolution.

7. Conclusion

We are in a paradoxical situation: We want to study psi phenomena; we want to do this in a respectable scientific way. But the phenomena themselves undermine the respectable scientific methods. As Millar has put it: "We are like the guy who invented the universal solvent, but found soon enough that there was no bottle to put it in."

I have sketched small steps toward developing a "bottle" that takes into account some of the aspects of the universal solvent. But I have also indicated that there is something contradictory in this approach, that we can only hope to find that the universal solvent is not really universal. And there are, of course—let's be optimistic about it—there are grounds for that hope. I have argued that time independence is not necessarily as radical as originally proposed by the observational theories. Also, if we look at the supposed purpose of psi, its contribution to evolution, I don't see any reason for universal time independence. And last, but not least, we find from time to time some weak forms of reproducibility in our experiments.

I am convinced that at our next centennial celebration all these considerations will be viewed as extremely simple and naive. I hope, though, that people will say: "It was in the right direction, you know."

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DISCUSSION

BELOFF: Well, as a believer in common-sense objectivism, I naturally disagree very strongly with the point of view that the speaker has expressed and I earnestly hope that parapsychology, as a whole, will not be bamboozled into thinking that now they've got to adopt this neo-idealist point of view. The point I would like to make is that, of course, the idea that reality is mind-dependent is a very ancient one indeed. It is known in philosophy as idealism and it just so happens that, in recent times, it has drawn some strength from the study of subatomic particles, and the sort of considerations that Dr. Bierman was referring to in discussing d'Espagnat's ideas, and so on. It's too much to hope that we can really sort out our differences in a few exchanges of this kind, but I would, before sitting down, like to point out how terribly implausible and incongruous is this point of view, when taken into the wider cosmic considerations. I mean, science teaches us that the universe existed long before there were any such things as observers or minds or human beings, and it will probably continue to exist long after we have all wiped each other out. And, much the greatest part of the universe is occupied by matter—but without any form of life at all. In that kind of cosmic picture, to suppose that what exists depends upon what one observes seems to me a real sort of learned foolishness, if I may call it that.

BIERMAN: Well, I think John Beloff misunderstood some of my remarks. I want to stress that this loss of objectivism does not apply to all of our scientific enterprises. It's just in the field of psi phenomena where it seems to be that objectivism is lost and, maybe, not to such a degree that we cannot handle that within our cultural-based methodology. But what I want to express is a serious doubt that there might be a possibility that we cannot handle psi phenomena with the current methodology we have. Now, it might be that there is another methodology which may be as respectable a science as the present one is. But I don't see one and so I have tried to show you my own struggle with this problem. I think we should always try to base our attitude on facts and I think that the main fact here is that psi seems to be, to some degree, time and space independent and one of the characteristics is its unreliability. If we, nevertheless, accept that it is real, then we have a paradox. But I can live with a paradox for some time.

BLACKMORE: As you know, Dick, I don't have much faith in them, but I have a great interest in the observational theories. I don't think they hold out much hope for getting us anywhere in understanding psi, but, given what you've talked about, I would like the opportunity to

speculate a bit. You've talked about the need for a drastically different methodology and it strikes me that one of the things that you could have said, and didn't, was that our science really depends very much on public sharing of information and what the observational theories may be saying is that we can't share that information. We can't give our data to people. We've got to keep them to ourselves. So, doesn't one of the possible methodologies—and perhaps you are actually doing this and you can't say so—involve keeping it all to yourself, a purely private science? One of the reasons why I reject the observational theories, personally, is that, on the one hand, you could collect your data and share them at the bit level with everybody in the world. That would lead to all these future observers. Or, you could simply share them on the P-value level. Or would this be equivalent? I don't know if they give an answer. Would it be equivalent if you simply said to me, "I can't tell you, but I'm convinced I've found it"? Would that be equivalent to giving it on any other level? I don't think the observational theories can answer that, but I would like to hear your views on it.

BIERMAN: Communication of data or results to other people seems to be fundamental to science. I think I would like to stick to that as long as possible. Otherwise, we won't have these nice meetings anymore. But, nevertheless, I agree that it might be that we come then to a situation where the best we can get is some description to give someone of how to get into a state, for instance, in which he can experience psi phenomena. Something like that and that's all. Once you have reached that point you don't need any real scientific conferences anymore.

Your second point is, more specifically, about the observational theories. Do they discriminate between giving information at the specific bit level or at the run score level. Does it make a difference if I show you exactly the results which I have shown to my subjects, or is it different if I only show you the P-values, or give even less information—if I say only "Well, it was a very nice experiment. Thank you. I enjoyed it very much"? I think there might be a difference and the observational theories are still struggling with this. I think Walter von Lucadou was one of the first who recognized that we should talk about meaningful information and try to quantify this. But I think, until now, we have not yet been able to specify how much information can be given to the scientific community before it really becomes "participant" in our experiments.

SERVADIO: Contrary to my old friend and colleague, John Beloff, I was very much in admiration of the paper that we have heard. I only regret that I had not read it before, because my own paper, that you will hear tomorrow, will develop many of these items. The sorry fact is that we are in a dualistic situation, whatever we may do to avoid it, so

that, even when we are reasoning or thinking about some problems, we try to escape this and reach a sort of unity—to by-pass the dualism, we are almost compelled to establish new entities. For instance, this Demon of Dr. Bierman's is already objectifying something that, of course, is not an object; that is, it's just an idea. But, as I said, our tragedy is that we are in a dualistic world and we try with all our efforts to by-pass it.

BIERMAN: That's exactly what I mean when I say that I'm afraid that a Western scientist cannot escape his fate, impressed upon him by his culture. We are struggling to escape this, but I'm afraid we will stay struggling.

RONEY-DOUGAL: Dick, you take the three premises from the *Scientific American* article and you call it a natural world view. Well, I wish to question that premise too, because, from what I gather by my reading, this natural world view is, in fact, a very recent world view. And, it is one that has been promulgated only within the last one hundred years. Up until that time, it was the most *unnatural* world view. I would also say that it's a natural world view only for a very few people living in the Northern Hemisphere—farmers, ordinary people. You go to most people living in the third world and, for them, it is still an unnatural world view.

BIERMAN: That doesn't hold for all three premises. I think it certainly doesn't hold for locality. I suppose that also ordinary people think that the more distant in space and time two events are, the less related they are.

RONEY-DOUGAL: You could talk to some shamans, or some Indians or even some physicists and they would not accept that. So then you go to anthropologists, and you look at different societies and how they view the world, and you find it is completely different. So we must take into account what we are learning from anthropology when we devise what we call a natural world view. I fully agree with you that we do need a new methodology. I disagree with you that we must take small steps, because I think that small steps are only for small minds. I think that you have got to be brave and really step out and try radically different methods. We've been too conditioned by our scientific training.

BIERMAN: I've heard this before—many, many times—and I've never heard what these radical steps were. And that's what I mean when I say that it's easy to propose a new methodology, but it's very difficult to find one that makes some sense. I'm very much against throwing the baby out with the bath water.

RONEY-DOUGAL: Right.

BIERMAN: Yes, I would really object to that. Now, with regard to your objection to the word *natural* in "natural world view," I admit that

it's the world view of the last two centuries of Western science and that's exactly what I wanted to discuss. What are the fundamentals of our present-day Western scientific methods? I want to find out whether these assumptions are valid or not.

SARGENT: I just wanted to support Dick against John. As I understand it, Dick is not promulgating some kind of reincarnation of Bishop Berkeley. Neither is anybody else. I thought the idea was not that reality was dependent on mind, but that reality was not totally *independent* of mind—which is a different kind of claim. It may indeed be that this is a learned foolishness, in much the same way in which, as Galileo says, Kepler's idea of the moon influencing the tides was an occult fancy. So, I'm not very impressed with that argument. What I really want to try and argue for is: Why on earth must we continue to have one methodology which we must use? Why shouldn't we suspend judgment and use Dick's methodology with things like the analyzer splits and see what happens? Now my instincts about the observational theories are largely negative, (a) because I don't understand them; (b) because the people who argue for them are strange gnome-like people whom I don't always trust and (c) because, being a psychologist, I'm really not trained to understand the language in which they are couched. So it isn't only that I can't even understand the theories; I can't even understand the language in which they are discussed. But, nonetheless, I am prepared to say, "Well, let's take some of the methodology over from these models." They are suggesting radical and strange lines of experimentation that would never have occurred to me, from the way that I look at the world. Now, I have done this, but I think that most people don't do this kind of thing. I don't think they do tend to do experiments that don't follow from their own natural ways of looking at the world. But, I have done this and such experiments have generated findings that have made me stop and think because they were not what I expected. They were not compatible with the ways that I think and they force me to become cognitively uncomfortable, to have to accommodate new facts and new ways of thinking about facts. If there is one thing that I think is very good for people, it's something that upsets them. It's things that break into their natural patterns of thinking and really force them to stop being comfortable. To be comfortable is absolutely antithetical to any kind of higher mental functioning. Now, this is important, and my argument is that the methodology that Dick is suggesting should be used particularly by those who think that it is of no use for getting anywhere, because the results may force them to really start thinking much harder about what they are doing and why they are doing it. So, I support Dick very, very strongly against you, even though I don't think the observational theories will

get us anywhere. I would support Dick against Sue in the same way. I don't think they will get us anywhere, but I'm prepared to give it a whack and find out what happens. And I think we have to be prepared to do that.

BIERMAN: I'm glad that your prejudice against the gnomes doesn't hinder your being persuaded by the facts.

BLACKMORE: You don't need to defend Dick against me. I'm prepared to give it a try, too. I just want to make the same objections to you—I don't think the observational theories will get us anywhere.

BIERMAN: I think, maybe in the past, some of these methodologies have been used unintentionally or without people knowing what they were doing exactly. There have been analyzer splits, in fact, the Fisk-West studies can be interpreted in that way. There have even been two-checker effect studies, explicitly doing just what I have tried to do in the last four or five years. They have shown the remarkable effects of future observers—future with respect to the moment of the experiment—on the results. I think that there are already some facts which support future observer effects. Maybe the observational theories don't have much appeal for two of our participants here, but honestly, I don't see any other theoretical framework which could explain experimenter and analyzer effects so well.

VON LUCADOU: My point is on reductionism. I thought that you used a very special notion of reductionism, what I will call a classical form of reductionism. But I think, especially in physics and in other sciences, this sort of reductionism is composed of several operations, so to say, such as elimination. For instance, if you say, "a witch is a neurotic person, but a witch does not really exist," this is called elimination. You eliminate a notion. And you say, "This is nothing but . . ." This is the terrible "nothing buttery." And another operation is identification. You say, for instance, "Heat and light are nothing but electromagnetic waves." Another operation is transformation. You can say that, for instance, ideal gas and CO₂ are examples of Van der Waal's equation. So you make a transformation from one notion to another. So this is classical reductionism, and I quite agree with you that this classical reductionism is not useful to explain, for instance, quantum physics or to explain parapsychological effects. But scientists have for a long time used (probably unconsciously) another form of reductionism, which can be understood from the point of view of system theory. I have stressed this in a paper which will appear in the *European Journal of Parapsychology* and I have stressed there that you can replace these old transformations by new ones, and you will again get a kind of reductionism which is more open to our problems. The operations are called idealization, which is really

done in every scientific theory, because you have to omit some features—for instance, to explain something. But this is not the same as this “nothing buttery,” because you are aware of your idealization.

The next point is interpretation. Well, this is a very important feature of quantum physics, because you have a formalism and what you are doing is that you interpret it, for instance, in the language of everyday life. So this is an important operation in dealing with formalisms. You must be aware of the fact that you are doing an interpretation, because you might omit information or you might put more information into the system than you really have. So, the last operation, I call classification, and this is known in psychology as the perception of the gestalt. This is important, for instance, in parapsychology. You attribute meaning to a certain phenomenon and you know the meaning is not identical with the phenomenon because probably you attribute some meaning which is not really there. But, if you are aware of this, you are allowed to do so. If you agree with this kind of reductionism you are more open to our problems and you can show that you can solve a lot of paradoxes which seem to appear in the realm of quantum physics or in observational theories in this methodological background. I am optimistic that we really have such a methodological background to describe the phenomena. I think that this has been used in science for several years, but it was not formulated explicitly. So, I think we have gone a step forward and you probably only criticize a position which is already out-of-date for some scientists.

BIERMAN: Your statements bring me to a part of my talk which I skipped, but which is relevant with respect to your idealization interpretation of reductionism. I think that there is also some paradox in the mere existence of quantum physics, because quantum physics showed that non-locality exists. Nevertheless, it's a very respectable science. How can a respectable science show that one of the fundamentals of science is questionable? I think that the answer lies in the idealization, since quantum physics is a mathematical model. If I had to bet on it, I would put all of my money on the idea that parapsychological progress will be made by formulating mathematical models which are able to overcome these apparent paradoxes and can reflect non-locality in space and time. That's no problem in mathematics. So, I really see, and hope for, the blooming of generations of mathematical models describing psi phenomena.

PARANORMAL COGNITION: ITS SUMMARY AND IMPLICATIONS

ERNESTO SPINELLI

It has often been assumed by both the general public and parapsychologists that the primary function of telepathic phenomena is communication. Indeed, a great many of the theories proposed to attempt an explanation of telepathic occurrences have forwarded the notion that telepathy is the residue of a primitive precursor to language. Although this approach appears to have gained a wide appeal it has not, on the other hand, engendered any particularly successful experimental predictions nor has it truly "explained" the telepathic phenomena.

In 1974², Kreitler and Kreitler published a paper entitled "ESP and Cognition" which shifted the psychological emphasis of telepathic phenomena away from communication and towards cognition. Because my own academic background and interests at that time lay in the area of intellectual development, the paper helped to shift my own assumptions concerning the primary purpose of the telepathic phenomena. As a result, I formulated the beginnings of a theory of paranormal cognition which proposed that the telepathic phenomena can be most clearly understood if they are seen to originate from the same process which allows for the presence of those phenomena associated with normal cognition.

I concluded that the primary function of both processes is to connect hitherto distinct meanings to form a new meaning and, hence, aid the organism's survival. The sole ostensible difference between the two processes is that telepathic connections (i.e., paranormal cognition) appear to be partially non-sensory in origin, whereas normal cognition connections are purely sensory. However, philosophers such as Broad¹ have clearly demonstrated that *all* cognition is, in fact, non-sensory. If this is the case, normal and paranormal cognition can be seen as being aspects of the same process.

In neither type of cognition is there any clear explanation by qualified researchers as to *how* such "meaning connections" take place. Until such a time, one cannot unequivocally state that the two phenomena are one

and the same. But since, once again, in neither case have we any direct proof of the existence of such a process or processes, I thought it useful to propose a combined theory which I hoped might add further clues to the nature of one or both of these processes.

A hypothetical process which could account for these observed phenomena was presented. This process carries the familiar term "mind," but, in this case, "mind" is not seen as an entity, but rather as the interaction between energy (labeled in this case, mental energy) and the brain or central process of an organism. This interaction is the source of consciousness and, hence, of cognition.

Kreitler and Kreitler (with, I suspect, some aid from Jung's theory of synchronicity) argued that the mechanism of this process can most easily be explained by employing the metaphor of "lightning." Just as lightning is the result of the sudden connection of equally charged bodies, so too can cognition (either normal or paranormal) best be seen in terms of a sudden connecting process between two meaning-related contents which—if and when connected—prove to be complementary with regard to their meaning. The "lightning" model is also of importance because it dispels the generally accepted view that in the process of cognition, information is carried from one location to another. The "lightning" model instead suggests that the process of cognition is, rather, a sudden connection between meaning-related contents. It is only as the result of this connection that the observable processes and physiological changes that we have associated with both cognitive systems take place. This new perspective makes much more understandable a large number of phenomena which could not be easily explained by previous cognitive theories.

I further argued that, as systems become more and more complex, meaningful connections become further internalized because the "meaning of a meaning" is dependent on an infinite variety of values that an individual imposes and, as well, on the infinite number and variety of meaning values of the referent itself, both of which would be severely restricted were paranormal cognition alone available to us. The probability that the cognitive process can detect distinct meanings which, if connected, prove to be in all respects congenial enough to produce a new meaning, is much higher within the cognitive realm of one organism than between two or more organisms. The more cognition becomes internalized or self-centered, the more necessary it becomes in terms of the survival value of the self-consciousness (i.e., the individual) to keep it internalized and not allow it to be overtaken by paranormal cognition. Indeed, seen from this viewpoint, our sense of individuality is the evolutionary price we've had to pay for the limiting of our telepathic abilities.

Scientists now concede that one of the brain's major functions is to act as a "selection filter" for incoming information. My suggestion would be that this same process occurs for the selective filtering of outgoing information as well.

I have suggested that if this approach is, in essence, correct, it should allow for paranormal cognition to be most easily observable in man under four main conditions:

1. when information is so trivial that it contains little, if any, self-survival value and hence passes through the brain's filtering process;
2. when the survival value of paranormal cognition becomes greater than that of normal cognition;
3. when internal (i.e., self-value) connections are somehow impaired due to naturally or chemically induced altered states of consciousness;
4. when the organism's maturational level has not yet reached the level of complex internalized connections its species is capable of generating, but is, as yet, largely engaged in learning to make internalized connections (i.e., the organism has a poorly defined sense of self).

Categories 1 and 2 are most clearly observed in spontaneous cases of *paranormal* cognition. While clearly of major interest and importance as indicators of paranormal cognitive phenomena, such cases are highly difficult, if not impossible, to replicate in an experimental situation, although it is arguable that the early Rhine studies and the thousands following which employed Zener cards, dice, etc., might fall into a combination of category 1 and category 3.

The greater part of modern day interest in paranormal cognition is in association with studies in category 3. The large number of GESP experiments in personality studies, dream research, hypnosis, meditation, hallucinogens, specific types of brain-waves and, most recently, the Ganzfeld effect all seem to more or less produce examples of paranormal cognition. My suggestion is that the common experimental factor in each of these techniques is the minimization of the subject's self-conscious directed thought. I have termed this effect "relaxation" and designed and carried out a successful experiment³ (pp. 424-438) which supported the hypothesis that relaxation is an important variable in the study of paranormal cognition. My main area of interest, however, is in category 4 and specifically, in its application to human development.

A series of experimental predictions were made with regard to this, all of which were then rigorously tested. I have described these at length elsewhere³ (pp. 180-440), so I will now briefly summarize the main results obtained. First, it was predicted that child subjects who have not yet matured to the stage of forming complex internalized connections

will show a greater tendency to employ paranormal cognition than adult subjects who have already formed complex internalized connections. I argued that within the general Piagetian framework of intellectual development it would be reasonable to argue that within our society and culture the majority of children reach the stage of creating and employing complex internalized connections at around the chronological age of eight. Following this chronological age, the observable amount of paranormal cognition employed should stabilize itself to levels of chance, under most conditions. In three separate paranormal studies involving a large number of subjects between the ages of 3 and 70 it was repeatedly found that only the three youngest chronological age (CA) groups (those aged between three and eight years) consistently scored *as a group* at levels far above those predicted by chance, while all the remaining CA groups scored at levels within those predicted by chance.

Second, still in keeping with cognitive theory, it was predicted that the tendency to employ paranormal cognition is inversely proportional to intellectual development as measured by chronological age. This would imply that within the three–eight year old CA groups, the younger subjects would obtain better scores than the older subjects. Once again, the results of the three studies reported clearly indicated this. In all cases, the younger the CA of the group, the higher the paranormal cognition score—with highly significant inter-(and in some cases, such as the five–eight CA group, intra-) group differences.

Third, in a series of three experiments, this time concerned with the IQ of subjects as a variable for paranormal cognition, it was predicted that subjects of lower intelligence levels within the same CA group will show a greater tendency to employ paranormal cognition more successfully than subjects of the same CA but of a higher IQ. Testing subjects aged between three–eight years, this prediction was once again clearly borne out, indicating another measurable variable, i.e., IQ as a determinant of the successful employment of paranormal cognition.

Fourth, it was predicted that the manipulation of both these variables, CA and IQ—either in combination or independently—would cause observable changes in the paranormal cognition scoring of subjects. It was found that those subjects paired for both CA and IQ obtained the highest paranormal cognition scores, indicating a clear inverse relation between paranormal cognition and both CA and IQ. It was also found that those subjects paired for IQ but not for CA showed a clear inverse relation between paranormal cognition ability and IQ, but not between paranormal cognition ability and CA. Finally, it was found, that those subjects paired for CA but not for IQ showed a still clear (but much reduced in

terms of successful scoring), inverse relation between paranormal cognition and CA and, to some extent, IQ.

Fifth, it was hypothesized that although both paranormal cognition and normal cognition can be employed together, if a normal cognition task of some complexity is introduced at the same time as a paranormal cognition task, then the successful employment of paranormal cognition will diminish. Further, the more complex the secondary normal cognition task, the lower the level of successful paranormal cognition scoring. An experiment employing the use of secondary word-association tasks of varying degrees of complexity which were administered during a paranormal cognition task was designed. It was found that those subjects given both tasks at the same time obtained significantly lower paranormal cognition scores than those expected and that the more complex the word associations were, the lower was the group paranormal cognition score.

Sixth (as described earlier) in contrast to this, it was predicted that if subjects in a paranormal cognition task were given an additional task geared to relax normal cognition, then they would demonstrate a higher employment of paranormal cognition. An experiment employing the use of headphones and various types of music being played at the same time as the paranormal cognition task showed that subjects in the relaxed environment made significantly greater scores on their paranormal cognition task than expected. It was also hypothesized that the more relaxed the subject groups were, the higher would be their score at paranormal cognition. Results from the experiment indicated that the more relaxation stimuli available, the significantly greater was the group paranormal cognition score.

Seventh, it was predicted that no sex differences would be present as indicators to paranormal cognition. In all the experiments and studies conducted, no sex differences were found.

The indication is strong, therefore, that paranormal cognition is clearly being utilized to varying degrees by man and that it is strongly related and affected by both CA and IQ—both indicators of the level of complex internalized intellectual development in humans—and by the relaxed state of the subject.

It seems to be the case that when self-directed internalized connections are being minimized or are not yet being fully employed because of the maturational level and intellectual development of the subject, paranormal cognition is much more actively and successfully employed. I have argued that paranormal cognition can best be seen and studied as an alternative system of cognition closely related in its mechanics to normal cognition, although quite clearly unable to combine with normal

cognition without impairing either one or both cognitive systems. All my experiments have pointed to the general validity of this theory. It is hoped that even with its limitations and assumptions it might provide the springboard for new types of experiments both in paranormal and normal cognition which will clarify both systems and, hopefully, the process or processes that initiate them.

It is important to note, for example, that although I have restricted my discussion to the telepathic phenomena, there is no reason to limit the implications of the proposed system to that phenomenon which readily falls under the telepathy (or GESP) label. My own feeling is that clairvoyance, precognition and even PK phenomena can—and should—be analyzed as primarily cognitive events and are, thus, most clearly open to hypotheses and experimentation when considered from this framework.

I believe that, by altering our approach toward the cognitive, parapsychologists will begin to be able to answer what I consider to be one of the most important objections raised by non-parapsychologists to accreditation of our work within the realm of science, namely that parapsychology appears to be a collection of data with no cohesive theory around it.

What my work also suggests is that, on the basis of the large and successful number of experiments on paranormal cognition conducted with child subjects, a whole new and easily accessible group of gifted subjects has become available for parapsychological study. There are, however, several limitations and necessary moral obligations to be considered in conducting research with children, as well as a number of practical problems which must be considered before an experiment with child subjects can begin. I have noted several of the major problems and obligations facing such a task elsewhere³ (pp. 601–609) and it is strongly suggested that any serious researcher wishing either to replicate or even extend the ideas and experiments described herein should make due note of them.

There appears to be another problem with this last point as well. Although a number of researchers (predominantly in America) have reported successes with child subjects, two independent attempts at detailed replication of some of my work with children by British researchers have failed to obtain significant results.

At the conclusion of my doctoral thesis I wrote “. . . to use Jung's phrase, it should not be concluded that the author believes that paranormal cognition is NOTHING BUT what he has written. The field is still so uncertain and unknown that to make such a statement would be folly—both scientific and personal”³ (p. 549). I'm glad I had the fore-

sight to include that proviso. For, since the writing of my thesis, the major issue of the experimenter effect has arisen and predominated parapsychological discussion.

A number of associates have suggested that the different results obtained by myself and the British replicators are clear instances of this experimenter effect. I am loath to accept this explanation, principally because no one really understands what the experimenter effect is or how it functions; it is not any true explanation.

Instead, my own viewpoint is that this discrepancy in results points to another aspect of the difficulties involved in the experimental study of paranormal cognition. Namely, that if, as I have suggested, paranormal cognition occurs when there is a relaxation of "self-oriented and directed" thought, so that a sudden meaningful connection occurs, then, in any experimental situation, one important variable which might aid or impair this event is the experimenter him/herself—or, to be more precise, the experimenter's own cognitive state. In other words, my interpretation of the experimenter effect, while not dismissing the many social and personality variables that other researchers have proposed, nevertheless views them as secondary offshoots of the real issue: the experimenter's own entry into the paranormal cognition state wherein for the duration of the experiment he/she accepts that there is no reason or purpose for what is occurring, there is merely an open-ended experiential event.

I suggest that this is one way of understanding the phenomena associated with this effect and, more specifically, of explaining the discrepant results obtained by myself and some replicators. What I am admitting to, I suppose, is that the state I've just described is the one I experienced in the course of my research. It is, I believe, an "alchemical" approach to the experimental situation in that the experimenter recognizes his/her lack of distinction from his/her experiment.

I realize that this notion of experimentation appears to go against the current ethos of the vast majority of scientists, barring a few theoretical physicists, but I sincerely believe it to be a necessary approach for parapsychology to accept in its second century.

The first century of parapsychology can be characterized as the period of search for scientific acceptability. It was a time during which parapsychology tried its best to emulate the standards of accepted scientific endeavor. In other words, parapsychologists did what was required of them. I think we have at last earned the right to place our own stamp on science.

Parapsychologists must remember that their work is revolutionary. We are working to undermine and/or expand the concepts and as-

sumptions of other sciences. To do so, we cannot go on feeling this compulsion to do everything properly. Parapsychology does not need to be proper. It has to be intriguing, exciting, radical, inventive, sometimes even a little crazy if it wants to continue to exist, if it wants to attract new researchers.

We have in our grasp one of the most potentially exciting topics of exploration that man has encountered. Most important, we have the interest of millions of non-academics. People of all classes and ages are entranced by this topic. For the past century we have caged this field in scientific trappings, we have compartmentalized it and dissected and labeled, and yet we have learned little about it because of this push to make it acceptable.

Of course, there was a necessity for such an action. There still is. I have no doubt that parapsychology can be acceptable to science, but only by discovering its variables. And, in some cases, these variables cannot be discovered within the present structures—and strictures—of science. If parapsychology were to turn away from its objectivity just a little, if it were prepared to view experimental events more as situations in which there are no experimenters and subjects performing tasks, but rather various participants acquiring very personal information and understanding, then I sincerely believe that it would be on its way to shattering discoveries.

We have been objective and scientific. We have those credentials. A true scientist cannot fail to be impressed by them. But it is not credentials of respectability we are after, it is understanding. And to understand more, we must break away more from traditions, from limitations, from supposed laws of science.

What my work has taught me most of all is that we are playing with something of which we have no understanding. We are as arrogant in our own way as all the critics of parapsychology put together. We attach labels and play at being scientists and think up acceptable experiment after experiment and come up only with vague conclusions which are as often as not disputed. I think parapsychology should enter a period of observation and participation and forget about trying to prove anything for a while. As parapsychologists we should immerse ourselves in our research, expand it, make it part of our being and essence. We should allow it to encompass us, to take us where it wants, to lead us anywhere.

Let us revolutionize ourselves before we proclaim any general revolution in science. Let us free ourselves from the habits and rituals we've accepted as "truths" all our scientific lives. If we are to question, then let us make the questions worthwhile. Results, I'm certain, will come.

But the risk must be taken. If it is necessary to break away from the other sciences, if it is vital to shun and be shunned by them once again, then let it be so. If we are truly men of knowledge, men who seek knowledge, then there is no question necessary. Succeed or fail, we are now at the point where the step must be taken. I believe that if we do not, parapsychology will fade away like all else of little value. Parapsychology's second century is a crucial one. Perhaps the most crucial. Whatever else, we have an exciting time ahead of us.

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DISCUSSION

RONEY-DOUGAL: I have one question which I've always had with child work. You say you get the most dramatic results at the youngest age and, by the age of eight, you get no results at all. Then, how is it that those of us working with adults get positive significant results? If it dies out, does it come back again in the teens? Is there a period where the child's cognition is such that he has to become totally self-orientated and individual and shut it out and then, as he gets older, he can open up again? How does it actually go right through?

SPINELLI: No, I don't think for a minute that it dies out, in any sense at all. What I do think, however, is what I was pointing to at the beginning of the paper. That is, with adult subjects, the best results that we obtain are under the conditions (most recently anyway) where the adult is in what we loosely term as some form of an altered state of consciousness. A great deal of research has been done with adults, inducing in them through Ganzfeld, through hypnosis, etc., any type of consciousness other than their normal cognitive conditions. If you succeed in doing that, then what you are essentially doing is opening the way for paranormal cognition to be more easily observable. What I'm saying really is that children are more likely to be more often in a paranormal cognition state than adults are, simply because they are in the process of acquiring their normal identity—their self—their ego. Does that clarify things at all?

RONEY-DOUGAL: So, by the age of eight, you need to use hypnosis or Ganzfeld, or whatever, to help that child through it.

SPINELLI: Yes, at about the age of eight, within a Piagetian framework. At about the age of eight is when true internalized imagery begins to take place in the child. The child has a strongly-defined sense of identity; he is able to internalize concepts; he is able to create new ones and so forth. It seems to be a crucial age for constructing the sort of mental state that typifies adulthood. And so it is at that point, I think, that there is stronger and stronger opposition towards allowing a paranormal state to manifest itself.

RONEY-DOUGAL: Is it at that point that those who we might call natural psychics, the Matthew Mannings of this world, will begin to emerge as such?

SPINELLI: That, I couldn't tell you. I don't know.

SARGENT: Ernesto, there is an affinity between what you are saying and some recent theoretical writing, by people like Rex Stanford, particularly, on cognitive operations and how they might relate to paranormal functioning. Now, when you are working with children, there are good tests, like Piagetian tests and IQ tests, that you can use to define pretty well what level of formal thinking they are using and so on. The problem is, I don't think that we can actually look through the full range of children and adults with the same kind of measure, to see if there were similarities between the child's level of typical mental functioning when it's very young and the adult's level of functioning when you get him into a psi-conducive state. Now a possibility here would be something as loose as word association.

SPINELLI: Yes.

SARGENT: And Rex Stanford's work with word associations has suggested that the use of Ganzfeld stimulation actually produces a disintegration in the normal mental functioning which is even more extreme than that which you find in schizophrenia. This comes from the Stanford and Roig study presented at the 1981 Parapsychological Association Convention. So, it might be possible that we could actually find measures that look right through the whole span and see whether there really is much greater agreement between the mental functioning of the child typically, and the mental functioning of the adult phasically, when you are getting these kinds of ESP effects.

The second point I want to make is about the experimenter effect. It seems to me that the experimenter effect is actually a label; it isn't an explanation at all; it's simply reified into an explanation. However, cognitive explorations might give up some insight into how such effects might work. The experimenter has his own cognitive state and it is indeed possible to use chemical approaches to alter the experimenter's state of consciousness during the experiment. That can certainly be done.

Another possibility is that it will be interesting to look at the experimenter's influence on the mental operations of his subjects. Perhaps particular experimenters appear to make it particularly easy for their subjects to loosen cognitive constraints.

As an undergraduate, I actually did do a project on the stability of gender identity in children with Piagetian tasks. I found something terribly embarrassing—that our four-year-old children had a more stable sense of gender identity than the seven-year-olds. Now this is rather tricky to explain because it really shouldn't be quite that way. When we went back and looked at the data, we found that the reason was very simple. There was a huge experimenter effect in the data of the children that I had actually tested. When we looked at the male subjects with a girl experimenter, every boy that she had tested had shown gender constancy. He was a little boy, he knew he was a little boy and you couldn't persuade him otherwise by Piagetian bags of tricks. He knew that even if you put a handbag on him he would never be anything else but a little boy. However, all of the male children that I had tested showed exactly the reverse picture. They were perfectly prepared to admit that, if you put a dress on them, they would now be little girls. And we had the devil's own time in trying to figure out why they should have reacted in this way. In fact, we spent hours agonizing over a straightforward experimenter effect in child psychology. These effects are by no means unusual. I think there are two lessons to be learned from that. One, is that one would believe, at times, the experimenter effect only exists in parapsychology, from the hysteria that was generated by some people over it. Of course, this effect appears frequently in child psychology. Second, it might be possible to develop tools within developmental psychology to actually figure out how these effects ever get mediated. So, indeed, the rapprochement that you are suggesting is certainly there.

SERVADIO: I am very much in agreement with many things Spinelli has said, but as an old timer, I want to make a few historical recollections. The shift from the interest in telepathy towards the theory of cognition, I think was first put forward by Charles Richet, who didn't believe very much in telepathy as such and created a term which is now long forgotten—*crypthestésie*—that would encompass the whole of ESP phenomena. That was written in 1922 or 1923. And another French scholar, Dr. Eugene Osty, wrote a book whose title was *La Connaissance Supranormale*, that is *Supernormal Cognition*. That was a few years after Richet's book, but still long ago. I was extremely interested in the experiments with children, because, of course, I think that Dr. Spinelli has gone a long way in studying phenomena that were not properly studied by other

researchers. This includes the famous studies by Berthold Schwarz in the United States, about paranormal phenomena between parents and children—books that you all know very well. But I was particularly interested by the age of these children. As a psychoanalyst, I know what Freud contended regarding the maximum of instinctual drives in children around about three years of age. This also makes clear why, at that age, not only are there more paranormal possibilities up to eight years of age, of course, but above that age, as Dr. Spinelli pointed out, the concepts are not so evident as in intelligent three-year-old children. This is perhaps why, at around three years of age, the phenomena are so prominent. And I think that, also, Dr. Jan Ehrenwald in one of his essays pointed out the scheme of the human personality, in that it is not a closed system, but is an open system that is very much closed in normal adult life, but is still very much open in very young children.

SPINELLI: I take your point as to the earlier researchers; I can only say that this is my ignorance of the early era.

BLACKMORE: Well, as many of you probably know, I am one of the failed replicators who Ernesto is talking about, so I'd like to say a few words about the problem of trying to do experiments with young children. Ernesto has often pointed out that I probably didn't have the right mental state, the right approach with the children and so on. But I don't think we're going to get anywhere with this kind of argument, because who can say what kind of state I was in when I was doing these experiments. All I can say is, that in doing a guessing experiment with three and four-year-old children, they got carried away, as it were. I mean, that they were so involved in it, they hardly noticed me. They were really involved in their task and they carried me along in it. I feel that it was one of the few experiments in which I really got totally involved. Nevertheless, the results were, as in all my experiments, purely at chance. What I really want to talk about is not that. I did those experiments, trying to replicate Ernesto's work, because I have long been interested in the kind of approach he has talked about today—the idea that children are better at psi, the idea of its relationship to cognition and so on. Potentially, I think there are some ideas worth following up in there. However, I do not think that the results that Ernesto has got really justify much hope in this direction. I hope you'll forgive me, Ernesto, for dragging out the old problems. Since you haven't published anywhere the details of this research, they have not been argued out in public, so perhaps this is a chance to talk about some of the problems. Some of your findings were very fascinating. For example, the fact that when you had a pair of children of similar age, they did better than a pair of children of different ages. However, I think I'm right in saying that

those experiments were in the early series, in which the sender was allowed to choose which picture was going to be the target. Now, in that case, you can explain a lot of results perfectly normally, because the younger children will be more prone to simple biases and preferences and so on, so the younger ones should do better. And, also, children of a more similar age are more likely to have similar preferences, so that would also explain that finding. Now I know that, in later experiments, you corrected that problem, but you didn't replicate all the findings that you got in the earlier ones. If we look at the results of later experimenters, there may be experimenter effects, but they haven't been able to replicate them. So, I think that the very hopeful things that you are talking about, which go on interesting me, are perhaps not going to get us as far as we might hope.

SPINELLI: You are only partially right in that. The results that showed that varying the age of the child produced variations in GESP scores were, indeed, in the first three sets of observations. Now, two of those sets of observations were experiments in which the sender did, indeed, have a choice as to the target. In the third set of observations, however, there was no choice on the sender's part—it was a random target, chosen by statistical tables. So, because there was absolutely no significant difference in scoring between that third set of observations and the first two sets and because all the tabulations were taken together, then it seems to me that your criticism doesn't really hold; that, by varying the ages among those children as well, decline in the scoring effect was also attained.

DEAN: As I understand it, a new born baby—the first day old—does rapid eye movements about 20 hours out of the 24. I think in the measurements that have been made even before birth, the fetus is doing rapid eye movements closer to the 24 hours out of 24 hours, than when it is first born, doing 20. But, thereafter, the number of hours of REM per day drops down by the age of puberty to about the two hours per day that we, all of us, do for the rest of our lives—two hours of REM dreaming out of the 24. In the decline of the telepathy scores from the three-year-olds to the eight-year-olds, was there a parallel with the decline in the number of hours of REM going on at the same time in those age periods?

SPINELLI: That, I couldn't tell you at all, I'm afraid. It was not a connection that I thought of. Obviously, one of the implications of my work is that, if three-year-olds are so good, then, if we manage to go even earlier to weeks-old babies then perhaps we ought to be able to obtain very, very good results. The problem is that I have yet to manage to think up an experiment that will allow me to work with children of

that very early age. However, Dr. Bierman informed me this morning that he had done one. So perhaps, later on, he will tell us about it.

BIERMAN: I want to return to the experimenter effects. I think you got off a little too easily by saying that it is just a label. What I want to propose to you is a specific mechanism which takes place in your experiment. Now, let us look closely at what will happen in a guessing experiment. The child has to respond at a given moment by naming one of the possible targets. Now, if we look at the process involved, it must be that some representation of that target comes into consciousness and activates the child to make his call. Now, what I propose is that the representations of those targets are what I called "Demons" and are characterized by some activity level *which has a random component*. The mechanism for ESP might be that someone uses PK to shift the activity level of this Demon in such a way that it becomes more active than the consciousness threshold and results in a call. So the mechanism that I propose for your experiment, which seems to be ESP is, in fact, PK on a brain state. Now, my guess would be that the PK subject in this experiment is you, that you are doing psi on this random system which is the "Demon" in the child's brain.

Now, we can develop two views—an optimistic and a pessimistic view—with regard to the relations you have found between psi scores, age and IQ. I start with the pessimistic view. The pessimistic view is that, as this experiment was just a PK experiment of you on the children, you had some expectations about this psi strength depending on age and you just confirmed your own expectations. This is a pessimistic view because within this view it is nearly impossible to find a real intrinsic process if experimenters are imposing their own expectations on their experiments all the time. The optimistic view on the other hand, is that there is something really going on there—that the age and IQ effects are true intrinsic psi effects—that psi really happens more often with younger children independent of the experimenter's expectation. For this latter view there is also some support in the "random Demon" model. This model supposes that there should be a representation (or Demon) for each target in a psi experiment. We might assume that for younger children, the associational links between those representations are less strong than for adults. However, the associational links between targets are developing during an experiment which obscures the psi effect. (It also "explains" decline effects.) Because, whenever you "PK" one Demon to above the consciousness threshold, and there is a strong associational link, it just pulls all the other possible targets with it and a choice becomes very difficult for the child. So under the assumption that younger children have less strong associational links the decrease of psi

with age can be explained. In a similar fashion the IQ effect could be explained by assuming that children with a high IQ probably have more different activation levels, so that there are very highly activated Demons that they can attend to very easily—they can concentrate better on that—while low-level IQ children probably are dealing with a sea of Demons, more or less simultaneously activated, a low ability to concentrate. This latter situation is an optimal situation to do all your PK in. In a sense the cognitive system for these low-level IQ children is more random (hence, their inability to concentrate). And that's also the situation which is induced e.g., by the Ganzfeld procedure.

SPINELLI: As to your pessimistic and optimistic viewpoints, I have to be honest with you and say that, certainly, when the experiments began, I had indeed begun to think in terms of an age effect. So you can be pessimistic from that point of view. But, what had produced that idea was an earlier set of experiments I carried out in cognitive development, in which this notion hadn't even occurred to me, but which, in themselves, showed this age effect as well. So, I don't know whether that's optimistic or pessimistic, or both. I don't think I have any real objection to what you have been saying, aside from the fact that my own feeling is that the issues that my work raises fall very readily within the framework of cognitive psychology. Rather than work in a new sort of Demonchaotic framework, I suppose I'm more willing to work in one that, at the moment, allows the same type of theoretical work, without upsetting too many other people, and allowing other people in a field which is allied to mine to contribute to it. As to the point of PK, all I can say is that, at the moment, this is the research that I'm conducting with children. So now I have shifted my attention away from ESP—from telepathy, specifically—and I'm now beginning to carry out PK experiments with young children.

BIERMAN: You suggested that Sue Blackmore shows the experimenter effect in terms of psychological "treatment" of the children, and what I have been trying to suggest is that the difference between you two is your PK ability. What I suggest is that you do some PK matches or PK tests, or both, and compare your PK ability.

SPINELLI: I certainly have no objection to that. My own personal experience with PK is that I myself don't seem to be a particularly good subject. On the other hand, I'm willing to go along with your point of view that I only become a good subject when I think that it is other people who are doing it. That may be the case.

SARGENT: We're getting into this very long and garbled and incredibly complicated argument from what I shall call the gnome theory coming from Dick Bierman. It's all totally unnecessary. You state in your

paper, Ernesto, that there are, in fact, some highly significant intra-group differences in your data. Under these conditions the effects are due to the subjects. It is utterly gratuitous, when you have expanded variance with a group, to say that anybody other than the subjects is responsible for the effects, to postulate an experimenter psi effect, when you actually have prima facie evidence of highly individual differences.

BIERMAN: What I say is that there are two aspects to the psi process. There is the randomness in whatever system you try to influence (RNG or brain state) and there is the PK source. I won't say that there is no difference between the subjects and that there cannot be a subject effect. Certainly there can, because the amount of random brain function differs. What I suggest is that the source of the PK is coming from the experimenter.

SARGENT: Certainly, but I understood the argument, and I think Ernesto understood, that what you are saying is that he (Ernesto) is the PK source, and there is *clear* evidence that there is an input from the children as well, *at least*.

HAYNES: May I point out the innumerable and often unrecognized difficulties of communication in parapsychology. Perhaps they could be illustrated—or paralleled—by what occasionally happens at European Economic Community debates where every speech is simultaneously translated into the language of every member state of the Common Market. Here is an example. A forceful Englishman, anxious for a firm and speedy decision said, "Now we must shoot the rapids," which came back to his Francophone listeners in clear French as "Maintenant il faut fusiller les lapins" ("now we must shoot the rabbits"). It seems to me that the perils of instantaneous translation in all our languages, and especially in the language of parapsychology, must be looked at, allowed for and, if possible, obviated. I would suggest that we should try very hard to translate into a common tongue the words we use, since they are all too often technical terms, which don't mean the same things to everybody.

There is also the matter of reductionism by way of semantics. This has two main aspects. One is the use of "causation" to mean physical causation alone, which has only, I think, happened over the last hundred years. Before that, there was assumed to be a first cause, the exercise of the will, even in Aristotle's time. And the second, and it has just recently come up, is the habit of evading consciousness and preconsciousness by attributing almost all ESP (which is an affair of consciousness) to the effects of PK (which is an affair of mechanism.)

RONEY-DOUGAL: I happen to have in my possession something called a Magic Doll's House, which the late Colin Brookes-Smith built for my

daughter some years ago. It can actually be used by any child who can sit up and pick something up and put it into something. So it could be used by a child from the age of at least one year onwards. My daughter, at the age of six, still enjoys playing with it. So, with a little bit of technical renovation or repair, if anybody wants to borrow it and wants to put it right and get it working properly again, we've got a nice bit of equipment there.

BLACKMORE: Perhaps I don't have equipment to offer, but I have a baby to offer. I've trained my five-month old baby to pull a string in order to turn a tape recorder on, to find out what sort of music she likes. And I wonder whether, with those sorts of simple responses, one might be able to design ESP experiments. If you can use a baby with those kind of simple responses, to design an ESP experiment, I'd love to try it!

SPINELLI: Sure, I think so. The main problem, as I see it—and perhaps its just because I see it as a problem—is that the experiment won't work. It's because, if what I've found so far is correct, I'm going to have to have two babies.

MORNING GENERAL DISCUSSION

CUTTEN: I'd just like to say that I was extremely interested in Dr. Spinelli's discussion. He is, certainly, by no means the first one who has indicated better results in telepathy experiments with children than with sophisticated adults. It is also indicated that, quite apart from chronological age, the mental age also has its effect, suggesting that, if we had experimenters of low mental ability, they may get better results than more sophisticated people. It is not very clear whether any actual experiments have been done along those lines, but, if this is true (and I've no reason to think that it isn't), at the same time, we hear a great deal of discussion on the experimenter effect. Now in the usual type of experimentation, it's practically always a highly educated, highly cultured experimenter who conducts the experiments. But, with regard to the experimenter effect, would it not be sensible to have a person of low mental ability conducting the experiments as well?

SPINELLI: Well, perhaps you have just answered the question as to why Sue and I have had different results!

SARGENT: If you want a system for testing young children and you don't want them pulling strings, what you want to use is the natural scanning eye movements. This means an ideal kind of response (you're going to need a laboratory for this one—you can't do it at home). Okay, you have the baby just looking at some kind of blank screen. You have a mother in a different location, just looking at a similar screen, and you produce some very dramatic visual stimulus. The mother's eyes will move and scan it and you want to see if the baby's eyes move at the same time to the same portion of the screen. I think some variant of this kind of system is certainly a very easy way of doing it. The problem, of course, is keeping them awake. It is very difficult, when they are very young, to keep them awake for very long. I think that some variant of this system is probably the best system to work with.

SPINELLI: Some years ago, Jan Ehrenwald suggested a number of experiments with infants about two or three weeks old, along those same lines. I agree with you that, to some extent, it's simple. On the other hand, there are psychological difficulties, not experimental difficulties.

SARGENT: What did you have in mind?

SPINELLI: Well, as I was saying, I think that perhaps the best results might be with two or more young infants. Although, the mother-child interaction is one that's interesting.

SARGENT: I think you probably did this with two babies.

SPINELLI: I can't quite remember her results, but one of the other unsuccessful replicators, Hillary Henegan, did obtain some significant results with mother and child, but I can't remember the age of the children. I think they were about three or four or five years of age.

SARGENT: As I recall that study, it was investigating the hypothesis that in telepathy studies there will be a difference between the scores if their mothers acted as senders and if casual assistants acted as senders. Now, she didn't find a significant difference between the two. As I remember it, the scores were actually significantly above chance for the whole data. Now I'm not really sure, that under those conditions, one would say necessarily that was a failed replication. The effects were weaker than they were in your study, but she didn't replicate the familiarity effect. The results, overall, I recall as being significantly above chance at the .02 level. So I think that one would hardly have said that was a failed replication. Perhaps you are not doing yourself justice.

SPINELLI: Well, only in the sense that she initially began trying to replicate, as closely as possible, my own experiments with two young children. And then, having failed to turn in any significant results in that, went on to her own interests, which was between mothers and infants.

BELOFF: It's very significant, I think, that the one little bit of marginal significance she did get in that thesis of hers, was precisely on the hypothesis that she, herself, had invented, rather than the hypothesis of yours that she was trying to replicate.

RONEY-DOUGAL: I would like to make a comment which, I think, encompasses both Dick's talk and Ernesto's talk. Dick says that we must look for a new methodology. Ernesto says that we must now forget about the skeptics and go to a period of observation and participation and, in a way, learn to incorporate psi within ourselves. I think that maybe this is a new methodology that Dick is groping towards. It is possibly the most immediate way that we can push forward into the second century. It encompasses the experimenter effect in that an experimenter who understands psi from the inside can best design experiments to bring out the psi within people that he is working with.

BIERMAN: When I first became involved in parapsychology—it was around 1972—I met Helmut Schmidt. I had just left a physical laboratory where the clean objective science takes place. And Helmut Schmidt told me that he did self-testing. I found that appalling! Well, during those ten years, I changed my mind radically and now I'm doing a lot of self-testing. I think for any parapsychologist it's essential to do self-testing. So, I agree with that, although I don't agree that this is the radical new methodology which we have to find.

COX: I agree, as you have just now said, about the self-testing. It is very useful and, in Schmidt's case, established confidence, which, as was said a moment ago, is very helpful in anyone. If one is confident, then never mind the experimenter effect theory. We put too much weight on that, I believe. I don't think that it is as responsible for some of our findings as we seem to think. But, the main thing is Dr. Spinelli's remarks about doing tests to find out what we don't understand and also freeing ourselves from habits. You mentioned Schmidt, for example, Dr. Bierman. He has implied that PK and ESP can be separated in his equipment. I disagree with that. I don't know many who share my view; but I remember a year or two ago I wrote a paper on the structure of electronic PK which is a critique on that point (not yet published). It was on the matter of whether we can effect PK on electronic systems, or whether it is GESP alone. I happen to think it is the latter, but that is a question that has yet to be settled. So many people assume as Schmidt appears to, that it is PK when you want it to be PK. This actually is a very good point to test, and I have outlined certain methods by which it can and should be done, for both children and adults; I suggest, therefore, that we also use dice with them—not just electronic Schmidt machines. This will yield even better scores, I believe. The average Psi-Q level isn't as great with Schmidt machines as it is with dice and cards. I recommend using Zener cards, of course.

And I'll say one other thing while I'm speaking—that we should free ourselves from habits, as was said by Dr. Spinelli, and take new steps, for it is always helpful to realize that there is a lot about PK and ESP that we don't know. This also includes numbers of phenomenal types of "qualitative" variety, by which I mean direct PK effect upon static targets. I have been researching these for some time and, in fact, an account is now in print.

OUTSIDE AND INSIDE THE PARANORMAL.

ELMAR R. GRUBER

It is now exactly twenty years ago that the Parapsychology Foundation invited a number of well known researchers in the field of parapsychology to express their opinions on the future of this science. This conference is dealing with the same topic. Therefore, I found it particularly interesting to flip through the pages of the *International Journal of Parapsychology* in which the answers of the researchers were summarized. Several striking features can be noted. One is that there were remarkable differences as to what the respondents considered suited to the framework of psi research and what is not suited. Such a variance points to the fact that even then our field was not guided by one generally accepted paradigm. Another interesting aspect of the parapsychologists' statements was the strongly differing, sometimes bold proposals for potential future research. Art and creativity were mentioned as fields to investigate in attempting to understand more about the workings of psi and Ducasse suggested that parapsychologists try themselves to develop psi abilities.

Looking back over the past two decades of investigations into the paranormal it seems that only a few of the ambitious proposals have been adequately met. Somehow I have the feeling that, were we to repeat such an opinion survey today, the answers would still differ considerably from each other and might indeed be very similar in content to the ones from twenty years ago. Though the idea of changing our nine-to-five attitude towards our subject (only psi that happens in the lab during work-hours is "in") seems to have been always prevalent, behavioral consequences can only seldom be observed. It seems as if the paranormal causes a strong attraction, coupled with the fear of "getting too close to it" if one were to leave the position of an outside observer. Charles Tart referred to this conflict as the "religion of the .05 level."¹ It is safe for parapsychologists to accept psi studies that show statistically significant results at the .05 level or so, and the attractiveness of the phenomena keeps them busy hunting for such results, but they back away when confronted with strong manifestations of psi and react with intense criticism. In view of this fact it is interesting to note that in the survey of

twenty years ago the idea was expressed that psi researchers will turn towards qualitative investigations, because they can relax about the existence of psi, since the experimental evidence presents massive support for their claims.

Anxiety about the paranormal is still an issue with which parapsychologists themselves have to deal. The question of whether or not psi phenomena exist is not the basis of the researchers' reactions when confronted with massive paranormal phenomena; the roots must be looked for at a different level.

The paranormal in its expression has a tendency towards the "un-focused," the impish, the evasive. From an anthropomorphic perspective one could say that it exhibits trickster-characteristics. The paranormal is always surprising in its triviality, its meaningfulness, its evasiveness and its "exhibitionism." Seemingly the only rule that can be sustained for the paranormal is that it defies every rule. "Always the same, but always different."² This is certainly not true only for psi phenomena, but since they escape integration into mainstream scientific frameworks most persistently, they are outstanding representatives of the unknown, of the "other"; a "conspiracy of events" that do not conform to expected behavior and hence represent a threat to classical rationality, a model of security.³ This model says that only when ways can be found to describe the unexplained phenomena in relation to known ones can a part of the fear-provoking territory be integrated into our body of knowledge.

In trying to bring order into paranormal phenomena, to make them part of our scientific knowledge of the world, parapsychologists act as track readers searching for circumstantial evidence until the foreign phenomena are described as being part of the order of the known world. Naturally, the better skilled the hunter is, the better he can understand the tracks of his prey. He might even be able to read from the tracks if it is worthwhile to hunt for this specific animal. He is the one who has specialized in interpreting the slightest unintentional gesture for his own benefit. He learns the secret ways of the wild animal; as a scientist he studies the secret ways of wild phenomena in order to capture them. The basis of the scientific method is indeed to maximize the difference between the chaotic, wild, unconscious, impulsive, dirty and the ordered, confined, conscious, rational, clean. The scientific realm of the analytic and objective, whose symbol might be the observatory or the microscope, dictates the order and provides the means to map unknown territory. (Of course the map is not the territory, as the menu is not the meal.) If parts of the unknown territory are extremely hard to explore, because conventional tools do not render expected results and a conquest would imply too many casualties, then often the territory in question is declared

nonexistent. This is the way a considerable number of mainstream scientists deal with the difficult territory of psi phenomena. This is like saying the upper Amazon does not exist because it is hard to get there.

For parapsychologists the situation looks somewhat different. They do believe (or at least I've heard they do!) the territory of psi exists and usually accept that it is a particularly hard one to explore. They also hold the tacit assumption that the methods and tools of the hunter reading the tracks will eventually lead them through the jungle of strange events. This implies the basic idea that, provided you follow certain rules, you will eventually conquer all the unknown territory. Kuhn's concepts⁴ have made it all the more explicit that scientists need not fear the unknown, since before they even cross borders they know that the virgin soil is not new territory at all; it is part of the "self-evident" that just has to be questioned in the right way. Such an attitude had the advantage of preserving the adventurous feeling of being a discoverer and conqueror, while at the same time preventing one from getting lost in a scandalously strange land.

The attitude towards the unknown hence is marked by an approach-avoidance conflict that certainly does not disappear through justification. Rather it is maintained by sticking to methods that support rationalistic security. The methods cover the conflict temporarily and justify the means. They handle the scientists' frustrations of wanting to give themselves over to the seductive appeal of the unknown—obviously an object of desire that is able to elicit the wildest fantasies because it is new, strange and untouched—as long as they know that in "reality" it is not foreign at all.⁵ Why this behavior and where do the fears come from that render the scientific method such a seemingly exclusive device for gaining knowledge about the world?

Tart argues⁶ that the process of enculturation in our society, whereby each of us becomes a "normal" citizen, involves dynamics which repress psi functioning and create strong defenses against paranormal events. Infants learn to accept and mirror the world views of their parents in order to grow up in accordance with a model of "normality." They are trained to accept a loving image of their parents, but by means of their innate psi abilities that image is undermined and creates a conflict for the child. To secure parental love, psi functioning is inhibited, which later results in ignoring or attacking psi phenomena as a consequence of not dealing with deeply repressed material which, for parapsychologists themselves, turns into the above-mentioned "religion of the .05 level."

I believe that there is more to the picture of repressing psi and actively holding on to *models* of security than can be explained by a strictly psy-

chological and social-psychological interpretation. We might have to view paranormal phenomena as belonging to a part of nature that is characterized by uncertainty and surprise; some might say by chaos. This part of nature belongs to the ancient stratum in the history of hominization; it survives in rituals and magic of so-called "primitives" that are associated with the savage, impulsive and, in psychoanalytic terms, with the *id*.⁷ The process of civilization, which saw man coming out of pathless forests and caves into the geometry of cities, has declared the conscious *ego* to be the important aspect of rendering a man what creation has meant he should be. Control over the world, control over one's own impulses. The main achievement seemed to be the triumph of having found a way out of the scandalous kaleidoscope of change and transformation that characterized the archaic form of existence—the possibility of living "the other" without culturing it out, repressing it.

I believe there is good ground for change in our attitudes toward parapsychology and psi phenomena in parapsychology's second century, if we look back and learn from ancient ways, not just by studying a history of ideas. It is difficult to make clear that this kind of perspective sees knowledge as intrinsically connected with working on our own personality. Today psychologies of the unconscious have completely taken the lead in describing the part of ourselves that I called the "other." According to rationalistic thinking this fact might have its roots in the idea that the unknown, the unexpected, the unexplainable cannot be part of the physical world—since this is the known and at least potentially explainable world—and hence represents only psychological realities. The discussion about the "other" as a repressed and cultured-out part of nature is transferred to a meta-level of discourse and dealt with by schools of depth psychology, which, in the view of conventional rationalistic science, try to describe psychic events with "irrational" methods. Very subtle strategies of immunization prevail among scientists and strengthen the position of a kind of rationalistic ideology that obviously is very touched by the fear-provoking aspect of the "other." The paranormal becomes part of the abnormal, the insane.

To some extent psychologists themselves, as a tribute to rationalistic science, have tried to explain the "other" in a purely rationalistic way. I think about Jacques Lacan, for example, who by means of his structuralist-phenomenologist approach toward the unconscious has intellectually obscured our understanding of the "other" rather than elucidated it. By the way, this tendency was already visible when Frederick Myers, one of the founders of the Society for Psychical Research, put forward his theory of the subliminal self, which includes isolated conscious events

(he called them "streams of consciousness") which occur in connection with one's organism, but which do not form part of one's habitual (or supraliminal) consciousness. His theory was poor as an explanatory model, though his original thoughts looked promising in regard to understanding more about the "other" in its diverse forms of paranormal events and unconscious psychological processes.

In the archaic tradition, to come back to my line of thought, knowledge/experience of the "other" was gained through initiation, the process of becoming the "other." This was the synchronic and, at the same time, diachronic apprehension of the world. Later when the hunter learned that he could develop an amazingly accurate model of observation which allowed him to trap the "wild," the process of demarcation between the self and the "other" began. He discovered that outside of the savage, the unknown, the unconscious, the uncontrolled, everything could be assigned a place and that the relations between the objects of knowledge were clear-cut and could be subjected to analysis. He *learned* about the magic of nature, whereas his ancestors had *experienced* it. In the archaic way of perceiving, objects lost their anonymity, their "objectivity"; the archaic perspective allowed events (that in our usual state of mind would not mean anything to us) to reveal secrets, to become *signs* and *omens*, to "show" that the "other" is part of us, part of our body and part of our experiences.⁸ The world was not just a collection of elements that fill up space and change with time, but more it was a world of magical interrelatedness. This understanding of magic permitted stone-age men and women to experience connections and identities where modern man would see nothing but delusions.

Once man started to move out of the forests, knowledge through initiation fell out of favor. There were religious movements; but the cults of mysteries from Phrygia to Eleusis, where the initiate would experience the unity of the self and the "other," were no longer considered to represent acceptable ways of gaining wisdom. Thus the cults became elitist; they were forced to withdraw from the mainstream. Because they had as their main characteristic (to the analytically-minded) the *arreton*, the ineffable, the description of the mysteries in the early scientific works was reflected in the science of *arretology*, which tried to make exoteric what by its very nature cannot be analyzed without destroying this very nature. If the atmosphere of the *mystikon* disappears, we might be left with a philosophical system or a history of events, but not with the essence of the initiatory experience. A similar effect would be observed if one were to take away the magical from parapsychology. One could talk in metaphors and allusions; poetic forms say more than the written words

reveal. This is the adequate form for talking about magical relations and was intentionally employed by the quick-responding (*artiepēs*) oracles from Delphi to Dodona.

Certainly, approaching the unknown in an archaic way elicits fear of losing strict boundaries of self and the fear of losing one's mind. Quite a few scientists seem to know that in the magical realm of Castaneda's nagual lies nothing else than insanity or death. The usual arguments against Castaneda-type assumptions of man-animal communication, flying shamans, etc., reveal an incredibly unimaginative, unpoetic attitude toward the world. If an animal talks with a human being, then its language must be a known human one. And if a shaman or a witch flies they must be up in the air like hang-gliders on a sunny afternoon. Otherwise the animal wouldn't talk and the sorcerer wouldn't fly (the discussion would be displaced into the realm of the psychologist and his knowledge about "strange" mental events). The usual comment, not unknown to parapsychologists dealing with skeptics, runs something like: "I haven't seen any shaman fly." What does this mean? It means that he or she did not see a shaman fly. Nothing else. (Remember what I said about the place that is hard to get to, but certainly not less real than Victoria Station in London.)

Part of this attitude towards the "other" is the "civilized" idea that psi must be something extremely "far out," something totally different from our everyday experience, something belonging—if it were to exist—to a completely different reality than our everyday one. Yet, even in times when civilization already had a long history and religion was based on initiation into mysteries, there was a distinctive knowledge about psi as part of our reality and indeed it was always present in one form or another. The Latin version of a Delphic response says: *Vocatus atque non vocatus deus aderit*—sought or unsought, a God will still be present.⁹ But she does not reveal her presence to telescopes or measuring tapes. The traces she likes to leave are only sometimes visible from the "outside," but clear if one knows how to get rid of boundaries and to "enter into the world where everything is known," as the Mazatec *curandera* Maria Sabina put it. In the classical world the *mantis*, the seer, was not just a psychic with formidable precognitive abilities, like Cassandra, Priam's daughter who, in one of the most moving and terrifying passages in Greek tragedy, in Aeschylus' *Agamemnon*, correctly senses the murderous history of the Atreidae, describes in great detail the murder of Agamemnon and foretells her own death. The *mantis* was more than someone who possessed unusual psi abilities. In addition to being a poet he or she was an artist and a *sophos* whose divine inspiration revealed the truth about the world. This gift was a special form of

awareness, shamanic awareness, a matter of communing with the forces of nature by communing with oneself. In the *Iliad* Achilles says about Calchas: "And amongst them stood up Calchas son of Thestor, far the best of bird-augurers, who knew what is and what is to come and what has been before, and led the Achean ships to Ilium through his mantic art which Phoebus Apollo gave him." Calchas is not only a forecaster, a bird-augurer, but most strikingly he knows the present and tells the truth as opposed to the appearance of things. Through his sensitive awareness he knows, in the *Iliad*, why Apollo is angry. He knows this art because he knows himself. Like the shaman, the true seer is one who has gained an insight into his own psyche (in Lacanian terms, one who is able to read the language of the "other," the unconscious) and existence that enables him to perceive and interpret the hidden reality of our everyday consciousness.

The Eskimo shamans have to master *quamaneq*—the ability to see through themselves. Actually they have to seek solitude and pain, so that the psyche can break open, as one Eskimo shaman put it,¹⁰ and in doing so they become able to literally see through their body, perceive their own skeleton and insides. This immediate, literal and figurative insight into oneself, the understanding of one's psyche is the understanding of the "other." In the very moment of *quamaneq*, in which the shaman's perspective about himself alters totally, he experiences the gift of clairvoyance. His eyes pierce through darkness and space as they pierced through his own self-evident being. Again, it is as if he would reenact the archaic ways of the paleolithic shamans whose consciousness extended all through nature and whose visions always told them something hidden about the world as well as about themselves. A shaman of the Teton-Dakota once said about a vision seeker: "The vision may come to him, either when he is awake, or when he is asleep. It may appear in the form of anything that breathes or as some inanimate thing. If it communicates with him, it may speak intelligibly to him, or it may use words that he does not understand, or speak in the language of beasts and birds. By something it says or does it will make known to him that it is the vision he seeks."¹¹

According to *how* the eagle or the rattlesnake appears to him he will know things about himself that previously he might have vaguely sensed, but never was really clear about. The vision makes them clear. Like in countless incidents where a face is seen in a cave and, shockingly as well as surprisingly, recognized to be one's own, the Australian aborigine will recognize during his initiation that "that thing there," a wallaby or a kangaroo, *is himself*. The habit of cutting the urethra open as part of a special initiation among Australian aborigine males is but one manner

of visibly rendering themselves similar to opossums, kangaroos or koalas, all of whom have slit penises. Similarly Piaroa men in the Venezuelan rain forests make holes in their tongues to render them similar to the tongue of the pekkari. Once the Thonga broke their upper incisors during initiation to become similar to their oxen, and the Fali in northern Cameroon laminated their teeth to look like crocodile teeth and made holes in their ears, lips and noses to resemble toads and turtles.¹² The novice experiences that "this thing," which in our everyday consciousness is different from other things and certainly from oneself, in reality is himself. For the initiate it does not make a difference if we say the self is the world or the consciousness is expanding into the world or if we say the world is everything and hence—nothing. Inside and outside are not different in the archaic perspective. It is the *tat tvam asi*—this is you—of Indian philosophy that expresses the radical simplicity of the shamanic consciousness.

Western rationality is going the other way; more boundaries and more indirect experiences of the world. Whereas the shaman silently listens to the soft voices of nature, scientists generally ignore the soulful aspects of things and reduce them to concepts and processes.

Fear of getting "inside" the world to experience and understand those phenomena that pop up as surprising anomalies of models and theories, has a strong connection to a historical burden. This was brought on by the process of civilization, the glorification of the *ego*-functions in connection with the condemnation of the savage and uncontrollable primordial states of constant ecstatic transformation, as well as through establishing a sort of supernorm of rationality believed to exist apart from man as a given of addressing the world "properly." Accepting strong manifestations of psi, allowing oneself to be touched by them and affected in one's outlook upon the world, does not permit us to hold on to models of security and drives us to recognize the intimate relationship between gaining knowledge about the "outside" world and at the same moment gaining insight into oneself, and vice versa. This is a kind of poetic approach which does not accept the world as being only like our senses and apparatus register it. It clearly represents a continuation of the shamanic perspective. The shaman has eyes which see the world not as commonplace, or as scientific scrutiny sees it; he sees it transformed beyond measure, as it really is. As Roszak put it: "Instead of rushing to downgrade the rhapsodic reports of our enchanted seers, to interpret them at the lowest and most conventional level, we must be prepared to consider the scandalous possibility that wherever the visionary imagination grows bright, magic, that old antagonist of science, renews itself, transmuting our workday reality into something bigger, perhaps more

frightening, certainly more adventurous than the lesser rationality of objective consciousness can ever countenance.”¹³ I would not support Roszak’s argument that magic is an old antagonist of science. Science rather grew out from a magical substratum, from the shaman’s curiosity about nature and its ways. But it has estranged itself from its roots, from the art and poetry of knowledge which allowed an inner view of magic, and repressed this possibility of the solitary knowledge of the fence-sitter who is estranged from the self-evident world of the talking animals as well as from the world of talking parapsychologists. The scandalous possibility of an intimate connection between the outer and the inner, the possibility of not only observing, but also experiencing psi, brings forth all the negative images and feelings that in the historical process of civilization have become so closely connected with the realm of the uncontrollable, the impish, the savage and the crazy! A whole kaleidoscope of primordial forces of the dark, unconscious and animal-like becomes associated with (at least unconsciously) the possibility of strong psi manifestations. Behind the fact that enculturation in our society might act as an ontogenetic factor in creating fear and suppression of psi, a very similar, I might call it “phylogenetic,” factor accounts for the tendency to avoid dealing with the fact that we have the possibility of letting go of models and rationalistic security and still staying alive and sane and—*horribile dictu*—experiencing something about ourselves and the world that we have not thought possible before.

Certainly this represents a challenge to parapsychology. Although I see nothing negative about a scientific inquiry into the field as such, I do see a great likelihood that psi investigations will remain limited to such approaches.

Nowadays there is a great deal of interest in shamanism and shamanic world views. It looks as if quite a number of people are willing to take the risk of experiencing themselves “inside” the world without thinking about it as a kind of awareness that at some point has to be corroborated by scientific standards. I do not mean that we should adopt shamanic styles and techniques in the literal sense, like beating the drum and climbing the *axis mundi* to the upperworld (though this might be necessary for some), but rather I mean adopting a certain style of existence. The shaman is not only a shaman when he proceeds to cure someone at a special ritual, just as psi does not happen only when a psychic is wired to special devices in a parapsychology laboratory. We must be ready to encounter psi at any time and accept it outside our laboratory walls and outside all of our expectations if we are to learn something.

Since psi phenomena are among the most representative events pointing towards the “other,” the unknown and unconscious, they present

us with the inestimable opportunity to forget everything we have ever known about this ordered world, to temporarily become, at least partially, blind to it. This is similar to the initiate in the Eleusinian mysteries; his head was covered so he could not see anything any more. The word "mystery" goes back to a root that means "closing the eyes and mouth." The novice enters the dark, leaves the world as he knows it, to actualize the ability that only the dark has—to generate light. "Every shaman has to feel a glow of light in his body," says an Eskimo shaman referring to the light cast upon the world which makes it look entirely different than before. Once we experience the magic, let a part of us become open again, everything will become different than we knew it before. When Don Juan taught Castaneda to fly, the flying itself was not the important part, but rather the surprising experience afterwards of what it meant to walk. The same is true about his learning to talk with the coyote, which resulted in a new consciousness about what it means to talk with people.¹⁴ In a similar sense, experiencing the paranormal might teach us what it means to live in the world of the self-evident *normal*; it might also teach us what it means to conduct experiments with a seemingly self-evident method in order to understand the phenomena.

Unfortunately, it seems that there is a new trend among some parapsychologists at the end of this first century of organized inquiry to state, after all, that we do not really know if psi exists. This is somehow that most extreme position asking for strict and unambiguous scientific corroboration of something that most probably has been experienced by all parapsychologists. I wish we could enter the next century of research with a more open and accepting attitude towards the surprising and the unknown. The challenge is not to be worried about the correctness of one's perceptions and feelings in the sense of their objective reality, but rather to develop a sense of its inner "correctness," and its significance for understanding ourselves and nature.

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DISCUSSION

SERVADIO: The difference between the two lines of approach has so clearly come up in this conference and has already been very nicely exemplified by a discussion that I heard myself, during a conference, between Mircea Eliade the famous scholar and student of religion and Ernesto De Martino, who was the number one of Italian cultural anthropologists. It all started with the discussion between Castaneda and Don Juan about whether or not Castaneda, after having swallowed some drug, had really had a flight experience. Castaneda objected that this is a typically Western question. De Martino and Eliade discussed this point at length, because Eliade contended that what was important was the idea of the flight, the principle of the flying. De Martino, more materialistically oriented, said, "if I heard that some shaman somewhere flies, I would go there with photographers, camera men and so on in order to have proof and evidence of the flight." Now who was right? I remember that our old friend Eric Dingwall was in favor of De Martino's ideas, whereas I and others were rather inclined toward the approach of Eliade. Both lines of approach can be defended, because after all even the most mystically oriented man or initiate does not deny that phenomena exist, so an approach to phenomena as we experience them everyday is quite correct. But thinking of that discussion that occurred many years ago, I am still more and more in favor of Eliade's ideas.

GRUBER: De Martino in one of his books, *Il Mondo Magico*, discusses magic from a perspective that is really closer to Eliade's ideas than it would seem. On the other hand, I can assure you that shamans do fly in the air. There are stories that Eskimo shamans collided when flying, but I am sure there was no one there with a recorder or with film equipment to get an objective document of this event.

BELOFF: I think, Mr. Gruber, that I caught the drift of your argument which wasn't, I might say, very easy because you were so discursive, you

ranged so far and wide. What you were saying essentially was that psi phenomena have more in common with primitive magic and with shamanism than they do, say, with the phenomena of physics as we understand them. I think I would be inclined to agree with this and to go along with you. But what rather disappointed me was that you didn't go on from there to spell out what the implications are for us and by us I do mean serious parapsychologists. Now, as our Chairman reminded us when he opened this conference, the Society for Psychical Research was founded one hundred years ago and it's the tradition that we still pursue, to apply the methods and the objectivity of the sciences to these peculiar phenomena to try to understand them from a system of thought that we, with our scientific background and traditions, have inherited. Now, it seems to me once we abandon this, once we adopt what I suppose you would call the insider's point of view, we no longer serve a useful function. We might just as well decamp and leave the field to occultists and other students of esoteric traditions. I mean parapsychology as this Foundation understands it, as the SPR understands it, would no longer play any part. I wonder whether you really want us to draw those conclusions from what you're saying or whether you kept up your sleeve ways and means by which, despite the evasiveness and the extraordinary nature of the phenomena, we might nevertheless come to grips with them, if necessary with photographers there when the shamans take to flight and whatever else may be necessary.

GRUBER: I think one thing is that the scientific perspective and scientific pursuits in regard to paranormal phenomena are perfectly acceptable. I also think other pursuits are acceptable though they might not share the point of view of scientists. If we were to look at what I term archaic ways or shamanic ways of seeing the world, we could learn from that, as scientists or as "normal" people, and draw conclusions for ourselves as to how we want to proceed in researching psi phenomena. I don't say that every parapsychologist who gets involved with shamanism should drop his scientific scrutiny and go out and beat the drum, or experience what shamans experience, but he might be able to learn something from their *perspective* that might alter his ways of looking at psi, alter his ways of inquiry and maybe help him find new methods that apply better to these phenomena that seem to escape the methods that we usually apply to them as scientists.

SARGENT: There is a very unfortunate little slip in your paper. It rather gives the game away. It says that "The shaman has eyes which see the world not as a commonplace sight or as scientific scrutiny sees it, he sees it transformed beyond measure *as it really is.*" Now, I take very strong objection to that comment because I don't believe that there is any world as it really is. I think there are various views of the world

depending on how you happen to look at it. But I think that, while you're trying to say we should listen to these disciplines and look at what we may learn from them, in fact you're actually identifying yourself or aligning yourself with them more than perhaps you think you are. I think this kind of slip rather gives it away. On the other side we have John Beloff, who asked what all this means for us *serious* parapsychologists, as opposed to anybody who does anything other than permanent statistical studies; they are obviously the frivolous parapsychologists. You know we have here dichotomies; they're so unnecessary, so unproductive. It's a question of using the shamanistic way of relating to the world as and when it looks like a useful thing to do. That's the individual's decision as to when that may be useful. It's as Feyerabend says, anything goes, depending on what happens to be the most likely looking thing, in an individual's judgment, to get you somewhere and get whatever you want to get. So I think it's rather unfortunate that one has to go and polarize these things this way. The second point that I would like to make is that I'm a little unhappy about this kind of romanticization of what we call, for better or worse, primitive cultures. I think a very good intellectual discipline you can interpose between this kind of thing and Western scientific thought is in the writings of Abraham Maslow. Maslow writes about self-actualization as the high development of human personality. The nature of perception in highly self-actualized people he says, for instance, is quite different from what psychologists term "perception." For Maslow, one cannot divorce perception from value and meaning. They're fused. You could not conduct the kind of pointless and meaningless experiments into the psychology of perception that are normally carried out on people. Values and meanings are directly infused into the objects, as well as their perception. But it doesn't mean that they live in a concrete world of immediate sense objects; that their perception is a fusion of adult and child perception. The child, Maslow says, writing very poetically, experiences the flower as something tactile, as something beautiful, something poetically arranged and smells delightful. A highly abstract adult intelligence sees the geometry of the petals and so on. The self-actualized person sees both at the same time and you couldn't possibly take the two apart for him. I can't help feeling that it's that kind of almost supernormal perceptual development that may be a better way of trying to learn about psi phenomena, than studying shamanistic literatures from allegedly primitive cultures.

GRUBER: To some extent you are right. But still, not only the shamanic world view, but more the initiatory experience or initiation itself is one step beyond what you're saying. The initiate does not only experience at once the smell and the poetic form of the flower, for example, but he experiences *being* the flower. This "oneness" was experienced in

archaic forms. It gave the initiate a totally different perspective on himself, once he wasn't the flower anymore.

RONEY-DOUGAL: It's all very well to try to experience and understand the magical reality, but what parapsychology is doing is, in a way "earthing" this reality. We are using our science to take that other reality and help to bring it back down to ground level, down to earth, to this plane of existence where most people can understand it and where it means something to them. I think in a sense we're becoming translators. We're translating from one language to another and it's very important that we don't get lost in either one side or the other side. We've got to face the bridge and so we must always take what people like Castaneda say, what we read in *The Iliad* and so on and then try to apply it back here and see what our ground rules, in the form of parapsychology as a science, can actually help us to learn and teach us, about reality.

GRUBER: I go along with you only when you say our scientific way to deal with psi phenomena is to be a translator, to make the phenomena understandable to non-scientists. We have heard today from Renée Haynes, for example, that science however may not be the best translator for paranormal phenomena. We have to find other ways to translate it so that it is really understandable to everyone. People who give themselves over to initiatory experiences do understand something. It is not necessary for them to communicate what they understand, but their understanding gets them somewhere, too. So, I don't think we should aim necessarily at a scientific understanding or that translating is the best job we can do. I hope that science as it is will alter its translation job so that everyone can really grasp what is translated.

MAUGHFLING: Eleven years ago, in 1971, I had an experience of human flight and it was only two years later when I read Castaneda's books that I realized that perhaps I wasn't the only one and also ceased to doubt my sanity from that point on. I would be very interested in a scientific explanation of it, although, of course, the scientific explanation is not the same as the experience of human flight.

BIERMAN: I completely agree with Carl's remark that any method goes, even beating the drum, and it might be a good method in the creative part of the scientific process. However, only as long as it leads to somewhere, as long as it gives results, should we measure the method by its results. Now I assume by listening to you that you experienced your other self several times and I should like to know from you where it led you, as a serious or non-serious parapsychologist.

GRUBER: Well, it led me, for example, to this discussion, that seems to separate the serious parapsychologist pursuing an accepted scientific method from others that accept many more ways of approaching the paranormal. For example, I discussed here the Greek notion of the seer,

the *mantis*. This was someone who not only experienced "strange events," but who was very attentive to his own psyche and to the world around him. He had a certain kind of awareness, to which I aspire, so that psi events were not separate, extraordinary happenings, but rather part of his ongoing appreciation of the texture of life. Being open to psi is really being open to oneself, and through that openness becoming attentive to what is outside oneself.

BIERMAN: I understand what you seek, but what I want to hear is the practical consequence, I want to see the results, if there are practical results. Maybe you don't expect practical results, on the level of the serious parapsychologist.

GRUBER: I don't have specific suggestions for "serious" parapsychologists except those that I gave in my paper. I personally think that as a result of having adopted a more open perspective my life has become more interesting.

COX: I just want to comment about the phrase "alternate realities" and a number of others in which we seem to be labeling phenomena, implying that we know how they operate. I wish indeed that we did, but "alternate realities" is a Castaneda concept and this and other quasi-sources of information do leave so many questions unanswered. We've got enough to worry about even in the phenomena. Now may I mention that the levitation you spoke of, or matter penetrating matter and other incredible effects, seem to be a trend that nowadays is occurring, ever since Geller appeared with his spoon bending and metal bending. It even seems to be the fashion. What it is that causes these physical phenomena to ensue among many we still don't know; but there's one fact which should be noted, and this is that Geller has indeed flushed out of the woodwork other potential physical sensitives who have found they could bend metal, too. If D. D. Home in his day had the press that we have now, he might likewise have found a whole lot of little D. D. Homes here, there and yonder who hadn't discovered themselves, but who were imbued by nature with these proclivities.

If you wish to see recondite claims, behind which I stand, however, unfortunately, some may be viewed on film during the ensuing Parapsychological Association Convention, such as matter through matter, levitation and the rest of it. If anyone there present can explain them by simpler terms (to use a little reductionism that we mentioned this morning), I will be the beneficiary.

Whether the quantitative and qualitative nature of psi are related, and I think they are, we probably can find out. I am encouraging some new blood in New York to see to it that Geller is not ignored on the assumption that he is a fraud. I for one have seen Geller and also Girard bend metal in my own hand.

BLACKMORE: I'm very enthusiastic about a lot of things that you said and particularly the idea which I think maybe Serena was referring to when she talked about grounding—that we have or will soon have the ability to start relating our explorations of inner space to psychology. I'm going to be talking about this tomorrow morning, but I'm hopeful that we may be able to start talking about the structure of imagination, of hallucination, so that we can understand why people can get in similar states by doing similar things. And shamans know a lot more about how to do it than we do and we may have a language with which to bring it into the public domain, into science. Now I'm very interested in this from the point of view of the out-of-body experience, from the point of view of my own inner explorations of all sorts of altered states. The question I want to ask you is where is the psi in all this? Now you mentioned it often enough and the shamans mention it often enough and it appears in many altered states to be there, but when you start to look at psi as defined by what John Beloff would call serious parapsychology, psi as defined by the PA, by any of these bodies, it may not be there at all. And I'm rather concerned that perhaps we may get left out. It may be other people who are really going to do valid exploration of these states and start to understand them and in a rather futile search for psi we may be missing the most important thing there.

GRUBER: I don't think that what shamans do is like what you referred to as "exploring inner space." They explore inner space by exploring outer space at the same time and vice versa. I think that's *why* psi comes in. Whether you call it OBE or shaman's flight is unimportant. The anthropological literature is full of psi phenomena. It seems that shamans can really experience those phenomena much more easily than we can.

BLACKMORE: If you don't take the cameras out to actually film them flying, then you're not bringing in psi as it's normally accepted by parapsychologists.

GRUBER: That's true. If I said that I haven't seen a shaman fly, they might still fly. I don't know. But on the other hand if a shaman has an OBE and he reports something seen that he could only know by clairvoyance, for example, you'd say that was a psi experience. But you can't film that because he just tells you about it. You don't have to be able to document everything. Besides, there is a funny story: an ethnographer once visited a North American Indian tribe, in hopes of documenting on film the famous shaking tent ceremony. The shaman told him his efforts were in vain because "the Whites don't capture anything when they photograph." What happens is not something that can be documented easily. But that doesn't necessarily mean that it's all hallucinatory. It just means it cannot be caught on film.

PSI SCI-FI: THE SHAPE OF THINGS TO COME?

SERENA RONEY-DOUGAL

For this paper I have decided not to look into the near future, assessing the direction of present trends, but rather to attempt to jump 100 years and see where we are then. Since my precognitive faculties are, as yet, rather limited, this will involve a considerable degree of speculation, inspired ideas and intuition. My primary source material, therefore, will have to be of the science fictional "type" rather than the science fact.

I consider that the next 100 years will be more concerned with applied science than the pure, theoretical science of the past research. Since an applied science tends to develop rather more quickly than a pure one, this means we can expect radical changes. Thus, we can expect to see the arts of weather control being used, healing and precognitive centers being opened up, telepath agencies and so on. Dowsing will obviously be more widely used than now, especially for oil and mineral discoveries, there will be training centers, time travel by teleportation, space travel utilizing clairvoyance and telepathy for communication as well as out-of-the body experiences. If all this seems a little bit far-fetched, go back 100 years in time and read Jules Verne to realize how far-fetched he seemed, and then return to this time and see that we *have* had men on the moon. The one item he got incorrect is that they put up an American instead of British flag!

In a society where psi is being utilized the first most important necessity will be training centers. Schooling will be radically different from the three R's emphasis we have at present. Suggestology, self-hypnosis, meditation, biofeedback and other similar techniques that assist the learning process will all be widely used (cf. Krippner, 1980). Education will not be rigid trying to fit every child into a logical, analytical mode, but will assess individual talents, assisting these to full fruition. Thus, those children with strong psi abilities will be noticed and will accordingly be given special training to assist them to develop their particular talent, if they so wish, as will children with musical or other special talent. This training will vary according to the nature of the ability, but at an early age basic visualization, relaxation and meditation techniques will be taught, as well as control of physiological processes such as breathing,

heart rate, etc. In developing control of the psi ability they will need to learn how to open up, close down and be selective; how to develop a natural shield and how to "blanket" the psi field. As Blish (1977) puts it: "The use of psi powers requires terrific precision of mind." On completion of basic training, if the person wished, he could be initiated into some guild or craft where further training could be commenced suitable for his particular ability. There is even the possibility that instead of working towards a Ph.D. we shall instead graduate with a PsiD!

There are quite a few science fiction (or sci-fi) writers who use a scenario where the psi ability emerges later in life, with some force, and that this can be quite disturbing. If this were so there would also be a need to have some form of counseling service, and this counselor would obviously be a person with strong empathy (an empath), or a receptive telepath who can become aware of the emotional as well as the cognitive state of the person and so be in a position best to help him. While there is some anthropological evidence to support this idea (that psi can emerge dramatically later in life) it remains at best a question mark, but the use of psychics in the counseling field is definitely a positive one. A receptive telepath would also be excellent in the field of public relations!

Another frequent assumption made by sci-fi writers that I question is that of a person's being talented in only one area. Many writers suggest that a person is a healer, or has strong precognitive abilities, or some other special talent, but I see no reason why this should be so. If a person is, say, a therapist with strong healing abilities, then it is to his benefit, and that of his patients, if he develops other aspects of the paranormal as well, and in any training program this should definitely be encouraged.

Another aspect of the detection of psi abilities in children or adults is whether or not we will ever have machines that are sensitive enough to detect the occurrence of a psychic episode. Anne McCaffrey (1980) considers that the psychic talent can be seen by using a very sensitive EEG machine, which she calls a "Gooseegg," by a specific pattern which is similar to that occurring just prior to death. She gives the following scenario: "That Gooseegg (EEG) was the really important break. Now we can prove parapsychic powers exist and who has them. We can discredit the charlatans and clowns who've given the rest of us a bad name. The real Talents will be registered with the Centre and we'll have graphs to prove they've had valid Incidents. The Centre will supply them with the specialized jobs that utilize their Talents. From just a sample of validly Talented people we've already attracted, I can think of hundreds of top jobs." In this scenario she also suggests the concept of a center with a group of psychics working together supporting one another in a coor-

dinated way, as distinct from the usual idea of a psychic center where people merely send in reports of the experiences, e.g., precognitive, that they have had.

Now that we have a society where psi is recognized and trained let us look at the uses to which we shall put it. The use of psi for creating an atmosphere of social harmony is probably the most important task (Swann, 1978). We obviously all have our dreams and ideals of how we would like the world to be and through psi we can create a force that projects those ideals out into the world where they can take material form. At a very basic level this can be seen in one's own life and in the present uses of suggestology and self-hypnosis (Krippner, 1980); if one's thoughts are negative and pessimistic one's life tends to become full of obstacles, a misery to oneself and all around; if one's thoughts are positive and you tell yourself you can be a happy, healthy person, then this state can be realized. The colloquial saying "It's all in the mind," has more to it than many people realize. Thus, an enlightened society is a dream which is possible to realize, but how probable is it? Brunner (1978) creates a scenario where psi is used by "the mysterious, half understood agents of the U.N. who read minds: the honorable spies, the telepathists." These people are sent into areas of potential war or places where war has already broken out and they go around broadcasting waves of peace and harmony, interviewing any arrested guerrillas, etc., finding out the deep reasons behind the discontent that created the outbreak and attempting to put matters right at this level. He considers that psi can really only be used for good—doctors, peacemakers, arbitrators—but is this really so? We must not lull ourselves with a sense of false security or hope. James Blish tackles this point with his book *Jack of Eagles* (1977), in which he has a group of psychics who are attempting to take over the world in a not very pleasant way, finally, of course, being ousted by the good guys! Another aspect of the Brunner book which is worth mention, is that he envisages a situation where the talented are used by a governmental agency, albeit the U.N. Ingo Swann (1978) is far more anarchic in his ideas, where the lone psychic defies the super-powers and uses their war machines against them in an attempt to bring them back from the brink of bringing destruction on us all. This is possibly the way psi has been used in past societies—either lone people or those organized in non-governmental groups acting as units projecting the peace energy out into the world. Possibly a more immediate way in which this aspect of social harmony will be realized is as a by-product of the other uses to which psi energy can be put.

The most obvious use, and one that is already becoming well-established, is healing. So far psychic healers tend to be either nurses or

generalized healers with no specific training or area of work. In the future there will probably be a far greater degree of specialization and healers may well be trained in one or more of the healing arts such as acupuncture, osteopathy, herbalism, etc., using their technique as a channel through which their healing power can flow. Those who have a stronger telepathic or clairvoyant ability may well become "curative telepathists," commonly known as psychotherapists these days, although no training program that I know of teaches telepathy to potential psychotherapists or psychiatrists! Those with "green fingers" will work in agriculture and forestry to help promote plant growth and prevent disease—a method far more in balance with nature than the chemical methods or genetic manipulations that occur at present. Those with a natural affinity for animals will become vets, which may well develop into preventive medicine thereby preventing outbreaks of contagious diseases, such as foot-and-mouth, amongst farm animals. It is even possible that the "Healing Guild" will have a psi equivalent of the Hippocratic Oath, as suggested by Bester (1979). Thus the whole process of diagnosis, maybe even through techniques which are as yet in their infancy, such as radionics or Kirlian photography, and preventive medicine will come into its own, and through such "whole energy" healing of the individual, healing of the nations will occur.

Counseling is another healing art, at present practised by the much discredited "fortune tellers" or clairvoyants. In genuine cases these people are using their gifts, especially with young people, whose life is opening out in front of them and who possibly feel lost with no sense of direction, to help them see in what direction to go, what path lies in front of them, where their main ability lies, or other aspects of counseling that can be so helpful to one who feels lost. Older people tend at present to go to a hypnotherapist or marriage guidance counselor, in order to put to right the tragedies and traumas of the past. A psychotherapist or counselor with psi abilities is obviously in a far better position to help these people (Schwarz, 1980).

Dowsing is another psychic art that is already to some extent being used, but can be extended far further. Applications vary from the common one of finding water to finding minerals or oil, psychic archeology or even the location of planets on other star systems that are suitable for life.

Space travel is an aspect of future endeavors that will require the use of psi talents. Even with our present efforts where men go no further than the moon, the time lag in message relays, using radio communication that only travels at the speed of light is a problem. When we travel farther afield how much more of a problem is this going to be. Telepathy

and clairvoyance are the only sensible answers and with the training centers we will have then, the problems of clarity and efficiency, that we have at present, will have completely faded away. Bodily teleportation and teleportation of physical objects is as yet a relatively unexplored field. Some work is being reported, e.g., by the SORRAT group (Richards, 1982) and some is being initiated here in Britain with one of John Hasted's metal benders and also in China (Haft, 1982). This aspect of the paranormal will definitely be developed in the next century with obvious benefits to those involved in space projects.

Perhaps by 2082 we will also have machines, resonators as Blish (1977) calls them, or matrix crystals (Zimmer Bradley, 1978), that can amplify the psi force, or direct it to some specific task, or even on occasion nullify it.

Precognition has again very obvious social uses. According to McCaffrey (1980), insurance will be one of the first major industries to see the advantage of staff "precogs," since it is of vital importance to insurance companies to know what disasters are likely to happen where and when, so that evasive action can be taken. Other big agencies such as national and international transport of all kinds, stockbrokers, the media etc., will all find such a talent immensely useful to guide their day-to-day business. Using psi in big business, though, has obvious problems as Philip K. Dick (1978) discusses in *Ubik*, where the scenario is one of a telepath agency having problems with another agency of "inertials," i.e., those who can block psi communication! But outside of big businesses and governmental agencies, precognition has obvious personal and social benefits, as we can witness today in the incredible extent to which such divination techniques as the I Ching and Tarot are used by so many individuals, and have been for so many millenia. It is all a question really of seeing more clearly, both in the here and now and also for tomorrow. Some forms of precognition do not tell you exactly what will be, but show you many possible futures and where each of those possibilities will lead you (Zimmer Bradley, 1978), so that you with your free will can have a clearer insight into exactly where to go. Divination can also be a form of good advice. I tend to think of the I Ching as a wise old sage to whom I go when I really don't know what decision to make and the advice it gives me helps me to make up my mind. We all use precognition to some extent; most of the time we ascribe it to astuteness or hunches or shrewd extrapolation, but training and sensitivity can sharpen many hunches into definite perceptions. The most difficult aspect of this is to know which are the false impressions and to differentiate the valid "precogs." So many of the decisions and directions we take in life are based upon subliminal influences and control, that

often we have no idea at all why we are engaging in a certain activity or behaving in a certain way, and so the more we can bring of our life under conscious control, the better both for ourselves and all around.

This brings me to another paradox which is that most sci-fi writers assume that psi abilities are a latent human characteristic, rather like a musical talent. Everyone can learn to play the piano, but some will always find it hard work while others have a natural genius for it. Yet these same books also suggest that those who are not natural psychics are scared of psi because they see it as being "different" and that its open use within society is going to have to be "eased into public consciousness with shoe horn care" (Brunner, 1978). Brunner suggests that there is an "instinctual alarm" against having your mind invaded by another, yet others say that telepathy can only occur if there is willing participation by both people. Brunner also suggests using movies, TV and other media channels as propaganda for psi so that people can consciously know that "the telepathists were saving life, saving sanity, guiding countries away from war." He considers that the uncushioned impact on ordinary people would culminate in persecution, maybe pogroms. Anne McCaffrey (1980) also suggests that the world in general remains skeptical, and that they had "the biggest goddam public relations programme on our hands and the public can make or break us." She suggests that "once people can stomach the idea that there ARE limits on individual psionic Talents, that all Talents are not mind readers cum weight throwers cum fire dowers cum crystal ball scers, all rolled into one frightening package, they'll start treating them as you want Talents treated: as professional specialists trained in one area of a varied profession and entitled to professional immunity in that area."

I have to question this whole approach of the "fearful public." Not only does it go against the premise that psi is a natural human ability, but also as far as I can see from all the surveys that have been made, from anthropological evidence and from personal experience, the "public," i.e., the "lay" person, the countryman, the ordinary man-in-the-street is completely au fait with normal psi abilities; "Granny used to read the cards," "The old clock always stops when someone in the family dies," and so on. You only have to go to one of these "New Age" festivals to see the queues waiting to see a Tarot reader or other clairvoyant, and that most certainly suggests the opposite from a "fearful public"—it suggests an eager and expectant public! Another good example is Louisa Rhine's latest book (1981) in which she discusses her large collection of over 10,000 spontaneous cases and these are only the very tip of a mammoth iceberg. Even surveys within the scientific community reveal that only 3 percent of those that bothered to answer the survey definitely

did not believe in psi and recent surveys in *The Times* (Inglis, 1980) and *News of the World* showed that over 50 percent of "lay" people definitely do believe in psi. So who are those who are trying to pretend that people are frightened of psi and that psi is abnormal? Every society other than this present one has used psi as part of its everyday life, witness the universal appearance of shamans. To me it appears to be a small academic establishment elite who, for some reason, are trying to prevent the use of this energy from becoming public property (cf. McClenon, 1982). Is this because they want to control the use of psi energy for their own ends as Blish suggests (1977)? I think it is high time that this myth of psi being unacceptable to the general public is exploded and the extent of our knowledge and the possible uses of psi brought right out into the open. We do not have a heavy public relations program on our hands, most people believe in psi already—it is only a few who are trying to hold it back. When Edison, Tesla and others learned how to harness electrical energy they did not have a full theoretical understanding of how it worked, they just knew how to use it for the common good and went ahead and did so. So let us do the same with psi energy; the intellectual theoretical understanding of how and why it works can wait. What is important is to use the positive benefits of psi now, to help make our beautiful planet a happy harmonious place on which to live.

One aspect of this, a concept which comes mainly from anthropological and archeological sources, although you do find it in some sci-fi books, is the use of certain places as psi centers. These are the holy mountains, e.g., Mount Shasta in America or Glastonbury Tor here in Britain, places that have from time immemorial been used for their strange properties. These properties can be best described as paranormal, since they all seem to be psi-conductive places in that they are traditionally connected with healing e.g., Chalice Well at Glastonbury, and have been used for ritual ceremonies. Other aspects of this principle of a psi-conductive place are those places which have been especially constructed in order to enhance psi faculties, e.g., Stonehenge, the Pyramids, the temples in Greece, particularly the Parthenon and Delphi. These places were all built according to ancient ideas of the "cosmic order," and Julian Jaynes (1979) discusses the strange properties of Delphi noting that the prophetic powers of the place must have been incredibly strong in that many intelligent men for a period well over a thousand years went there when they had an important decision to make, especially with regard to matters of state and country. He considers that the oracle, or prophetic precognitive power, could not have been all fraud or it would not have been used so consistently by so many eminent people for such a long time for such important matters. Perhaps in times to come there will be a return

to a greater scientific understanding of these places and structures, hints of which are already occurring in the works of such people as Thom (1967) and Michell (1975), so that future man utilizes the natural aid offered by these places to help him live and govern in a harmonious manner. Thus, we could have our places of government set up at special sites in buildings constructed according to a scientific understanding of what is a psi-conducive structure, as is done in the Isle of Man to this day, where all new laws have to be promulgated from the Tynwald Hill on July 5th before they become effective (Hole, 1979).

Concurrently with this we may well find that psi is being enhanced by the use of groups in a manner even more radical than that suggested by McCaffrey, mentioned earlier. Zimmer Bradley (1978) suggests the idea of using groups of people whose minds become telepathically linked and focused on a particular project, each person performing a distinctive function within the group, such as technician monitor, keeper of the circle. This is, in fact, an old idea and has been used by many societies throughout the ages. In her book *Stormqueen*, Zimmer Bradley locates her groups within specially constructed towers, which are psychically shielded, at special sites, and these groups perform such functions as forming a telepathic network that covers the whole country and is used for instantaneous communication, physical projects such as detection of precious ores and the mining of them, fire location amongst the widespread forests so that fire fighters can go immediately to the scene of outbreak and so prevent catastrophe, and other ideas even more removed from our present reality.

At the very beginning of this paper I suggested that there might be centers for precognitive or other psi functions, and at the time I conceived of these places rather in the present day manner as places to which any reports of a precognitive dream or psi experience could be sent, rather as we have in its infancy at present. I then sketched an alternative idea for these centers, as being places where people with specific abilities could live and work, mutually reinforcing and assisting each other, and I have now suggested yet another concept of a center where the people actually work as a group in a very intimate way so that their individual energies are enhanced for the benefit of the world as a whole. All this is a world order very removed from where we are at present, but observing the rate of change from the last century to this one and extrapolating from that, I see no reason why these enormous changes could not happen. We are becoming infinitely more adaptable to an incredible rate of change in life style, and I consider it very wise to study very carefully where we could land—a totalitarian world state

with thought police—no thanks, or one with centers of harmony as places of government, the concept of the New Jerusalem? We must all attempt to conceive of the most perfect world possible and work towards that.

In one of the first lectures that I ever gave, “the Key to the Subconscious,” (Roney-Dougal, 1979), I suggested that the opening up of one’s mind to subliminal and psychic inputs was of considerable benefit to the harmony and happiness of the individual. Following the maxim “As above, so below” or that “Man is the microcosm of the macrocosm,” I suggest that as each individual opens up his being to this psi world, so the planet in turn gradually becomes more aware, healthier and happier and a more harmonious place on which to live. The actual form that it takes is really very important, since it must be in harmony with nature or it will jar with very unpleasant consequences, and anything we can learn about the nature of the cosmos and how to be in harmony with it will assist us in setting up the best form of psi center, training school, etc. Basically there is no limit to the ways in which psi can be used, other than the one that our own minds set for themselves, the “boggle factor,” and the reason why I am so concerned with striving for the correct ideal is that psi is such a powerful force that it could wreak havoc if used wrongly.

Possibly the first step to this dream or ideal of a harmonious world is to open up all the ways in which we can use psi beneficially within society now; to stop nitpicking over statistical details and to make sure that psi is realized by all; to stop scoffing and being skeptical about talented individuals or experimenters, rather to learn how to utilize psi oneself in one’s own life for the benefit of oneself and others. I am amazed when I see or hear of people within the parapsychological field getting negative or no results themselves and then turning round and putting down those who are psychic or getting positive results, since this means that they either do not use psi themselves (and how can you investigate an area of mental ability without being accomplished in that area yourself, cf. Tart’s state specific science concept), or it means that they are deliberately or unconsciously trying to suppress those with ability—and why on earth are they working in this field if they wish to suppress psi? Better to join the Committee for the Scientific Investigation of Claims of the Paranormal if this is the way they feel. As Anne McCaffrey says: “Those who truly understand psionic powers need no explanation. Those who need explanation will never understand.” In conclusion, I have suggested various possible ways in which psi will be used practically in the next century—from standard ideas of healing and dowsing through to “way-out” suggestions of centers of group psi in

special structures at special sites for the good of the world and the healing of the nations, and I have suggested one possible and very realizable first step towards these ideals.

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DISCUSSION

SARGENT: I think this is a very good paper for one particular reason. I first indicated to Allan Angoff that I had a question; by the end of the paper I had dozens and lots of points to make. That's good; your paper stimulates ideas.

There are two fictional sources you might find helpful: one is the imaginative treatment of psi in Julian May's *Saga of the Exiles* (two volumes so far, two to come). The other is the excellent fantasy role-playing game *Dungeons and Dragons*. It's a game in which several players take on character roles, and adventure in a fantasy world created for them by the master of ceremonies, the Dungeon Master. The characters are given

some quest, some mission, and go off seeking fame and fortune, slaying dragons, rescuing maidens in distress, acquiring treasure. Playing a game can be, effectively, endless; players begin to get under the skin of their characters as they gain more experience and more powers. What's crucial about the game is the treatment of magic: magic is very much part of the D & D world, and there's more than one type of magic. Clerical characters are granted spell abilities by their gods; they mostly heal and protect and acquire information. Druidical magic has a special affinity with nature. Illusionist magic is self-explanatory, but can be ingeniously deployed by an intelligent player. Members of the official Magic-User class have the most powerful magic; including destructive and aggressive magic.

The characters differ strongly in personality and their interchanges during a game can make or mar it; it's a very creative process developing such group dynamics. But, above all, magic dominates the game, which can be extremely subtle; when playing this game you do live in a world of very powerful psi. As such, I think it's very relevant to the points you're making.

DEAN: I would like heartily to endorse Serena Roney-Dougal's idea that applications of psi will be strong in the next century of parapsychology. But actually it has been happening quite a lot in the last century. In my book, *Executive ESP*, we give a hundred examples of how it was being done by the top business people. I would like to take just one example because it seems appropriate here—that of Conrad Hilton who started the chain of hotels in which we're having this wonderful conference. The first hotel he went after was a Stevens Hotel in Chicago. It had come on the market after the United States Air Force had it in World War II. Bids were asked and he bid \$157,000.00. That was in World War II dollars—those dollars are now more like a million. But when he sent his bid in and before they were opened he had this feeling in the pit of his stomach that he would not win—somebody would be higher. And then he was allowed to submit a second bid, but how high should be go? If he went to \$200,000.00 and the next bid down was \$50,000.00 he in a sense would lose \$150,000.00. Well, he settled on \$180,000.00 and he won. That was his first hotel. But it's interesting what was the second one that lost—\$179,800.00. Conrad Hilton won his first big hotel with an overbid of just \$200! Then he had to make decisions like who to put in as manager, where to go for the next hotel, where to go to which bank for the mortgage and so on—right through the whole chain of hotels. He tells us in his biography, *Be My Guest*, how he did it. He was a Roman Catholic and when he had big decisions like this to make he would search out the nearest Roman Catholic cathedral,

go in there when there was no religious service and sit quietly, relax and concentrate on the exact decision to be made. Serena asked how you distinguish between the true psychic answer and the false impression. He tells us. You sit quietly and wait for that psychic impression to come up from your unconscious into your conscious mind. And when it comes one of the marks of it is that it is very weird and immediately your logical left brain says, "Oh, that won't make any money, that will lose money." This is almost the hallmark of its being the true psychic answer. And the last stage of it he said is "You must act on it, this impression." When he was willing to be made millions of dollars and when he was not willing to be lost millions.

BELOFF: Well, I hate to be always the one who sounds a negative note at this conference. When I heard Serena developing her scenario for the future I said to myself, well, this time I shall really keep quiet. After all we're talking about the future. Everyone has as much right to project his own fantasies as the other person, let her have her say and so on. Particularly as I think we are all in sympathy with her in having hopes for a more harmonious world and with that we are all in accord. But I think then she came to the point where she says we have no public relations problem, this stuck too much in my gullet to let it go. I mean she might be able to in the fastness of the West Country; she might be willing to despise the academic and political elites and so on, but, unfortunately, I cannot afford that luxury. If I want to get money for a student to study parapsychology, it distresses me acutely that I can't persuade any of the ordinary funding bodies to fork out something. The reason why they won't is because we've not yet convinced them that we have real phenomena to investigate and therefore, for me at least, it's a very real problem and not just for me. I was spending much of my lunch hour talking to Dr. von Lucadou who comes from Freiburg, West Germany, and I see the problem there is just as acute as it is in Britain. It isn't in any sense a local problem. We've got a long way to go to persuade those who have power, who have authority, the policymakers, that psi is something worth backing. Before I sit down there is just one other small point which I would like to query. It's so often said, you see, that you can't study psi unless you are yourself psychic. Now, it may be, of course, a great handicap not to be a psychic in the sense that you can't then formulate the best conditions for getting results and so on. I mean to that extent this might be true. But, the point to remember is that anyone who has any sort of competence, scientific training, objectivity and so on can be and is a fit person to test paranormal claims. Let the person who has the psychic ability come along, but any good observer who knows about how to handle evidence can test such claims and so

we mustn't think that the testing, the verification side of parapsychology has to be left to those who are already convinced believers and psychic individuals.

RONEY-DOUGAL: When I made the statement that an experimenter should have experience of psi I was really endorsing what other people here have said and what Charley Tart himself has said in his idea of state specific science. In order to study something from the mental world it is very helpful to have experienced that mental state, because then you know the right question to ask and the right way in which to ask it. About the problem of getting parapsychology accepted, what I was trying to say is that most people—they might not be the people in power—actually do accept and experience it. The rate of change is such that those people who at the moment may be still young and not in positions of power, within at least ten or twenty years are not going to be so young and will be in the position of power and money and funding. That's already happening at the moment at a beginning level with such foundations as the Threshold Foundation and the money is going to be coming through more and more over the next few decades.

BLACKMORE: Serena has given a very vivid and apt description of people like me and it's very clear that I shouldn't be here. But since I am I shall put in a few nasty skeptical points. I think it's all too easy to say if there was plenty of psi around all these things would happen. The question I want to ask is what's going to change in this 100 years to make all this suddenly possible? You talk about these centers where training could take place, but you also say basically there's no limit to the way that psi can be used. But there is a limit. It's extraordinarily evasive, we can't get hold of it and it's terribly weak. What's going to change in the next 100 years that is going to make all of this possible? That is what I would like to know.

RONEY-DOUGAL: Well, research so far has shown that attitude is probably the strongest factor in allowing psi to come out into the open or not. And I think that attitudes will change. Also, once we get schooling to be such that children do not find that, as their cognitive centers are opened up, their psi centers are being closed down, and we are using the appropriate forms of schooling so that children can keep the right brain concordant with the left brain (as we see with adults when we use techniques such as hypnosis or dream work or Ganzfeld work or relaxation techniques) this will help psi to come out. Now there are not many people today who grow up with those techniques although Stanley Krippner's book *Human Possibilities* suggests that it's starting to be taught. If we can help our children to grow up with both sides of their brains working, so that both sides are together in balance, then I do not see

that psi should be as elusive as it has been in our society in the past 100 years.

PRICE: I would suggest that the best science fiction tradition which provides a framework for psychic phenomena, is the one of which the 20th century representatives are C. S. Lewis, Charles Williams and J. R. Tolkien, which has a healthy respect for not only human evil, but also for superhuman evil. The fallen nature of humanity has been very evident in the last hundred years of psychical research. If thoughts could kill there would be a great many dead psychical researchers—killed by their own colleagues. Killed indeed in the last two and a half years in the history of the distinguished society of which I am a younger member! I'm rather anxious, therefore, about a future where there could be controlled psychic power. Anxious not only how external agencies would use it such as economic agencies, political agencies, military agencies, but anxious indeed about how psychical researchers ourselves would use it. The successful practical application of psi requires many safeguards against human egoism and human greed. I don't say that these safeguards cannot be devised, but they are difficult.

RONEY-DOUGAL: Yes, it was in fact this anxiety which prompted the paper, because when I first started working in this area five or six years ago, I had a rather horrifying dream in which in the future we were in a world which was controlled by the thought police and it was *we* parapsychologists who initiated that system. As a result of that dream I convened a seminar on the social and ethical nature of our work and how we could direct it to make sure it went in a positive direction rather than a negative direction. This is something that I think we should all think most carefully about and maybe learn from past societies about the control that they used to keep the negative at bay and help to bring the positive out. Everything tends to go in balance and the more you've got on one side the more you get on the other. It's a problem that is inherent in every aspect of life—how to keep the balance on the side of the positive—and I have no ready answer to that. I don't think anyone ever has had.

SARGENT: I wanted specifically to take up the point that psi effects are weak and what is going to happen in the next hundred years to do anything about that. Let's consider levitation: there is very little scientific evidence for the phenomenon. But if one reads Thurston and realizes the historical evidence, it is actually considerable and one of the problems is that modern experimenters don't often read that stuff. And if you wanted more recent examples you can obviously look at people like Bill Delmore, and we'd look at Ryzl's experiments in redundancy coding with Stepanek. It was possible to get perfect encoding. The only trouble is it takes you months. You know you have to go through repeated

guessing again and again. So if you have enough money around to keep on doing that kind of thing, keep paying the guy that's doing it, you can get the effects. The effects around are not necessarily weak. There are other techniques for optimizing them and I don't think anything does have to change apart from having more patience, more facilities to do things and being prepared to look at traditions, the kind of tradition that Thurston is writing about, rather more seriously than previously was the case.

RONEY-DOUGAL: I fully agree with you. I don't think psi effects are weak. I think it's really the way we've been working to try and scientifically validate psi, that has made them appear elusive and weak. Perhaps that is the reason for some people's fear of psi—psi can literally make a person potentially omniscient and omnipotent if taken to its greatest extreme, as in Jesus or the Divine person.

SARGENT: Absolutely. If you put a rat in a Skinner box it will behave like a machine because you don't give it any alternative. That doesn't mean that rats are like machines, though behaviorists are stupid enough to make that kind of mistake. Similarly, if you put people in card guessing and RNG experiments it would probably turn out for the most part to be a pretty feeble effect. But it doesn't mean that's all they are capable of doing.

AFTERNOON GENERAL DISCUSSION

SPINELLI: I would just like to make a comment on Serena's paper concerning the aspect of fear associated with the paranormal. Now, I agree with you that perhaps aside from scientists the vast majority of people, certainly in this country, appear to have accepted the reality of ESP. But my own experience in talking with parents of children I've tested and in going to people's houses where there have been claims of poltergeists is that there has been associated with acceptance a very strong sense of fear as to what these phenomena are. I think if you go back to the mystery cults that Elmar was talking about, the shamanistic experiences and so forth, there is there also an element of fear. People may well accept the reality of what the shaman is saying, but they are also scared or they view the shaman as someone who is to some extent an outsider of their society. Now, perhaps this is related to Elmar's point that psi is a manifestation of the other. And, therefore, the other produces fear in us, in the type of society that we have produced. Serena, do you have any further comments to make about that? My own feeling is that it might not necessarily be instinctual, but I think, from a society point of view, it might be a necessary aspect of psi phenomena.

RONEY-DOUGAL: As you said that I thought of a quote, "Strangeness begets fear, fear begets anger and anger seeks a victim." I think that maybe it is the strangeness of psi when it happens in everyday, ordinary life that frightens people, such as poltergeist phenomena. It's very strange. It's outside of our normal earthbound level of reality. It's akin to the divine in a way. Looking at anthropological sources and shamans, you find that the one who is most psychic often tends to be the mad one, the insane one within the society. That is another source of fear that the two, the abnormal and the paranormal, are very closely linked, as we have heard today in a previous paper by Elmar. The fear is there, it's fear of the unknown, in a way, even though psychic events happen to most of us a lot of the time. It is not part of the logical earthbound level of our reality; it's another aspect of our reality on a different "plane." Perhaps it has also this safeguarding aspect of fear to it. Leslie Price was saying that it is a powerful force. If used negatively it can wreak havoc and so we have a natural fear of something that is so powerful, or potentially so powerful, anyway.

DUPLESSIS: I am not optimistic for the future of parapsychology because now, in France, it is very difficult to talk or write about psi phenomena. There were vigorous attacks against metal bending, for instance. Now it is very difficult to do research in France. But before the war there were very well known scientists such as Professor Charles Richet, Drs. Pierre and Marie Curie, Henri Bergson and others—very well known persons—who thought that they could experiment on these phenomena and who freely discussed them and wrote about them; and I think we, now, go back from this period.

RONEY-DOUGAL: Let us hope that the cycle in France changes yet again, and soon.

CUTTEN: I have a certain amount of sympathy with Sue Blackmore's pessimism about the future, but, on the other hand, just because we have not had the great breakthrough that we've all hoped for, we ought not to be too despondent. Although psychical research has been going on for one hundred years, how long have psychic phenomena been going on? Millions of years. Electricity was known about long before mankind was able to make much use of it. Coming more up-to-day with nuclear energy, the existence of these energies was known, but it's only been in very recent times that we've been able to harness them, to understand them sufficiently to be able to use them. We have not got that far with psychic research in a hundred years, but we do have to remember that one hundred years is relatively an extremely short period of time. If we haven't got the results we're looking for in one hundred years—by repeating and repeating the same kinds of experiments—possibly it is because we haven't changed our ideas and changed our experimental procedures and methodology. Perhaps if we have some new thoughts on the subject I think we ought not to be despondent. We've got plenty of time yet if we relate psychic phenomena to other kinds of phenomena to get some real answers.

SARGENT: To take a specific historical example of electrical phenomena: Peter Dear, who's now working in the Department of Philosophy at Princeton, has written a very good essay comparing the development of parapsychology to the development and study of electrical phenomena. And as a historian of science his argument is that it took seventy-five years after the death of Newton for anybody to come up with a half-way credible kind of account of what was involved in electrical phenomena. Until that time people had theories that you could virtually describe as spiritualistic—etheric fires and all kinds of things. Until Franklin came along there wasn't a half-way convincing explanation of what was going on and no real regularity in the phenomena. There's an extraordinary

quote from Desaguilliers in which you could virtually scrub out electrical phenomena and write in psi phenomena, bemoaning how difficult it is to repeat the experiments now and when different experimenters repeat them they get different results. It's absolutely classic. It's a real, a delightful parallel. He concludes the essay by saying if a Committee for the Scientific Investigations of Claims of Electricity had been around in those days that modern day skeptics would not now have their electric typewriters to bash out their crass comments on. And one could only agree. It is a beautiful historical example. We spent thousands of years rubbing pieces of amber and then we complain because we have only psychics that can't do it on demand. You know, we might have learned something.

SERVADIO: I just would like to give a pair of impressions and I would like to have it pointed out if and where I am wrong. First of all, I have a mixed feeling of admiration and incredulity regarding the optimism of Ms. Roney-Dougal. This reminded me that in the very first years of this century there was a great theatrical performance in my country, in Italy. It was called *Excelsior*. In that performance the future of humanity was described in extremely optimistic terms. We were really approaching the great height of civilization. And after this we had two World Wars, concentration camps and the wonderful world we are living in right now. So I hope that she will be right and that my rather pessimistic outlook will be wrong. The second impression is this. It seems to me that Ms. Roney-Dougal has spoken of developments of things and their categories and phenomena in a rather materialistic way. Anybody can make predictions regarding the material world, the technological world. I can say that in the future there will be much better microphones than these, because a microphone is a technical reality. We know how it works. But, when I hear that in the future precognition will be used for practical purposes in business or in politics, it seems to me that the start is rather uncertain. Because we cannot just say what precognition really is, we cannot control precognition. I mean we just cannot say I will be precognitive as I can say I will speak into a microphone or put on or off a light. So this kind of approach seems not to cope with the idea that many of us have about psi phenomena. Well, we know that in the one past century of work we cannot just rule and control psi phenomena as we can control, switch off or on a light in a room.

RONEY-DOUGAL: Yes, it is true as you say that I stuck to the material side of the future and I did that on purpose because I see that we have initially to head for the practical applications within the sphere of parapsychology. And I was merely trying to look at all the possible practical uses that one can take psi into. I am fully aware of the spiritual and the

non-materialistic aspects of psi and I think that is a completely different paper. The Gestalt of this paper, however, is spiritual, in that the ideal for the new order being outlined is that of the New Jerusalem where we live in harmony with nature. I touched on this aspect most clearly when mentioning sites of special psi power being used as places of government.

BIERMAN: Since we have come to discussing the strengths or weaknesses of psi and the development of psi's strength in the future or the way it can be used, I should like to recall to your attention the model I developed this morning for the purpose of psi. That is that psi is meant to give direction to our evolution, essentially by collective retroactive PK. In that way it should be a weak mechanism to avoid oscillations in the evolutionary process. I consider psi centered around individuals as an anomaly of psi itself. This constraint in goal and strength of the psi process should reduce the fear that a world with abuse of psi can occur. I think the psi centered around individuals will stay as unreliable as it is now or maybe get a little bit better. I don't share at all the comparison with electricity. I think it's also a shame we all try to prove psi is something quite new and quite different from everything before and then we are going to compare it to electricity! I don't see that comparison at all. We have a quite new "mechanism" in our hands and it might very well stay weak and unstable because that might be one of its intrinsic properties.

RONEY-DOUGAL: No, psi is not a new mechanism. Psi has been used throughout the ages by people as far back as you go in history.

BIERMAN: I don't mean it in the sense that it just started.

BELOFF: I'm getting up to take issue with something that Carl Sargent said; partly because he has such a way of saying things with an air of confidence and I am worried that some of you may be taken in by it. Basically, I agree entirely with Susan Blackmore that psi is weak and evasive and like her I unfortunately see little prospect of things changing in the foreseeable future. And to try and contradict this, Carl Sargent mentioned two things, neither of which really have much relevance. One was to Thurston's cases of levitation. Now, I don't think that the reason why this is irrelevant is because it's historical evidence. I agree with Sargent that a lot of historical evidence is well worth our studying carefully and taking seriously. The reason is that even Thurston doesn't claim that more than perhaps a half-dozen people he could mention, ever even claimed to levitate, let alone produced strong evidence of having done so, perhaps St. Theresa, Joseph of Coppertino, there are a few you can count on your fingers. It still remains a very rare phenomenon and I don't know if any individual at the present time claims

auto-levitation. I mean we've been told of instances this afternoon, but it's obviously not a case that can be repeated or submitted for examination or, so far as I know, even witnessed. So levitation remains way beyond our dreams. The other case he mentioned which was much closer home as far as experimental parapsychology is concerned, is Ryzl's experiments with Stepanek where by dint of constant repetition he managed to get a five or a three digit number completely correct by going through various guessing procedures with his subject. The point is that other people have since repeated this, have attempted this repetitive guessing technique for transmitting communication. I remember how excited Douglas Dean used to get about Ryzl's work. Well, since then, again zero. I heard at a PA convention about a year or so ago, that Carpenter or one of those younger parapsychologists in America tried his technique and just couldn't get a reliable result from it. So again it is a query.

SARGENT: That is not correct. Carpenter reported an 80 percent plus hit rate in a binary task with an associated Z of over 5. He had very highly significant results indeed. I was going to quote him. . . .

BELOFF: Then my memory is at fault. But I seem to remember he didn't get the complete digit transmission that he was . . .

SARGENT: . . . he got a detection rate in excess of 80 percent. Very highly significant.

BELOFF: He did? Well I'm very glad to hear this, I'm all for positive results. I mean let's see some more of this, that's all I can say. And perhaps next time we'll really get there. Finally, about the analogy with electricity, I think it is a false analogy, because although admittedly it took a long time for humanity to get around to an explanation of electrical phenomena, at least with rubbing pieces of amber together you had a repeatable phenomenon—namely the phenomenon of electrostatic attraction. And we don't have such a repeatable phenomenon that we can say now try to explain this. We can't do something simple like that and say explain this, because it wouldn't work when we tried to do it.

VON LUGADOU: I think that a main reason for the crisis of our technology and for the crisis in our belief in technology is that scientists have promised too much and could not fulfill those promises and we should not do the same on our own in parapsychology. This is the first point I want to stress. The other is that I have somewhat disparate or paradoxical reactions to your approach to the future of psi. You say that we need new methods and all we have done in all the hundred years of the SPR seems to have no value. But I think that all research which was done in parapsychology used methods of classical science. We have not taken into account that normal science has made a lot of new approaches.

In normal physics, for instance, in the work that I. Prigogine and others are doing, we are at the beginning of a new revolution. We should notice this and see if we can apply such methods to our field. I think we would learn a lot of things from this, but we should not be too pessimistic, nor should we be too optimistic, because otherwise we would be surprised and we would regret this.

RONEY-DOUGAL: While talking about these practical applications I most certainly was not putting down the last one hundred years. As I seem to remember a comment I made before—science is very important in that it helps to bring the “magic” of psi down to earth. Science is our language and it’s the way we’re working at the moment. I fully agree with what you were saying. The revolution that is happening within the rest of science, especially in physics, is most hopeful.

SARGENT: The case of Bill Delmore, I suppose, was an example of a very powerful performance. There are good and well established cases. Another example could be Girard’s metal bending beyond the strength of normal human physical capacity. There are examples of strong effects to be found. It doesn’t matter if they’re unusual, the argument is one concerning potential. And if you can produce powerful effects even in a small number of cases then the argument that psi effects are weak collapses, because this is a universal assertion. As long as you can produce just a few examples of strong performance, it shows that the potential is there. And I think that’s really all you need to propose the kind of argument that Serena did. We can’t really be hard on this kind of argument because of the nature of the paper. It’s a speculative paper. But if there are a few examples of powerful effects then it seems to me perfectly valid to propose the kind of arguments that she is proposing. Well, sure we can sit and go through this with left hemisphere thinking and rip this up and that up, but that is pointless. It’s not taking the paper in the spirit in which it’s intended. It is trying to do something other with the paper than the object for which it was prepared and that was to stimulate thought about what we are trying to do and why we are trying to do it. To kind of push people’s noses back down on the ground, misses the object of the exercise I think.

BELOFF: Just to get it straight about Delmore, he was averaging 3 guesses correct out of 52 as opposed to a chance expectancy of 1 correct out of 52. Is that supposed to be a strong psi effect? This is what I want to know.

SARGENT: Delmore hit 80 percent on confidence calls.

COX: I want to make a comment about Serena Roney-Dougal’s paper. I, too, have long championed the testing of sensitives when you find them in other than their own desired way. I’ve tested a dozen static PK

sensitives with cards and dice and found interesting parallels worthy of publication. The paper I wrote about them is in the manuscript file at the Foundation for Research on the Nature of Man.

I don't myself think that psi can be trained, as I believe you implied, but we can discover novel ways of making it increase, of increasing our ability to get yield from the given amount of psi that we might have. There is a device, for example, that I constructed some years ago at the FRNM. It's still in operation but a computer breakdown slowed it up a year or two. At any rate, it's now operating, and is for the purpose of pooling both ESP and PK. The method is structured to render a continuous PK input to the computer, but on a stream of blind targets (consisting of tumbling cubes and balls) which require goal-oriented ESP to ascertain. James Carpenter did highly significant work through repetitious ESP proceedings. Brier and Tyminski also have tried that and so have others laboriously. It takes time, but now I believe we have a technique of doing it semi-automatically.

SERVADIO: I have some information that perhaps may be useful to Ms. Roney-Dougal. In her paper she mentions "curative telepathists, commonly known as psychotherapists these days, although no training program that I know of teaches telepathy to potential psychotherapists or psychiatrists." Now this is being done in Mexico City by Dr. Jaime Cardeña del Río, who is a leading psychoanalyst. He is the President of the Circulo Mexicano de Psilogia Profunda. He has studied the possibilities of ESP between analyst and patient as many psychoanalysts, including myself, have done for many years. But he has observed that, in general, the analyst keeps aloof from the patient and just studies what happens to the patient, involving himself only to a very limited extent. His idea is that the analyst or psychotherapist could possibly develop in himself something more open to psi phenomena, in addition to being more attuned to what happens to the patient. This is done by Jaime Cardeña del Río, in Mexico City.

PARAPSYCHOLOGY—WITH OR WITHOUT THE OBE?

SUSAN J. BLACKMORE

The OBE (out-of-the-body experience) may be a purely psychological phenomenon, requiring no paranormal influences for its explanation. If this turns out to be the case, and I shall argue that it will, then what will parapsychology's response be? Will the OBE suffer the same fate as hypnosis or the trance state, and being found susceptible to a "normal" explanation be dropped like a hot brick? Or will parapsychology keep the OBE as part of its subject matter regardless of how it eventually comes to be understood? This is the question I want to ask today because I think it is crucial to the future of our field. And although I shall only talk about the OBE I think the same arguments apply to other psi-related experiences such as apparitions, poltergeists and experiences occurring near death.

First, I hope to explain why I believe that the OBE is a psychological rather than paranormal phenomenon. Now, I should make it clear right away that I do not rule out entirely the possibility of paranormal events taking place during an OBE. In fact, I would be stupid to do so. Since we define psi negatively and have no known ways of ruling out its occurrence, it must be that it could occur during OBEs. However, I mean more than that. If there are such things as psi-conducive states, then the OBE may be one and I do not exclude that possibility. However, I will argue that we do not need to consider this when trying to understand the OBE and that eventual theories of the OBE will not include it.

To do this I must first consider the evidence which bears on psi in the OBE and second the kinds of theory which I believe will be helpful in understanding the experience.

There are several reasons why the OBE has long been thought to be a "psychic" experience and associated with the paranormal. Those who have OBEs (OBErs) sometimes claim that not only did they seem to have left their body and traveled to some distant place, but that they were able to see things at that place and bring back information about it which could be checked. In other words they claim to have had ESP during the experience. They also occasionally, although this is much rarer, report PK, that is, affecting objects or people at the place visited.

This provides an association between psi and the OBE, but I think the main reason is that the experience itself seems to imply the existence of a body other than the physical, and the ability to think, act and move without the use of nerves and muscles. This implication may be false, of course, as I think it is, but nevertheless very many OBEs are convinced that in this other body, and outside of the physical, they can survive death. It is this apparent implication for survival which brought the OBE to the interest of the early psychical researchers and which adds to its popularity now with the increasing research into other survival related topics such as death-bed and near-death experiences.

So how convincing is the evidence that there is something "psychic" about the OBE? The evidence comes from spontaneous OBEs, from the experiences of practised OBEs and from laboratory experimental research.

The spontaneous case material is the hardest to assess. Let us take as an example that most famous story, the Wilmot case. This concerned a Mr. S. R. Wilmot who was traveling on a steamer from Liverpool to New York. Both he and his room-mate apparently saw his wife enter the cabin at night and kiss him before departing. On arriving "Almost her first question when we were alone together was, 'Did you receive a visit from me a week ago Tuesday?'" Apparently, she had seemed to cross the ocean and finding the ship made her way to her husband's cabin. The description she gave of the ship was "correct in all particulars, though she had never seen it" (Myers, 1903, Vol. 1, p. 683).

By 1967 Hart reported that this case had been quoted no less than five times and this was certainly an underestimate. Since then it has been used again and again, most recently in Mitchell's new book (1981) where the quote is taken from Muldoon (1936) rather than the original source (Sidgwick reprinted in Myers, 1903). An interesting difference between the two is that Muldoon adds the notion that Mrs. Wilmot "left her physical self" whereas in the original Mr. Wilmot only claims that "it seemed to her that she went out to seek me."

I feel I must apologize for talking about this case yet again, but it illustrates perfectly the problems of spontaneous case investigation. It all happened a long time ago. All we have in existence are the brief reports of the people involved. I have checked that the ship did sail on the date given, but no passenger lists are extant and I have been unable to trace plans of the ship. The people concerned are dead and no further attempt was made to check their stories at the time. Because of the sketchiness of the reports it is impossible to know what Mrs. Wilmot's experience was like. We are literally only told (and not by her) that she seemed to go out to seek her husband. The main account is given by

him, not her, and in her own brief comment she only refers to her "dream." So we cannot tell how much it was like what we normally call an OBE.

The weakest aspect of the whole story is that we have no independent verification that Mrs. Wilmot's experience took place on the date stated, or that she told her husband about it before he mentioned it to her. She says "I think that I told my mother the next morning about my dream," but we have no account from her mother. In fact, we have only Mr. Wilmot's word for both sides of the story and, of course, it is only when both sides are put together that the coincidence appears so stunning.

I do not wish to claim that this, most famous of "evidential" cases, is worthless; only that it is very hard to know what value it does have. That really depends on how much credence one is prepared to give to a one-sided account of a dramatic coincidence, bearing in mind all the vagaries of memory and the impossibility of checking the facts now. As so often happens in these cases, each person has to make up his own mind, but in my opinion this is not an ideal story to form what many people have considered the best spontaneous case.

To be fair, though, it is not considered the best by all. Hart (1954) gave "evidentiality ratings" to 99 cases which he considered passed his test and provided evidence of paranormality. He ruled out from the start "all cases which do not present evidence that the individual who had the psychic experience reported its details before receiving evidence of their veridicality" (p. 125). As we have seen, in the Wilmot case this evidence is slight, which may explain why it was given only .28, putting it well down the list.

Top of the list is the Danvers case. This was one of Myers' "experiments." He was well aware of the importance of getting the experient to report what happened *before* checking the details. In this case he asked Miss Danvers to appear to her friend Mrs. Fleetwood, as she claimed to be able to do, and to send him (Myers) a letter-card stating her intention *before* she knew whether she had succeeded. Myers points out (p. 695) that this would carry a dated post mark. She was also asked not to forewarn Mrs. Fleetwood. However, it might have been better if there had been some check on this or if Myers had chosen the time she was to try himself.

On June 20th, 1894, Myers received a letter from Miss Danvers describing her attempt to appear to Mrs. Fleetwood on the previous Sunday night. She enclosed a note written at midnight, just as she was about to lie down, with her hair down and eyes closed, to make her attempt. Also enclosed was Mrs. Fleetwood's account of how she had woken from sleep to see Miss Danvers apparently kneeling on a bedside chair, her hair

flowing and eyes closed or looking down. As she wrote the account it was 2 minutes past 12.

The correspondence is good (although the details are hardly surprising) except that Miss Danvers was lying and not kneeling. But most interesting is that she seems either to have misunderstood Myer's instructions or deliberately to have ignored them, because she did not post the note to him before seeing Mrs. Fleetwood's account. This leaves open the possibility, which is exactly what Myers was trying to avoid, either that she wrote the note afterwards to deceive him, or that she tried many times and only sent the note when she succeeded. On a later occasion she definitely misunderstood him because she told her friend when to expect her visit.

Again, I do not wish to claim that this case is worthless, but as Hart's best case it falls far short of providing the kind of evidence which we could reasonably ask for. Why is it that Myers, with all his good intentions, was unable to procure such evidence? And why do we still not have any today?

You may argue that I have deliberately chosen old cases and that things are different now, after 100 years of physical research. But I do not think they are. We do, fortunately, have several adepts who are prepared to take part in experiments, and more of that in a moment, but they have rarely claimed evidentiality for their experiences, at least publicly, and when they have, the claims have not stood up to checking.

Take, for example, the case of Robert Monroe. In his well-known book *Journeys out of the Body* (Monroe, 1971) he makes several claims to have seen correctly what was happening at a distant location. In only one case are we told both sides of the story. In the introduction Tart describes an experiment in which Monroe "traveled" to Tart's home in California. The time match was very good. Monroe felt a tug, pulling him from his body, within a minute or so of when Tart and his wife began concentrating to help him visit, but Tart says ". . . his continuing description of what our home looked like and what my wife and I were doing was not good at all: he 'perceived' too many people in the room, he 'perceived' me doing things I didn't do, and his description of the room itself was quite vague" (Tart, 1971, p. 21).

My own experience of investigating claims has provided no better evidence. Whenever I can I try to investigate cases, but all too often, when a person tells me he has succeeded in seeing things at a distance during projection, this cannot be verified. Often he did not record the details or tell them to anyone else before checking, sometimes they are uncheckable, but most often people do not seem to want them checked. However, there are exceptions. One is a young man who claims to be

able to project frequently and has provided me with many detailed accounts of his experiences. At his request, every week I put up a new target in my house and he is trying to visit to see it. So far he has not managed to, but I am looking forward to when he does. If he succeeds in seeing the target correctly, I should have to change my opinions!

Another exception is a case kindly brought to my attention by Karlis Osis. A Canadian architect had projected across the Atlantic and seemed to be in the London of about 1840. He clearly saw a shop window with leaded panes and a curved cobbled street along which people were hurrying to a near-by square. On his journey he had vividly seen the bends of the river Thames and from these was able to pinpoint on a map the exact street. He said he had never been to London, but that when he asked an English colleague to describe this area of Fulham, the colleague "proceeded to describe the character of the street, the buildings, the style, the building setbacks and entrance yards—all exactly as I had seen them!"

This sounded most promising and had the great virtue of being easy to check. But when I went to Fulham I met with great disappointment. The houses were nothing like those he had described, nor were those in other possible streets. In fact, I quickly ascertained that in 1840 there was little but green fields there and the houses which are there now were built with the railway extensions and are quite different from his descriptions. I concluded that wherever this man's vivid impression of the street came from, it was not from London.

This case is instructive for several reasons. Like so many other OBEs, it was extremely vivid and convincing to the experient. But, of course, that need be in no way related to whether the details seen were correct or not and in this case they were not. The claim that his colleague verified the details is found to be worthless and I suspect that many other such convincing sounding claims are equally unable to stand up to checking. Interestingly, Green (1968) claimed that "in no case of an involuntary nature has it yet been observed that the information obtained was incorrect" (p. 142). Perhaps this was because too few cases of this kind were subjected to proper checking, but whatever the reason, this case falsifies that claim. It would have been nice if true, but apparently it is not.

Another point worthy of note is that it is easy to get the impression from some accounts that not only is Green's claim valid, but that veridical perception at a distance is a common feature of spontaneous OBEs. In fact, this is not so at all. In his survey of residents of Charlottesville, Palmer (1979) found over 100 people who had OBEs. Of these only 14 percent (and 5 percent of experiences) claimed ever to have acquired

information paranormally during an OBE. Less than 10 percent claimed to have appeared as an apparition to someone else and the claims were not checked.

In Osis' (1978) survey of OBErs he does not report how many claimed veridical perception, but apparently the OBErs frequently claimed they were noticed when visiting, but in only 6 percent was this verified by witnesses. In my own survey of Amsterdam students (Blackmore, 1982a) there were 34 OBErs of whom only seven (21 percent) reported having seen or heard anything they could not have known about beforehand. Of these only three bothered to check the details and all claimed they were correct. In another survey of Bristol students (Blackmore, 1982b) there were 15 OBErs of whom six (40 percent) claimed distant perception, but only two checked the details. In one case they were correct, in the other not. Of course, we could do with far more information on this, but it does seem that veridical perception at a distance is not a universal, or even especially common, feature of the spontaneous OBE and it is of so little interest to some OBErs that they do not even check the details of what they saw. This fact should be borne in mind when considering the importance of claims that the OBE is a psychic experience.

From all the claims from spontaneous and anecdotal cases I think we can come to one certain conclusion. That is that information reported is sometimes correct, sometimes totally wrong and most often a mixture of the two. Whether factors like distortions of memory, selective recall and reporting and hidden sources of normal knowledge, can account for all the correct material I do not know, but we certainly do not have the kind of evidence which would convince any reasonable person that vision during OBEs is usually veridical.

Perhaps it sounds odd, after what I have said so far, but I must add that I think the evidence from spontaneous cases is the best that we have, for the experimental evidence is, in my opinion, even weaker.

Early this century many experiments were carried out on hypnotized mediums who were asked to exteriorize their "doubles." The doubles were then found to be capable of tasting and smelling and seeing distant activities. However, the controls used were so poor that we cannot be sure that suggestion from the experimenters was not responsible for all the effects (see Blackmore, 1982c).

Such experiments more or less ceased in the 1920s and only began again when Tart carried out his well-known series with Robert Monroe (Tart, 1967) and Miss Z (Tart, 1968). Monroe (then called Mr. X) spent nine sessions in the laboratory, but only managed to have two brief OBEs and did not see the target. However, the results with Miss Z were exciting.

She slept on a bed in one room, above which was an observation window through which she could be seen from another room. Above this window was a shelf on which Tart placed a five-digit target number and, above that, a black plastic clock. EEG monitoring was used throughout and it was assumed that Miss Z could not move from her bed without this showing on the record. As is well-known, on one of her four nights there she correctly saw the number and reported it to Tart. This was exciting for two reasons. Firstly it seemed to be evidence that ESP was possible during the OBE, but secondly, and more important, it seemed that perception was better than by "ordinary" ESP. Although it might be hard to capture OB vision in the lab, when it was captured it was totally accurate.

However, any excitement was short lived. This remains the only experiment in which such a stunning success was obtained and there are several reasons for doubting its paranormality. Tart himself considers the rather far-fetched possibility that Miss Z concealed a mirror and reaching rods in her pyjamas or that she might subliminally have seen the very dim reflection in the clock. Although he believes this did not happen he concludes that her "reading of the target number cannot be considered as providing conclusive evidence for a parapsychological effect."

Other features confirm this conclusion. Miss Z could not "see" a second target placed in the observation room. Conditions were tightened up in preparation for a fifth night of recording, but she was unable to take part any further. Also, as Parker (1975) pointed out, the fact that the EEG record was obscured by a lot of 60-cycle interference is exactly what would be expected if Miss Z had tried to move to see the target. Other weaknesses include the fact that Tart went into the subject's room and placed the target on the shelf in her presence. Of course he did not show it to her, but this should not have been necessary at all. It is a great shame that an experiment with so many flaws and doubts hanging over it should be the only one in which such an exciting result was obtained and that this subject was unable to take part in any more experiments.

Since then results have not been so dramatic. Ingo Swann was able to make comments on and drawings of a number of target objects well enough for a judge correctly to match up all eight. However, this experiment has not been written up in the sort of detail which allows one to be sure of how it was conducted and a recent report (Mitchell, 1981) implies that it was only one of a series of unreported experiments.

Osis (1974) advertised for OBE subjects and tested about 100 for distant vision. Most thought that they could see the target, but apparently most were wrong. Osis concluded that they were deceiving themselves and had not had bona fide OBEs. But this raises the awkward, and

important, question of what is to count as an OBE. On any experiential definition these people were presumably having OBEs and surely no parapsychologist would claim that we could distinguish psi from chance hits so as to be able to separate "bona fide" OBEs from others, would they?

One of Osis' subjects (Alex Tanous) was successful and took part in some of the most interesting of OBE experiments, using the optical image device. This aimed to ascertain whether Tanous was using OB vision (localized sensing) or generalized ESP during his OBEs (Osis, 1975). Osis claimed that the results favored the "ecsomatic hypothesis," i.e., that something actually left the body and traveled to the box to look in through the viewing window. However, the results on which this conclusion was based were very marginal indeed. Scores were divided into first and second halves, separated according to Tanous' confidence on each trial and analyzed for color, picture and position. Overall, they were not significant and Osis' positive conclusion rested only on parts of the analysis.

In more recent experiments (Osis and McCormick, 1980) he has claimed that strain gauges placed in the target area produced greater activity on "hit" than "miss" trials, so confirming that Tanous was present at the target location. However, even in these well-publicized experiments the overall scoring was close to chance levels, casting doubt on Osis' enthusiastic conclusions.

Blue Harary, who has provided much information about the physiology of the OBE, was also tested for ESP, but, according to Rogo (1978), was only "sporadically successful." Other experiments have involved attempts to induce OBEs in volunteer subjects (Palmer and Lieberman, 1975). These were successful in getting subjects to have experiences they labeled as out-of-body, but not in producing reliable ESP scores. And, of course, this method raises even more awkward questions about what is to count as an OBE.

There have been several attempts to separate genuine OBEs from others on the basis of whether veridical paranormal perception occurs. Osis and Hart are just two who have tried this, but I believe it is doomed to failure because of our lack of understanding of psi. And, if we cannot make this distinction, then we have to accept that most OBEs produce erroneous "perception."

Alongside experiments on OB vision have been those on detection. If something leaves the body, then it should be possible to detect it. Indeed the fact that nothing can be detected has led some to reject altogether the notion of something leaving the body (e.g., Rushton, 1976). Certainly detection is hard. There was the famous experiment

in which Blue Harary apparently influenced the behavior of one of his kittens. While he had an OBE, the kitten, in an open field, moved and meowed less (Morris et al., 1978). However, other tests with physical apparatus, human observers and other animals have typically provided little or no evidence of detection. Morris' conclusion from research at the Psychical Research Foundation probably holds for it all. He said "Overall, no detectors were able to maintain a consistent responsiveness of the sort that would indicate any true detection of an extended aspect of the self" (Morris et al., 1978).

I have only skimmed the surface of this research, but I would like to ask what conclusions it can support. It is often said that extraordinary claims require extraordinary evidence. However, I would rather treat as quite ordinary the possibility that something might leave the body and carry out these paranormal actions. Assume for a moment that a priori this is likely. Does the evidence suggest it so? I think not. Such evidence as we have is weak, contradictory and statistically very marginal. I think the most reasonable conclusion is that paranormal events rarely, if ever, form a part of the OBE.

In fact, looking at the evidence dispassionately, it seems to me that what is exciting, dramatic, attitude altering and ultimately important about the OBE, is not the putative paranormal aspects, but the nature of the experience itself. If this is the case, then it is a waste of time to concentrate so much effort on seeking the psi in OBEs. It may or may not be there, but it is not the only, nor even the most important, aspect to research.

More interesting are questions about the nature of the experience. Why does it seem so real and affect people so deeply? What is the OB world, where does its furniture come from and why is it apparently affected by thought? Why do OBEs sometimes take place during relaxation, sometimes during accidents or stressful situations and sometimes for no apparent reason at all? Why are there peculiar sensations on separation and return, why the common tunnel experience and the rare silver cord? These seem to me to be the questions we could most profitably pursue.

No doubt the argument, and the search for psi, will continue, but I would like to look ahead. Where might we be in 100 years time, or even 10 years? How will the arguments have been resolved and how will our current research look from that perspective?

Personally, I think the research we have done so far will appear rather superfluous. I do not believe we shall resolve the issue by looking, in ever cleverer ways, for the rare paranormal events. Rather, I think we may see two diverging research programs; one based on the idea that

something leaves the body, and producing research of the kind we are used to in parapsychology, the other based on the idea that the OBE is a psychological experience. In the end one of these will forge ahead with expanding and developing research and the other will atrophy. To put it in Lakatos' (1978) terms, one will provide a progressive problemshift; the other a degenerating one. So which is it to be?

I do not wish to dwell on the theoretical and empirical weaknesses of the first approach (I have done so elsewhere, Blackmore, 1982c), but rather to sketch where I think the second might take us. I cannot presume to imagine how it will develop in our "Second Century." If I could predict that I would either be psychic, or there would be no need for those 100 years of research. However, I shall enjoy allowing a little speculation to start me on the kind of journey I think we might take.

Most exciting about this journey is that I think we may find a rapprochement between psychology and occultism. At least, I think that certain ideas from occult and magical teachings may provide a kind of guide. It would be ironic indeed if such ideas, which have been largely shunned by parapsychology, should come to be useful to psychologists. But let me try to explain what I mean.

If the OBE is seen as an altered state of consciousness then we need a theory of these states within which to understand it. As with any uncharted area, we may begin by looking for a map to give us structure and there have indeed been many attempts to make maps of experiential "spaces" (e.g., Fischer, 1975; Tart, 1980).

The analogy with space and mapping is more than superficial. Exploring states of consciousness is very much like exploring inner spaces. Just as the boundaries of some countries and continents are rather arbitrary, so are some states of consciousness differentiated and labeled arbitrarily. But just as some lands are divided by rivers and mountain ranges, seas and oceans, so I think there are natural divisions between some states of consciousness. Some are closer to others and some more distant; some boundaries are easy to cross and others difficult. I think some may even be "higher" than others in a hierarchy of skills.

But if a map of such spaces is what we need, how are we to set about creating it? One answer is to go exploring and record what we find. Of course, many have been there before. Mystics, meditators, magicians and others have tried to describe their explorations and have much to tell us if we will listen. For example, lucid dreaming is very close to the OBE, but ordinary dreaming is far from it. Waking consciousness is very similar to the OBE, but separated from it by some sort of barrier—the OBE seems discrete in this sense. The OBE can be reached from waking with difficulty, but from lucid dreaming more easily. Such vague state-

ments may not seem to get us very far; the description always seems inadequate. However, we may now be able to combine this knowledge with a psychological framework for describing it and glimpse a future in which statements like this will make psychological sense.

As one small example, I have previously suggested (Blackmore, 1982c) that to be in the OBE state one needs to construct an imaginary viewpoint and for this to be convincing one must be totally cut off from, or pay no attention to, sensory input maintaining the normal viewpoint. While this persists the OBE may be sustained, but if inputs tending to stabilize the normal view impinge alongside the "elsewhere" view of the OBE, then the normal body image and viewpoint will be bound to win. They are strongly developed schemata. So there is a kind of forbidden area—an intermediate state which cannot be maintained. It is for this cognitive reason that one so often seems to rush back into the body. This may explain Crookall's observation of the blanking of consciousness on return from astral projection (e.g., Crookall, 1961).

One should not belittle the findings of proponents of astral projection, nor even the theory itself. As I have previously argued (Blackmore, 1982c), I do not think the idea of a separable astral body makes any sense, but I do think the whole notion has a lot to tell us about the nature of the experience. One aspect which particularly interests me is the age old adage "like attracts like." This is used in many magical practices to design and execute ritual and in such inner activities as path-workings and rising through the planes. As you think, so you are attracted to similar thoughts. Think about a beautiful place and you will be there, think evil thoughts and you will attract evil. In our normal state of consciousness this has marginal relevance. We can perhaps see its operation in memory, but the external world is far more vivid than our fleeting and ephemeral images. However, in certain altered states of consciousness the adage perfectly describes what happens. In an OBE thought means action; to think of a place means to be there and to think about one thing summons other similar things. The difference between the states is described in occult terms as a difference in vibrations. The slower vibrations of the physical world are compared with the finer ones of the astral and higher planes. Personally, I find the analogy with vibrations unhelpful, but what is being described is, I believe, a valid difference and one which makes sense if the OBE is an altered state of consciousness. Perhaps vibration levels are equivalent to ways of thinking or modes of information processing.

Another valid idea is that of the planes themselves. Taken too literally they are absurd. Clearly the astral plane is not a place in the sky full of elementals waiting to play their next devious trick on mankind. Nor, I

believe, does one plane "interpenetrate" the others, as the Theosophists would have us believe. However, I think teachings about the different planes apply extraordinarily well to experience in altered states. And the astral plane, which one "visits" in OBEs is indeed all it is supposed to be, a "thought created world," a "world of illusion" and a world in which thought creates (Muldoon and Carrington, 1929). This is what we should expect if it is all created by the imagination, but we know so little and have been so little interested in the world of imagination. What we have to learn from the occult lore is that there is structure to imagination and it can be used and explored in many different ways. These are, I would suggest, the different planes.

If we are to progress along these lines we must do two things. The first is to learn how to enter and control the different states of consciousness. So we need experimenters who are experiencers and here the teachings of those who have gone before will be valuable. Second, we need to relate our findings to psychology. I hope for a day when we understand the organization of memory in such a way that it makes sense of the way we use it in "traveling" in the astral and accessing the cognitive map. We may one day have a cognitive psychology which is capable of describing the differences in ways of thinking between the states, which will allow us to predict what those states will be like, which are more similar to which and how they can all be reached. I can look forward to a psychology of altered states providing maps in its own terms, but which make sense of the astral, etheric and higher planes.

If we had these then, I believe, we should see that the OBE is just one of very many exciting states in which we can explore the world of our own imagination. It does not demand any other body, except the one created by the imagination, and the planes and regions of the astral are all likewise creations of the individual mind. The similarities between different people's experiences are due to similarities in our thinking. In this scheme there is no need for "ecsomatic" theories of the OBE and the idea of the paranormal occurring during OBEs becomes superfluous.

Maybe the OBE is a psi-conductive state, but if so this is just an added piece of interest. Something may survive physical death, but the OBE, on this view, has little bearing on the question.

I have only sketched some of the ways I think this route might take us, but my guess is that it will be a fruitful one; a route of cooperation between new and old ideas and one which will lead to a progressive research program. By contrast, I think the search for other bodies, or for evidence of psi during OBEs will not be fruitful and will not progress beyond where it is now. It will never be proved wrong, it will simply be superseded and left behind as the other approach takes strides forward.

If I am right, then parapsychology has a stark choice. On the one hand we may confine our interest to psi phenomena. This would mean leaving psychological research on the OBE, apparitions, poltergeists and near-death experiences to others. Parapsychologists would become yet more isolated rather than sharing their expertise and experience with others. If the psychological research progresses well, the parapsychologists will simply be left behind.

On the other hand, we could confirm that the OBE and other such experiences are to be a part of parapsychology, whatever their explanation. We could carry out both psychological and parapsychological research together and, with an open mind, take an interest in the results wherever they lead. And I am sure that will be to exciting places. In this case parapsychology would become more productive and worthwhile. It would overlap with and share ideas with other disciplines and have a genuine contribution to make to the understanding of the human mind. Not only that, but it could make use of its special relationship with occult and magical ideas.

Well, I know which route I would rather see. Parapsychology's Second Century may be with or without the OBE, but it will be a very much poorer future without it.

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DISCUSSION

SERVADIO: I'd like to add a little contribution as a psychoanalyst to what Susan Blackmore said. In the first part of her presentation, she recalled the phenomenon which unfortunately occurs very often in our search. Something is apparently ascertained and it has a first version, then the second one is different from the first, the third one different from the second. And finally going back to the first version, one can see that details were missing, that people who were mentioned were not there and so on. There is a famous case of this sort. A man had dreamt that a funeral car was waiting for him and the driver had a very ugly face. Finally he finds in a Paris hotel an elevator man with the same face. He refuses to take the elevator. The elevator crashes with five or six people dead. Now this has had several versions and the fact is that it never happened! I have written a little paper about this phenomenon and I've even created a term for it; parafantasiology. Of course we know that all this is due to emotional inclinations, wishful thinking. So we must be very careful about inner drives, our emotions, our fears and our hopes. But there is also the reverse. There is something that has often happened to many parapsychologists who ascertain something very care-

fully with witnesses, good reports, very good details. After a few months they start thinking about it and they say have I taken all the precautions, was I perhaps wrong? Many people were there, but of course you were not wrong, the fact existed. Nevertheless, the doubt comes in and so we have the reverse phenomenon which means that we have to take into account not only our inner and unconscious hopes, but also our inner and unconscious fears and resistances.

RONEY-DOUGAL: Sue, what you're saying there is that basically OBEs are all in the mind—are a thing of the mind, an altered state of consciousness. As an altered state of consciousness do you consider its range is halfway between normal psychology and paranormal psychology? Do you see that there is an actual, discrete dividing mark between these two or do you see it as being a continuum, such as my work in subliminal perception fusing into telepathy, your work with OBEs as an altered state of consciousness that fuses in with people maybe picking things up clairvoyantly?

BLACKMORE: I think there should be a continuum, absolutely right. I think that there is a danger that we isolate ourselves far too much as parapsychologists by saying we're only interested in psi. We should be able to expand this continuum and there will be people like me who are further down the skeptical end of it and people like you who are further this end. But the overlap between what we are trying to do is enormous. I think we should make the most of that rather than trying to make false dividing lines between them.

RONEY-DOUGAL: So would you see all of psi phenomena, telepathy, clairvoyance as being all in the mind, just different people seeing reality from different points of view?

BLACKMORE: I probably don't think they happen at all. I may very well be wrong, but I'm prepared to find out.

BIERMAN: I have some problems with the logic of your contribution. You start by stating that you want to find out, or you want to discuss whether OBEs have something to do with the paranormal or not. You do not make a very good distinction between OBE as a psi-conductive state and OBE as something physically leaving the body. But, anyway, you continue to argue that the few cases where apparent psi occurs probably were not psi. I think that's unnecessary, because if you use your surveys, you will see that the incidence rate of psi during OBEs probably doesn't differ significantly from a normal state. So I doubt your real intention of attacking those few cases. It seems to me that you want to prove that there is no psi at all, instead of answering your first question.

BLACKMORE: You may be right, it may be that that is what I really would like to do. What I actually set out to do today was to try and show

that we don't need to take psi into consideration when we're trying to understand the OBE.

BIERMAN: So it seems to me that you want to rescue us from chasing a phenomenon that doesn't exist and try to lead us into a field of psychological phenomena. Is that essentially what you want us to do? Because your conclusion is we should join the bandwagon of psychologists who are studying those altered states.

BLACKMORE: I suppose what I'm really trying to say is that the way we're going to get somewhere in understanding the OBE, is through understanding the psychology of it. Why it's the kind of experience it is. Now it may or may not be a psi-conducive state. There may be psi in there; I don't personally believe there is, but I'm sure plenty of other people do and that can go along hand in hand with it. It's an important question. But I believe the way we're really going to understand why the OBE is like it is is from a psychological point of view. I don't want to have a split between the parapsychologists doing one thing on one hand and psychologists doing the other and then not communicating.

BIERMAN: Oh, that's very important. They should communicate.

BLACKMORE: Yes, and at the moment there is beginning to be a split.

BIERMAN: I'm quite against including any subject that is not quite normal into the study of paranormal phenomena and if you are really convinced that it's just some form of psychological phenomenon, I would prefer to exclude it from our field because it is difficult enough. So let experts elsewhere spend their energy on it and let us spend our own energy on the really interesting phenomenon.

BLACKMORE: Well, I think that would be a shame, because the two will not help each other.

BIERMAN: No, there should be communication.

VON LUCADOU: I think that this point is very crucial whether we should get rid of OBE in parapsychology or not. If you ask this question you should know what psi really is, but since you do not know you cannot decide this question because probably you can learn more about psi if you were to study OBE, even if you cannot find telepathy or clairvoyance in OBE. So, I think it's more important to study the structure of the mind and to come from different directions to the problem of psi and not to shut off a special subject and to explain that this does not belong to parapsychology. I think this is a very important methodological point, because some parapsychologists tend to get rid of a lot of psychological problems and, for instance, say if I can explain telepathy by quantum mechanics, then this is no parapsychological phenomenon. This is total nonsense, because I really think that we try hard to explain telepathy and until now we could not explain it. So we should not divide our

subject into parts. At the end we will not get any phenomena we can research or can do science about.

BLACKMORE: I'm glad you said that, that's precisely what I'm trying to say. We'll be left with nothing if we keep excluding all of these interesting topics.

SARGENT: First of all, briefly to discuss the point made by Dr. Servadio. This phenomenon by which you can either get people elaborating details of things or else beginning to doubt whether they really did all the things they should have done has been dealt with by Brian Inglis in his paper on retrocognitive dissonance which is rather a nice term. He regards it as a symptom of a disease known as skepticemia which I think is quite delightful. It is in fact very common. The other point is with respect to the terminology of Lakatos, and whether we're going to have a progressive or degenerating problem shift orientation with respect to the OBE. I think it is perfectly plain from parapsychological and psychological writings who's going where. If you start looking at psychological writings on the OBEs there is an attempt to explain them away in terms of autoscopic hallucinations. The aim is very much to explain the phenomena away. And turning to an extraordinary phenomenon like the perceptual reverse of the Necker cube to try to explain the very highly structured cognitive phenomenon the OBE is . . .

BLACKMORE: It was an analogy, not a . . .

SARGENT: Well, that's okay. The level of differentiation is orders of magnitude. I think there's no question that psychologists simply try to explain these phenomena away. If you want to look at a psychologist who had actually made some real contribution, the one person you would go immediately to would be Charles Tart, who actually is a psychologist who has become a parapsychologist. I think that within psychology there's an intent to explain things away. As an example of a progressive problem shift within parapsychology one could immediately turn to Karlis Osis's work on perceptual orientations—the generation of visual illusions that are only seen as particular things if one happens to be standing at a particular angle. Now, whether Karlis Osis's logic here is sound or not I'm not absolutely sure, but it's perfectly plain to me that a man who thinks in terms of constructing this kind of experiment, clearly has his mind oriented in a way which is typical of people who participate in progressive problem shifts. So what's interesting is we've got all but 30 seconds about what a pity the past cases aren't that great. But we got where psychology's actually produced something that would help, we got a Necker cube.

BLACKMORE: Fair enough. Well, I think Charles Tart is a good example because he's doing precisely what I'm arguing for, that is he experiences these things himself. He actually tries to explore it himself.

He's using psychology and he's not making a differentiation between the two. Now, I agree in principle about Karlis Osis, it was a very nice idea to construct the optical viewing device that you can look into and if you are at this spot you see something whereas if you're using generalized ESP you see something else, but it hasn't worked. It hasn't actually got us anywhere. He didn't get any results and he went on not getting any results and he wasn't able to elaborate it any further so he just stopped it, more or less where it started. Now, you're absolutely right, I haven't offered anything concrete. You belittled that little attempt I made—well, fair enough. But I was asked to talk about parapsychology's second century and I believe we will in the future get somewhere with this line. I don't think that following Karlis Osis's experiments will get us anywhere. Only time will tell.

SPINELLI: About two and a half years ago, I had a rather vivid dream. I was staying at a friend's house in Sheffield and in the dream I found myself in my room in London floating over my body in the bed. My body was covered up with a blanket and I was desperately trying to get back into it. The dream went on for a quite lengthy period in which I was trying all sorts of techniques to get back into it and finally in the end I decided the only way I could would be by trying to wake it up. As soon as I did that the body on the bed stood up and I was shocked to find that it wasn't me at all, it was a very close friend of mine who reacted by stretching her arms out and knocking the table lamp off the bed that was just behind it. I have a habit of recording my dreams so I recorded that dream instantly when I woke up and I was very shaken by it. The following day I returned from Sheffield to London, got into my room and the first thing I saw was a note from this same person saying, "Forgive me for having knocked over your lamp last night. But I was startled while reading a book by someone coming into the room and I was so shocked that my arms stretched out and knocked the lamp over." I was even more shocked by this. I was frightened, to tell you the truth. Now, obviously the circumstances were slightly different from what I saw in my experience and what actually occurred in the room, but, how would you go about describing this? Is this a potential OBE case or is this a telepathic experience or what?

BLACKMORE: It's potentially the sort of case which would prove me wrong, but it's like so many of these cases that can't be investigated properly after the fact. If it happened to me then it would force me to change my opinions.

SPINELLI: Well, let me just ask what would be required for you to verify it? There is the record of my dream, there is a record of that note taken, there are obviously two living people who have had this experience.

BLACKMORE: Like Myers I would want to have the notes before the two were put together. I mean 100 years ago that's what Myers asked for and I think it's a perfectly reasonable thing to want. I would want you to ring me up and say I've had this dream and it might have been veridical and tell me about it. And then see the note from the other one. As I said, if it happened to me it would obviously have a quite different impact.

HAYNES: I think that in this talk the concept of the OBE is founded on the idea of an "astral body," a sort of equivalent of the ordinary body that hovers over it, or runs about and observes things. This concept of the "astral body" of course revives Myers' difficulty. Where does it get its astral coat and skirt or trousers from? I had hoped that if I was right in this assumption, Dr. Bierman would have applied to the whole problem his concept of non-location in space and time. Have you considered the idea of a bodiless sense, a center of consciousness (not dressed in an "astral" skin or clothes) with an apparent ability to locate itself, and to perceive what goes on in places other than the one in which the original body is at the time?

BLACKMORE: Well, there are a lot of problems in that question. The problem of where do the pyjamas come from, as Tart put it, has been around a long time. Muldoon and Carrington considered it. The fact of the matter is there are some OBEs, perhaps 20-30 percent, which have another body. They certainly have the skin and bones of another body, if not the clothes, the handbag and the car or anything else they happen to want with them. There are then a very large proportion which are just mindless spots or points or vague things like flames, or blobs or globes. Now, any explanation of the OBE has got to explain both; the astral projection theory only explains one side of it. Whereas any theory that says we can create a body for ourselves is potentially capable of accounting for any type of experience like that. Now, that means it's weak in some senses. It doesn't make it a powerful theory. But I think that the idea that the astral body or the body that you seem to have when you're out of the body is created by your imagination fits far better with what it's actually like. If you want five arms and three legs you can have them. You know I've tried this myself with multiple legs and arms changing shape and size and so forth. That's why I look to that sort of explanation to try and understand it. What was the second point that you made, Renée?

HAYNES: The non-location . . .

BLACKMORE: What you are saying is there is some sort of weightless nothingness that floats about in the world. How is it going to perceive? Rushton put it very crudely, but I can't help referring to this. He said, "If the thing is to perceive it's got to absorb light. If it's going to absorb

light it's going to be opaque, if it's opaque we can see it," and clearly we don't see floating eyes. Now there are ways around that argument, I know, but essentially he's got something. If you're going to perceive the environment, you're got to interact with it; if you are going to interact with it, you're detectable. We cannot detect any interaction going on. I don't think there is any interaction, I think we're actually interacting with the world of our own imagination. We're not floating about in the world out there.

BELOFF: Well, Sue, I would like to congratulate you on your talk, which I find not only very eloquent, but very persuasive. I go along with you in thinking that certainly as things stand the most parsimonious explanation of the OBE is in psychological not paranormal terms. And I think you've made a very powerful case that, if it's going to be contested, you know will require some very hard work and good evidence in order to upset it. I really want to compliment you there. As regards the next century of parapsychology, here I'm not sure whether your recommendations are entirely persuasive. Supposing for the moment we forget about OBEs and talk about dreams. Now, clearly dreams are and always have been of interest to psychologists and psychologists will continue to do research on them. The question of whether dreaming is a psi-conducive state is one that is still agitating parapsychologists. It seems to me that the two things will have to be pursued in conjunction. We aren't going to surrender dreams as a potential psi-conducive state yet, anymore than I think we are necessarily going to abandon the OBEs for their possible psi elements. And, therefore, is anything going to change very much beyond saying that the two fields should not drift apart and should maintain close communication?

BLACKMORE: I suppose that is all that I am saying. Why I think there is a danger of them drifting apart is because you can see now that as progress—and it is very slight progress—is being made on the psychological approach to the OBE, people are starting to publish their papers in psychological journals rather than parapsychological journals and starting to talk about them in psychological conferences. There is beginning to be a split developing, so it seems to me, which I really don't want to see. As Serena said, there is a continuum there. We ought to have much more interchange and keep that going and not back off as parapsychologists and say we're interested only in the psi-conducive bit and we're not going to make a contribution to the psychological bit. I just hope that the distinction can be as least damaging as possible.

ROUSSEL: Last year in Montreal, our group the "Psiologic Committee," spent quite half of the assembly on the OBE topic. First, there were two women, very well aware of their emotional experience and

their mental functioning, who described their OBEs, how they evolved through the years and through different experiences. Then there was Mrs. Lucia Del Vecchio who had written her M.A. thesis at the University of Montreal (1981) about the OBE. She proceeded in the same way as you do. She thinks that the OBE is only an altered state of consciousness which sometimes brings psi and sometimes not. But her thesis was not experimental, just a review of the literature in her own point of view. The problem with that as I see it is twofold. The first is that the two women who described their own experiences so well did not recognize themselves in the presentation of Lucia Del Vecchio and I think that I can see here the same problem when Dr. Spinelli talked about his experience. You could just say that it's a case where you don't have the proof. To summarize the first problem: we are building a science that is so different from what is experienced that people don't fit into that image. It is wrong from the phenomenological point of view. About the second problem I would address my remarks to Mr. Gruber. If we go with your scheme of thought we would explain away the OBE or if we go with the scheme of thought that gives credit to the OBE as being a psychic experience we go into a very different area, such as Monroe proposed. He proposed, if my memory is correct, that the OBE is a continuum of three states. First an OBE can function in a telepathic way and reaches geographical scenes and events. On a second level, it functions in the world of thought and your thought is made real. On the third level, it functions like the world that quantum physics describes. So I think that with Monroe, it's more promising because he is going inside of the psychic phenomena and paranormal dimension, but on your side, we just explain away these phenomena.

BLACKMORE: You reminded me of a point that I didn't respond to in Carl's remarks, which was I am absolutely not trying to explain away the OBE. You refer to phenomenology. What we need to do is understand what the OBE is like. Take people's descriptions. What happens to them—what is it like—can we explain this? I think it's far more exciting, far more interesting than going on about psychic aspects. And in that sense I'm not trying to explain it away, I'm trying to explain the nature of the experience. Now why I didn't do that with Ernesto's example was because he was specifically talking about a psi aspect. He talked about the fact that the lamp was knocked over and so on. This wasn't actually an OBE according to most definitions I would use, because it happened when he was asleep. Now you can use different definitions and you may or may not include it. But he was talking specifically about the psi aspect and I would not accept that as very convincing evidence for psi happenings. But what I do do, is to try and take people's

descriptions. As a general principle, I don't ever deny any one. I always believe it when people give me a description of what happened. I just take it at face value and try and work on that. What happens to them, what was it like? Why the similarities? Why the world of thought? Why are these different levels there? Why are different people able to have these experiences and apparently get to rather similar places? Now I think ultimately we're going to be able to understand that in terms of the structure of our imagination and our memory. And that's where I am trying to go. Phenomenology is very important. So I'm not trying to explain it away.

REPLICOMANIA AND THE PURSUIT OF MEANING IN EXPERIMENTAL PARAPSYCHOLOGY

CARL L. SARGENT

Views on Replication

It appears that a majority of experimental parapsychologists (e.g., Honorton, 1976, 1977; Palmer, 1977; Sargent, 1981a) and skeptics (e.g., Crumbaugh, 1966; Nicol, 1966; Hansel, 1980; Hyman, 1982) are agreed that experimental parapsychology needs to be able to demonstrate one thing in particular if it is to escape the dreaded label of "pseudo-science," and that is: repeatability. "Parapsychology lacks a repeatable experiment" is a frequently encountered skeptical war-cry, with the word "truly" often used gratuitously to preface "repeatable." Now we can all (probably) agree that a repeatable experiment is a Good Thing. The problems arise when we try to define exactly what a repeatable experiment is and how we recognize it. When is an experiment repeatable, or (to be precise) when is it the case that an experiment gives results which may be said to be reliable or repeatable?

In an earlier paper (Sargent, 1981a) I noted some distinctions within the term "repeatability," which are certainly not original, but which bear reiteration. First, there is intra- versus inter-experimenter (or laboratory) repeatability, intra-experimenter repeatability being the repetition of an experiment by a single experimenter and inter-experimenter repeatability being the repetition of an experiment by a different experimenter to the one who conducted the original experiment. While it is frequently the case that the intra-experimenter repeatability of experimental findings is asserted to be higher than the inter-experimenter repeatability, I noted instances in which this was not obviously true (e.g., response bias effects; Sargent, 1981a, 1982).

The second distinction I made simply reiterated that made by Stanford (1974c) between concrete and conceptual replications. A concrete replication is an attempt faithfully to reproduce the conditions of a first experiment in order to observe the same results (hopefully). A conceptual replication is an attempt to confirm (or refute) the findings of one

experiment by conducting another, with a differing design, the design and results of which bear some clear conceptual relationship to those of the first experiment. For example, if one experiment shows that elevation of some variable X (blood glucose, L-DOPA levels in the CNS, anything really) improves psi performance, then reducing the level of X should impair psi performance if X truly influences psi. Yet clearly an experiment which set out to examine the effects of a reduction of X on psi performance would not be a concrete replication of an experiment which investigated the effects of an elevation of X on psi performance; it would be a conceptual replication (see Braud and Braud, 1973, 1974).

I argued in the earlier paper (Sargent, 1981a), following Stanford (1974c), that conceptual replications are superior to concrete replications. Why? First, because concrete replications are impossible. One simply cannot reproduce all the conditions of an original experiment, for various reasons. First, some potentially important factors may not be isolated; if one were, for example, to survey the chronobiological literature one might develop a healthy fear of just how complex determinants of psi performance might be. Second, some factors might not be controllable for practical reasons (e.g., climatic variables) or even in principle (e.g., subtle experimenter personal attributes effects).

Also, concrete replications cannot in principle reveal certain types of psychological artifacts such as non-specific and iatrogenic effects. A classic example of this may be found in the huge pile of studies investigating the role of relaxation in systematic desensitization therapy for phobic disorders (Jacobs and Wolpin, 1971). Many experiments showed that relaxation treatment groups were superior to no-relaxation controls in this treatment; only recently have studies shown that tension groups fare just as well as relaxation groups, thus showing that the original experimental/control difference was just a non-specific effect and had nothing to do with relaxation per se. A continual blind adherence to relaxation vs. control concrete replication studies would never have revealed this. Conceptual replications advance our understanding, concrete replications merely retard it.

Finally, we are now faced in parapsychology with a number of theories and working models of how psi events occur and under which conditions that make predictions and can be tested (e.g., Honorton, 1974, 1977; Mattuck and Walker, 1977; Schmidt, 1979; Stanford, 1974a, 1974b, 1978; Walker, 1975). Now, no theory or model makes just one or two predictions; to be useful, they must make many and only conceptual replications can make progress with studying them, especially in a field like parapsychology where resources are limited.

Now, let us consider some of the very real difficulties involved in trying to assess replication rates, even when only concrete replications are being considered.

What's a Replication Anyway?

Recently, "box-score" analyses have been made of all studies undertaken to investigate effect X in psi research, where X may be RNG testing (Honorton, 1978b), Ganzfeld psi testing (Honorton, 1978a) the relationship between neuroticism and psi test performance (Palmer, 1977), extraversion and psi test performance (Sargent, 1981b), and so on. Here, an attempt is made to include all relevant studies. But just which studies are relevant and which are not? This is no simple matter, even if it is considered desirable to do this.

For example, if considering Ganzfeld/psi research, would one include the studies of Braud (1977) and Schachter and Kelly (1976)? The Braud study used pre-sleep hypnagogic state testing and the Schachter-Kelly study relaxation plus a self-induced hypnagogic-like state. Honorton (e.g., 1978a) does not include these in his box-score analysis. I think a very good case could be made for including the Schachter-Kelly study and a weaker one for the Braud study. Certainly there appears to be no objective answer to this.

On the other hand, should one include studies such as those of Rogo (1976, two studies) in which only partial isolation was used? If so, I cannot see why the Braud study should be excluded; although the subjects were not actually in the laboratory, it seems as good an approximation to the Honorton-Harper study as the Rogo study does. I think it is becoming clear that there is indeed room for negotiating whether particular studies are adequate replications or not. I do not think that we can call any experiment in which subjects have ping-pong balls put over their eyes a Ganzfeld experiment and pool it willy-nilly with others. If the points above do not suffice, let me illustrate my thesis with a *reductio ad absurdum*.

An experimenter runs a Ganzfeld GESP experiment and each subject is given 30 seconds to make his responses; that's the duration of Ganzfeld exposure. Is this really a viable experiment? Would one say that this should be included in a box-score analysis? Surely not. Yet there are studies in existence which have used as little as seven minutes of Ganzfeld stimulation, and several which have used 15 or less (e.g., Rogo, 1976, 2 studies; Sargent, Harley, Lane and Radcliffe, 1981; Stanford, 1979; Warnock, Dunne and Bisaha, 1977). Where is the dividing line? The

answer, of course, is that there is no dividing line. One simply cannot say "17 minutes and 25 seconds," and dichotomize studies into acceptable replication attempts (with a duration of Ganzfeld isolation above this) and unacceptable ones (with a duration of Ganzfeld isolation below this). Experiments cannot be dichotomized in this way any more than they can be dichotomized into "significant" and "insignificant" outcomes.

The natural state of affairs is a continuum. Experiments are more, or less, acceptable as replications. Some of the criteria involved are reasonably "objective." Session duration in Ganzfeld (or progressive relaxation) testing is a good example. Since Honorton's (1977) internal attention states model predicts that sensory habituation is the key to psi-optimization and it is also time-progressive, then it follows from theory that session duration should be positively related to performance. There is evidence that this is so, even though the only direct comparison with subjects randomly allocated to different session durations (Sargent et al., 1981) did not show a main effect of duration. And duration is not dichotomous!

Another variable which should certainly be involved is sample size. Experimental research in psychology indicates that psychologists systematically underestimate the sample size necessary for replicating effects at a significant level (e.g., Kahneman and Tversky, 1971). As an example, the first Ganzfeld study reported (Honorton and Harper, 1974) used $N = 30$ and obtained $P = .017$ one-tailed from a 43 percent hit rate. It does not require very high intelligence to work out that, if all attempted replications used $N = 30$, then around one-half of them should give insignificant results due to sampling error. Rhine (e.g., Rhine and Pratt, 1957) always emphasized the importance of adequate sample size in psi testing and his warnings have rarely been reiterated. If this seems to be stressing a point unduly, the reader should consult the Kahneman-Tversky paper!

It is rare for researchers to compute the N 's involved in successful and unsuccessful replication attempts and this practice should be encouraged. One problem is that the effect of N may be obscured by other, e.g., social-psychological, effects—the boredom of running a long experiment may generate experimenter personal attributes effects which depress subject performance. This type of effect will probably be a function of amount of time involved rather than number of trials, so the effect of N should probably be found more clearly with, e.g., fast RNG studies than with, say, relaxation or hypnosis research. Hyman (1982) claims to have found a nearly significant reversal with psi/Ganzfeld experiments (i.e., significance level negatively related to N), but it is clear

from his paper that he has been using *N* for the total design of an experiment and not for the Ganzfeld trials (cf. the Wood, Kirk and Braud paper, 1977, and others).

A third example of an objective reason for being concerned about the validity of an attempted replication would be inadequate variance in independent or dependent variables in cases of correlational experiments. For example, it is in fact quite astonishing that Delanoy (1981) obtained a significant positive correlation between Ganzfeld ESP performance and extraversion considering that all her subjects had extraversion scores above the mean for the general population. Had this study failed to replicate the results reported by myself and my associates (Sargent, 1980; Sargent et al., 1981), it could certainly have been protested that Delanoy's low-variance sample (and low *N* to boot; *N* = 6, but there were 12 trials per subject) did not permit a fair test of the effect we had reported. And indeed her sample did not show such an effect; it showed a more powerful one.

I have given some examples of "objective" reasons for being concerned about whether experiments are really "replications" of others or not and I have tried to point out that there are no dichotomies involved. It is not a case of a study being an adequate replication or not. It is a question of how adequate it is and this is not always easy to decide. Where such factors as low *N*, low variance and so on are concerned, inter-subjective agreement may be high. However, for other issues, such agreement may not be so easy to find.

What's a Replication Anyway?—2. More About Cheshire Cats

In the following section I shall use a particular line of research to illustrate my argument, i.e., psi/Ganzfeld experimentation, since it is one which I have worked within for some time and there is sufficient data base and number of researchers involved to discuss the research in a little detail.

I want to give some examples of variables which may affect the system which is used and where social negotiation is considerable. Some of the variables have been discussed elsewhere (Sargent, 1981c).

Let us consider the target pool used in free-response testing. It is true on trivial logical grounds that this must affect psi performance as it is measured statistically. To give the obvious case, if the pool of pictures presented to the subject or independent judge for judging in free-response trials contains pictures which are insufficiently discriminable, then psi cannot be measured. The system is too insensitive. Now when we move on to factors such as emotive content of targets, again there may

be effects from first principles (Sargent, 1981c), but we do not know what these effects actually are. We have a great problem here. We know the target pool must be important, but we do not know what effects target pools have. We do not even have the tools with which to measure the aspects of targets which might be important, despite the pioneer work in this field of Lendell Braud (e.g., Braud and Duke, 1980). Now, recently an American researcher and I acted as judges for Ganzfeld data the other had collected. I found her target pool simplistic, dull and boring, as did the two of my associates to whom I showed some targets. On the other hand, she found my targets over-elaborate, complex and hard to use in judging. These factors may be of crucial importance. We simply do not know. However, given the very boring nature of the targets that researcher uses, I will not be surprised by further null data from her! This belief on my part may be right and may be wrong. It is certainly one which can be debated.

Let us consider another concrete example. At the 1977 Parapsychology Foundation Conference, Jan Ehrenwald asked Honorton why certain experiments using the Ganzfeld procedure have failed to yield significant results. One interesting answer, of course, is sampling error, which would account for the majority of such failures. However, experimenters who do not obtain significant results with the procedure show an understandable, if irrational, resistance to explanations in terms of such error. In any case Honorton (1978a) discussed two studies by Palmer and associates in the context of failed replications. The study by Palmer, Bogart, Jones and Tart (1977) Honorton accepted as "a good study" and accepted that "I do not know how to explain that kind of failure." The study by Palmer and Aued (1975), however, Honorton was not happy about: "the agent . . . didn't even interact with the subjects before the session, or if so, there was only a very quick introduction. If we've learned anything in 90 years, it is that you cannot do psi experiments that way" (Honorton, 1978a, p. 93).

Skeptics would doubtless regard Honorton's argument here as post-hoc, special pleading, etc., despite the fact that there are data which suggest importance of sender-receiver familiarity in Ganzfeld GESP testing (e.g., Sargent, 1980; but see also Sondow, 1979) and, of course, a large literature on interpersonal effects generally (White, 1977), though it must be said that that literature is pretty chaotic. On the other hand, my consideration is that the kind of argument Honorton is offering here is a kind of appeal to background knowledge acquired and shared by the experienced researcher and that this kind of argument is routinely deployed in social science. I have overheard animal psychologists discussing whether such-and-such a batch of rats may have given aberrant

data because they were handled by a rather insensitive lab assistant, and in the field of abnormal psychology (which I select only because I happen to be reasonably knowledgeable about it) post-hoc arguments of the variety used by Honorton are very commonplace. This is because experimenters who have worked with particular techniques for long periods or who have worked in particular areas of research for a long time, build up much implicit knowledge about their procedures which is not and in some cases cannot readily be formalized. To be sure, some superstitious conditioning may be involved here, but some of the implicit knowledge is probably accurate. The important thing for the purpose of the argument being advanced here is that, in the terms of Collins and Pinch (1979), "nothing unscientific is happening"; these appeals to implicit experiential background knowledge are part and parcel of ordinary social science. It is, apparently, only in parapsychology that certain social scientists appear to get irate about them.

So, a distinction can be made between inter-subjectively agreeable problems in determining "replication status" (sample size, etc.) and implicit background-knowledge arguments with a very strong subjective component (e.g., importance of sender-receiver relationship). Needless to say I have not pursued my argument this far to end up with a dichotomy of this kind. There are middle cases; cases in which there are numerous empirical data which support an argument from implicit background knowledge and increase intersubjective agreement; cases in which an extrapolation from theory (cf. the importance of session duration in altered states experiments noted above) rests on too many extra assumptions to be a straightforward affair (cf. Eysenck, 1981), and so on. In effect, there is a continuum between intersubjectively highly agreeable and much more debatable parameters and values.

There are also parameters which are very difficult to find out about. Details are not published. I am reminded of a subject I once tested who had also been tested at a psi-inhibitory laboratory. His ESP performance was superior in Ganzfeld testing at Cambridge, and before he knew the result of his session he noted that he had been more comfortable with us than he had been at the other laboratory, because he had been reclining on a mattress with us and a reclining chair at the other laboratory, and also he had been distracted by corridor noise at the other lab whereas he had been undisturbed with us.

Corridor noise in a Ganzfeld experiment! Although no published report has appeared from the other laboratory, I am certain that no mention of this problem will be contained in any report that does appear. How can one have a Ganzfeld experiment in any realistic sense with such disturbances? The answer is that no room is totally sound-attenuated

and everything is a matter of degree; experimental facilities are more or less adequate, not either adequate or inadequate. Just to make the picture even more complex, in this subject's test session at Cambridge there was a loud noise outside the testing area which was audible to the experimenter, very clearly; the subject did not report hearing it, probably because he appeared very relaxed and "dreamy" and in an altered state!

Factors like this may be impossible to find out about. I have chosen the example I have because of the obvious importance of relaxation and sensory habituation, so that the importance of the mattress and noises from the corridor will readily be agreed to by almost everyone. However, many other parameters of less agreed importance will also surely differ systematically across laboratories. These parameters may involve very subtle effects, including how scruffy and homely a laboratory looks, how high-status an experimenter appears, age of subject X age of experimenter interactions and all manner of things. We not only have no idea about most of them, we wouldn't even know how to measure them if we did (cf. Rosenthal, 1976).

I suggest that the status of replication experiments resembles the Cheshire Cat; just as the cat disappears and only the smile is left, on close inspection the construct "replication" appears more and more complex and difficult until finally it begins to disappear in a haze of obscurity and only the appearance remains. But this is by no means the end of the story.

What's a Replication Anyway?—3. Peer Review and Other Random Processes

Other factors influence our perception of the value and importance of replications. Consider the five following scenarios:

1. Professor X and three of his Ph.D. students replicate a particular psi experiment. Four separate researchers, working independently around the globe, all fail to replicate it.

2. Professor X and three of his Ph.D. students replicate a particular psi experiment. Around the globe, four separate and independent student researchers fail to replicate it.

3. Professor X and three of his Ph.D. students replicate a particular psi experiment. Professor Y and three of his Ph.D. students, however, fail to do so.

4. Four separate, independent researchers replicate a psi finding whilst Professor Y and three of his Ph.D. students fail to replicate.

5. Exactly as scenario 4 above, with the additional piquant factor that the four separate researchers are all rabid skeptics—and they actually publish their positive results.

Now I think one would find much agreement that these five scenarios in order provide progressively stronger evidence for the experimental hypothesis being tested. The factors involved here include separation, status and prior disposition. Replications by different researchers are of greater subjective "value" if the researchers are totally independent; if they worked together for many years, one is not quite so impressed. Again, research by real live honest-to-God professors cuts more ice than research by students, and if the professor should happen to be at Oxford, Cambridge, Harvard or Yale, this is much better than being at Newcastle, Stirling, Wyoming or Wisconsin (and heaven help you if you are at the Tri-Valley Center for Human Potential). Not that there is anything wrong with the latter universities, of course, just that a (very strong) subjective bias is being shown up here (for some of the more hilarious consequences of this bias, the reader is urged to consult Peters and Ceci, 1982, and their exposé of the peer review system of refereeing re this bias).

Again, if one knows that a particular researcher was not inclined to have much faith in a particular experimental hypothesis and then does confirm its validity, one will be more impressed with the replication. And still more subtle factors may be involved. If a researcher has experience with the general line of research within which the experimental hypothesis is embedded, his significant results may not be as desirable as those of an equally experienced researcher who usually does quite different things for a living. If one considers Ganzfeld/psi research, a significant first study from a researcher who had previously reported many successes with hypnosis, meditation and progressive relaxation would perhaps not carry as much weight as significant results from a researcher who had always spent his time exploring the finer points of RNG testing. Then again, researchers form opinions about the competence and even the integrity of their fellows and the subjective value of replications will be influenced by these subjective factors.

In short, the "repeatable experiment" seems, at last, to be a mirage. It is simply not possible to state definitively just what actually constitutes a replication attempt; it is not possible to objectify the factors which make some replications more equal than others; and, here is the final blow, there is no such thing as a repeatable experiment in logic anyway, once a simple admission is made, and that is to deny the 100 percent repeatability criterion demand. Once this is done, and it cannot be avoided, even the cat's smile begins to disappear.

Just how repeatable would an experiment have to be in order to be a "repeatable experiment," pretending for the time being that we actually can decide what constitutes a replication? One criterion which I

have never seen explicitly advocated, but which is frequently implicitly used, is the 100 percent replicability criterion; the "repeatability on demand" criterion. One hundred percent repeatability means that any experimenter (or, in the magic phrase, any competent experimenter, although the term "competent" seems almost gratuitous) can replicate an experiment and obtain psi effect X. This criterion is never used in social science. There are no effects that replicate like this in social science. If this criterion were used seriously, all of psychology, sociology, criminology, most of medicine, biochemistry, genetics, pharmacology, and other areas of science would become pseudo-science overnight. It is manifest nonsense to advocate the "any competent experimenter" criterion, and I shall disregard it in further argument.

Thus, a "repeatable experiment" is one that gives a significant result somewhere above 5 percent of the time. But where? The answer is, of course, that there is no such thing as a "repeatable experiment." There are experiments which are more or less significant and emphatically not just two kinds—significant and insignificant (cf. Sargent, 1981a). And just where one puts a subjective cut-off and says "This is good," "This is promising" or "This is inadequate" is totally subjective. This cannot be a rational decision; it is purely subjective. One may be able to compare the replication rates of different lines of experiment (or estimate changes in replication rates over time for a single experiment) although I am dubious even about this; what one cannot do is to state that a particular experiment is, or is not, repeatable with any real confidence.

We might also consider here the possibility of an empirical standard for replication in psi research. Dropping any pretense at a rational criterion, we might become thoroughgoing conventionalists and use some area of research in experimental psychology as an empirical yardstick for assessing replication in parapsychology. Honorton (1976) has suggested this and such possible parallels as subliminal perception (Dixon, 1979; Roney-Dougal, 1981) and olfactory psychology (Sargent, 1981a) have been suggested. There are, however, problems involved with this strategy. The first is that psychologists do not often attend to problems of replication (cf. Barber, 1976, who points out that only 10 percent of introductory texts on psychology even contain the term "repeatability" in the index). The second is that the nonpublication of null data is far more prevalent in psychology, where around 90 percent of experiments involve a rejection of the null hypothesis at the 1 percent level of significance (cf. Barber, 1976, and his references), than in parapsychology, so the dice are rather loaded against psi from the start if such comparisons are made. The third problem, of course, is deciding just which area of

psychology is the most appropriate. The more one ponders such an empirical comparison, the more complex things become.

Parapsychology and Mainstream Science: Another 100 Years on the Margins?

The message of this paper seems uncompromisingly negative and even hostile to scientific endeavor. There are two good reasons for this. The first is that the belief that "science" is an undefinable entity and that there are massive chunks of conventionalism in the edifice of science, is rapidly gaining ground among philosophers and especially sociologists of science. The second is a growing realization that Feyerabend (1978) was right to proclaim, "What's so great about science?" These are two very important and all-embracing issues, and obviously in this paper I cannot deal with them; but a few comments can be made.

The problem of the "demarcation criterion" in science has always been a thorny one. Popper (1959) certainly eliminated inductivism as a criterion—to his own satisfaction—and attempted to substitute falsificationism in its place (Popper, 1963, 1972), but even in its methodologically sophisticated versions, falsificationism just does not appeal. Popper's qualifications about premature falsifications, the need for scientists to remain "tenacious" in defence of theories in the face of apparent falsifications, his inability to define exactly what a falsification is and, above all, examples from the history of science of apparent comprehensive falsification of hypotheses now accepted (cf. Feyerabend, 1975) make the falsification criterion unappealing. The real reason why it doesn't cut much ice, though, is illustrated in Popper's reply to the question of why scientists don't behave like the fearless falsificationists of his model: "Well, they should." Popper does not dispute the question—he accepts that scientists just don't behave as his model suggests.

Eysenck (1979, 1981) has suggested that falsificationism (if we pretend that it is a coherent philosophy of science for a while) typifies the highest stage of scientific development. Before that, in earlier stages, justificationism and inductivism are quite sound—and indeed necessary—strategies. To borrow the language of Lakatos (1978), a "research program," when young, needs protecting. A Type II error early on is more dangerous than a Type I error. There is simply no need to apply the same criteria to the whole of science; research programs of different levels of maturity should be evaluated by different criteria. This seems to be common sense; one would not test the intellect of a five-year-old child by setting him university examination papers. He might be a very promising five-year old indeed, but faced with an unreasonable test he won't appear so.

And, indeed, what is so great about science anyway? The excellence of science cannot, as Feyerabend argues in a masterful essay (1978), be established using scientific methods. One cannot justify the methodological supremacy of science by using the criteria of manipulation, control and prediction, since this is in effect using the rules of science to decide the issue. Many things of crucial importance to our lives are things about which science has nothing to say. If one wants to control and manipulate the world, science is a wonderful tool; if one wants to understand it and feel at one with it, then a religious or phenomenological epistemology would be appropriate. Only a fool would turn to science to find out what anything actually *means*. Understanding and acknowledging a plurality of epistemologies—and giving them a fair share of resources as Feyerabend (1978) urges—is essential to an understanding of psi phenomena. If this line of argument appears vague and undisciplined—and, with no training in phenomenology and not being of a religious frame of mind, it probably does—then let me simply point out that, in the rules of social science, there is absolutely nothing which forbids you to bore your subjects to death in experiments. That this might not be psi-conducive is an insight which comes to us not from science, but from common sense. And that inchoate, only partly formalizable body of knowledge is at least as useful to any parapsychologist as the corpus of scientific knowledge. Science is only a tool for exploring some aspects of our universe. It is not the only tool in the tool-chest and not the most appropriate one for many tasks. It is, however, currently the only tool which shows signs of telling the carpenter to throw the rest of the toolbox away!

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DISCUSSION

BELOFF: I take your point about the somewhat arbitrary nature of what replication means and that it is impossible to give any hard and

fast ruling on this. With reference to my student Deborah Delanoy, the most salient fact about her work is that in spite of her very high motivation to get results with her Ganzfeld work, she's not getting results. Once she was persuaded to run a correlation between extraversion and scoring and she got something that was significant, much to her surprise and incredulity. But the fact is that after having chosen extravert subjects, sheep subjects, all the ones that traditionally were supposed to yield good Ganzfeld results, and after having been coached by you in correct Ganzfeld procedures and so on, with everything going for her she still gets mostly negative results, not significant results, they're all over the place. And this is, of course, a keen disappointment. But generally I would say that the kind of situation that I've found in my experience and the experience of my students to be the most distressing is where one and the same experimenter can't get replication of his own work. I had a very salient case with Richard Broughton, who started getting very promising results on hemisphere difference findings and then found he couldn't repeat his own experiments. Now I mean those are the kinds of experiments that one can most hope to get results with, because, as you said, once you transfer to a different laboratory, a different method you are not really replicating. But once you find you can no longer repeat your own work, then you really are stymied. And I wondered if you have any comments or suggestions about this.

SARGENT: As far as Deborah's work is concerned there is, in fact, one aspect of the procedure that I have great concern about. That was her target pool. When we exchanged target pools I found hers incredibly dull, boring and simplistic and other people in my laboratory considered it a very dull, boring target pool. She found my targets very over-complex, very difficult and so on. There were radical dissimilarities, different views about what kind of target system we should be working with. It's the kind of factor you just don't discover, until one day I agreed to judge her data and a parcel appeared through the post and there were the targets. This is the kind of thing you're never going to find out unless you're actually doing something like that. I've only seen targets used by two other people. I saw some of Chuck Honorton's targets and some of Deborah's and Brian Millar has seen some of ours. So I have no idea about what the target pool is like in most other people's laboratories. Here is a very good example of something which we know must be important. We really don't have details on it. You cannot reproduce in a journal some 200 plates with all our targets. So that's one of the enlarged range of variables that presents problems. On replicating one's own results, I think people have a tendency when they fail once, to stop. At the PA Convention this year I shall be reporting four experiments

where in the fourth one, we actually found a real sheep-goat effect. In fact, it wasn't there in the first three. But I think there is a tendency to obtain a finding once or twice, then you try it once or twice more and if it doesn't work you forget it and go home. My guess is that you should always plan for a long series of experiments. You may get three significant findings out of eight; if they happen to be experiments 1, 2 and 3 well that's one thing. But they could turn out to be experiments 5, 6 and 7. Most people have given up by then. I think there is a tendency for people to infer too much from small amounts of data. I think that one trend that was very strongly present in John Palmer's PA Presidential Address a couple of years ago, was the idea that the individual experiments really don't teach you anything. You can only really draw conclusions from pretty wide arrays of data. I think that that's right. I don't think that individuals should be too depressed by one or two studies that don't turn out right.

RONEY-DOUGAL: In your paper you didn't actually talk about where this is going to take us into the next century.

SARGENT: One of the problems we've got here is that we have this criterion that we keep getting thrown at us: you don't have a repeatable experiment. When you start looking at the repeatable experiment you find it has distinctively mirage-like qualities. I'm beginning to wonder whether we should be dismantling this concept a bit. First of all, I'm disputing the criteria of science by saying they're not what they really appear to be. Secondly, I'm not certain that the criteria, even if you could pretend that they existed, would really be worth aiming for. One of the outstanding arguments for trying to persuade skeptics that parapsychology's findings are valid is that parapsychologists need research funds controlled by skeptical individuals. And this may be the wrong way of doing it. Maybe this is entirely erroneous and what is necessary is political action. The people that actually pay the money for the research and the people down there on the street should be simply told how much is spent by the Oxbridge civil servants and their "old boy" links in the research councils every year on a) parapsychology and b) rat food. Then those people could make a decision on whether they like their money being used like that or not. I think we might have the problem the wrong way around. Rather than persuade the scientific community that funds are deserved for working in this kind of area, one needs a better control of the funding of science down to a more democratic and accountable level. I think that's an implication that we should start taking to heart if we begin to examine the criteria we're supposed to be meeting and find they are very dubious when we start looking at them closely.

WEST: I agree entirely with Carl that conceptual replication is more important than literal replication. What is important about replication is that different experimenters at different times should reach the same conclusions. It seems to me, looking at the whole field of psi research, that conclusions on which everyone agrees are remarkably scarce. On the most basic aspects of psi we still don't have agreed answers to questions like which is easier—precognition, telepathy or clairvoyance? Such fundamental questions remain unanswerable because research has not given consistent findings over the years.

Now Carl has been talking about the conclusions of the Ganzfeld experiments which seem to suggest that relaxation is a psi-conductive state. I wonder if everyone really agrees and if the findings are entirely consistent with that conclusion. I would like to ask this question, not strictly concerned with replicability, but related to it. In these experiments, for instance in his own Ganzfeld tests, which have produced successful psi scoring on a number of occasions, Carl has pointed out that there are many intervening variables involved. The nature of the targets, the nature of the experimenter and the circumstances of the test, may affect the results and may affect replicability. Have controlled experiments been done in which the non-relaxed condition has been compared with the relaxed condition with exactly the same set up, same personnel, same sample, same environment, etc?

SARGENT: Yes, that indeed is the case. I suppose the best example would be the experiment by William Braud, Robert Wood and Lendell Braud who compared the Ganzfeld group with a no-Ganzfeld group and also the Braud and Braud experiments which used both relaxation and tension groups. We have the three strata there. Relaxation, control and tension groups. Chuck Honorton has also reported a Ganzfeld study with a control group. Control groups perhaps have not been as popular as they might be, there are certain motivational problems with them. Practically, in my own work, it has been impossible to use them. Since everybody knows about the ping pong balls, if you actually told them to come in and just sit down and make themselves comfortable and talk about what they thought somebody in the next building was looking at, then they'd say, "Gee, we're not going to get the ping pong balls!" The motivation would be shot to bits and we now have an artifact possibility that they might do poorly simply because they had bad motivation. If you wanted to look for literature which has quite a wide range of control groups it would be the hypnosis literature where control groups have been much more frequently used. I think there are something like 23 comparisons of hypnosis and control groups in the literature. I think that on 15 occasions the hypnosis group has shown a significant deviation

from the chance level whereas the control groups have never done so. Another point that perhaps I didn't develop as well as I might have is that there certainly are findings that have regularities to them. There are certainly many findings where if you look at the statistically significant results they're clearly all of one kind. For example, if you look at the sheep-goat effect, the results always show sheep better than goats when they turn out significantly. You don't get it the other way around. And the same is true with the extravert and introvert difference. There are known to me 21 significant findings in which, in 20 cases, the extraverts were superior to the introverts; only once has the reverse been found. And this was the only case where an automated test was used; perhaps the introverts felt more at home with it. It is also true in the case of positive versus negative deviations of progressive relaxation, dream states and Ganzfeld testing. There is the relationship between neuroticism and ESP. There are many occasions in which the data show clear regularities; all the significant results go one way. That's a slightly different matter from the repeatability rate, though. It's a related matter, but it is rather different, because you now are saying let's forget the null data, let's have a look at the stuff that shows you that a real effect is there. I think this is actually a criterion where you can say a real effect is definitely present, without having to invoke repeatability, strangely enough, because you are not actually making that many comments about repeatability.

ROUSSEL: If I ever get funds to create a lab I will be looking for that kind of information to orient students towards noting all the details. But if we need that much information about the physical nature of things, shape, size, light and personality variables and also about the experimenter, it gets very complicated. A few years ago, in an article in the *Parapsychology Review*, entitled "Holistic Methodology", you advocated simplification. So my question is where did you get with this idea of simplification, because yesterday you mentioned many judges and how you now use the idea of simplification?

SARGENT: Oh my goodness, it's always pleasant to find people with a long memory who dig up what you said years ago and hit you over the head with it. We started actually researching using the simplification postulate. There is a paper in the 1982 *European Journal of Parapsychology*, by Trevor Harley and myself where we both did parallel experiments in which we played all the roles—experimenter, subject, randomizer. You get rid of everybody if you have problems with the experimenter effect. The easiest thing to do is to get rid of the subjects. You can't get rid of the experimenter, but get rid of the subjects and there is just you. For political reasons it's probably sensible to have two of you doing this

experiment at the same time. We really did do this and we got results so similar that if you'd known the performance rate of one subject you could have predicted the results of the other with perfect accuracy. Neither of our results were individually significant, but when you put them together you got statistical significance, which is rather amusing, but it was exactly what we wanted to get. But the only problem is that when you really think about it you know those are very good results from Sargent and Harley. Now there is only one Sargent and there is only one Harley. So we can go on doing that, but the problem is that it's just those two individuals. The problem with simplification, when one starts to think about it deeply, is that you really only start getting increasingly idiosyncratic effects and I'm hopeful that you could do that with other people and they might get stable results. You might start getting the kind of private science that some of the observational theories drive us towards, if you do this kind of thing. That is, I think, a valid direction for research to go and it would certainly be a new methodology. What I was trying to present in this paper was how we tend to discuss experimental data of the kind that we have been collecting for the last quarter of a century and how it's been discussed in that time and how, if we want to continue doing this kind of thing, we should go about doing it. My argument is that we may have been chasing a mirage when we've been aiming for the repeatable experiment, because you start trying to figure out what a repeatable experiment is and it vaporizes before your eyes. It is very difficult to determine what it is. So I think this paper was a summary of what we've been doing, the way we've been tending to approach regularities in research findings in the last 25 to 30 years.

MORNING GENERAL DISCUSSION

RONEY-DOUGAL: Sue, towards the end of your paper you very briefly mentioned occult maps as maybe giving a clue or idea for your psychological theories of the OBE. I was wondering if you could amplify that.

BLACKMORE: I think statements that there are several layers, there is the lower astral and the upper astral and the etheric and so on, are actually attempts to describe experiences people have had. What I hope we can do is to start to look at the way thought processes differ in those different states. I can feel Carl saying you've given us a Necker cube, you know I have not got very far with this. But it does seem to me, purely from my experience, that you can by changing the way you're thinking get yourself into different states. I think the lower astral describes very well what happens if you have very loose thinking; if you're drunk or something like that, you flit from one image to another and you get monsters and you get all these things described as elementals and so on. I think they're all there and they can pop up if you have the right kind of thinking process. Take much more control of it. Start structuring your thought more clearly, start concentrating on different types of details and you'll get into something that could be called higher astral. Now I certainly don't claim to have explored very many of these, but I can begin to see the kinds of things they're talking about. Now I think we can, by trying out some of the methods that have been reported by magicians and meditators and other people in the past, learn to explore these states. I think if we can do that hand-in-hand with applying what we know of psychology to see what's happening to people's thought processes in those states, then we can start in a valuable way to put the two together. I'm being very vague and very speculative and I'm sorry about that, but that's the direction that I'd like to try and go next.

TROSCIANKO: This is a comment in reply to Carl's talk. I have to admit that your criticism of the criteria by which repeatability is judged by skeptics is unscientific, but you did mention one thing that hits people between the eyes—that was your example of a study being replicated by four skeptics, but not replicated by an equal number of believers. Now that sort of perks people up because it's unexpected. I should think that might be the way to do it. I've heard it mentioned that Research Councils and others are loath to give money to parapsychology. Well, I am sure a lot of this is based on unscientific reasoning. But one of the

things which might worry people is the concept which isn't spoken of so much now, but was a few years ago, of experimenter effects. You, Carl, get vastly significant results in Cambridge and if an experimenter effect is invoked, then it's not very cost effective to give you money, because if a bus hits you that would be the end of the effect. So if the experimenter, over a period of time, can devise techniques and experiments which don't suffer from these experimenter effects, and if some enlightened skeptics are willing to "get their hands dirty" and actually do the experiments as well as proving to the world at large that they haven't lost their marbles in any other way, then the system might work. I suppose patience is the only thing that will get you there. But I think there are ways forward and I hope that these might be explored.

SARGENT: I think there's a great deal of truth in there. First of all, I want to point out that actually I don't want any money from the Research Council, so the point doesn't really apply to me in all that much detail. But I guess the rejoinder is, that's fine, but don't pretend it's rational or scientific decision making. I think your argument has a great deal of validity to it, it's just I think it should be recognized that those decision processes do have very strong arbitrary and conventional elements.

CUTTEN: To refer again to Susan Blackmore's discussion, she is saying that OBEs are not necessarily related to psychic phenomena, there are other explanations. But that is no reason why the subject should be thrown out of parapsychology. And I would like to say that I could not agree with her more because I've had the experience myself of describing a phenomenon and attempting to give an explanation and somebody asking me "What has that got to do with psychic phenomena?" My reaction is that I couldn't care at all if it's to do with psychic phenomena as long as we are finding an explanation. It has always seemed to me that we tend to place rather too much emphasis on the word psychic. I think, for instance, parapsychology is a much more suitable description of the subject than psychic research. It seems that in some quarters if you dare to try and explain a phenomenon they want to discard it altogether and say it's not a psychic phenomenon. In other words, they're not interested in finding explanations, but only in proving that something is psychic and therefore there isn't, and never can be, an explanation. Well, if we go along on those lines we will never get any further at all, and it's almost like saying that psychic phenomena can't possibly ever be explained because when you do explain it it's no longer psychic. I think this is entirely the wrong attitude. It seems to me that the only purpose of research of any kind is to try and find explanations.

BLACKMORE: I can only say that I absolutely agree with you and I

hope that parapsychology will keep investigating all these things regardless of what they turn out to be in the end.

JENSEN: It has been said that we need more proof of the existence of ESP. I think we already have many proofs. I have conducted experiments with remote viewing that clearly indicate that ESP exists. I think you all know the procedure that has been worked out by Targ and Puthoff. The experiments are carried out by a team consisting of an agent, a percipient and two attendants or observers, one for the agent and one for the percipient. The agent observes a target unknown to the percipient who is seated in a closed room without connection to his surroundings. The percipient tells about his or her impressions to a tape recorder. We have made five experiments in the Copenhagen area with a 54-year old housewife as percipient. She gave a poor description of the first target, but an excellent description of the second target and good descriptions of the third and fourth targets. Her description of the last target was acceptable. The first target was a place called Christiania. The percipient did not say anything that corresponded to this place, but some details from the road leading to the place were recorded. The second target was the equestrian statue of King Friedrich V and his horse at Amalienborg Square. Amalienborg is the royal palace in Copenhagen. The agent, a friend of the percipient, was standing very near to the statue looking upwards so she saw the blue sky as background. The percipient said "blue, sky, can it be a horse? I think it is something in the neighborhood of Amalienborg. People are walking about and peering at something. Perhaps it is that figure. Yes, that is probably what it is. It is surrounded by a fence." Later the percipient mentioned the red sentry boxes situated near the palace for the soldiers of the Royal Guard. As you understand, this description was very accurate. You can argue that Amalienborg Square is a well known place in Copenhagen and the percipient could have guessed this place was chosen as a target. But it was not the place as such, but the monument that was chosen and the percipient described it as seen just by the place where the agent was standing. Out of a hundred possible targets in the Copenhagen area, just the right one was described. In the third experiment the target was the Stock Exchange building which is situated near Christianborg Castle. The percipient described a red building with a pointed green copper roof which was correct. She did not mention the name of the building, but she felt that the sending team was standing before Christianborg Castle looking in the direction of the bridge to the island Amager and that was also correct.

A PLACE FOR PARAPSYCHOLOGY IN EDUCATION

KATHLEEN WILSON

The problem of education is an issue which is relatively new to our field, largely because the first century of parapsychology has been concerned with establishing the existence of psi phenomena and, in the course of this, discovering its incidence in the population, its physical limitations and its psychological quirks. Many of these concerns still exist today and consequently parapsychologists see education as an issue which should be dealt with in the dim and distant future, when we have solved some of our more pressing problems.

The majority of parapsychologists are more than happy to accept the study of parapsychology at the postgraduate and undergraduate level; however, the possibility of incorporating parapsychology into our educational system below the undergraduate level seems a pipedream. Neither have we adequately established the phenomena of parapsychology, nor have we the opportunity to incorporate our knowledge of the field into an already established curriculum. Until recently, this is the position I have taken and although I may still agree with the suggestion that we have not sufficiently established the phenomena of our field, I must now disagree with the position that we have *no* opportunities to incorporate it into an established curriculum. In recent years, my experience as a parapsychologist in the field of education has shown me that this clearly is *not* a distant dream, but very much a current problem, and although there exist a fair number of educational opportunities for students at the postgraduate and undergraduate level, the "paranormal" education of anyone under the age of 16 is left largely to the media, whose interest in this subject has never been greater. At present the demand from schoolchildren for information about this area is being generated and in turn supplied through sensational films such as "The Exorcist" and "The Omen," as well as gory books and "real-life" newspaper stories. What I hope to show in the first part of my paper is that there is a big gap in this area of education, which I believe parapsychologists have a responsibility to fill.

Although in a controversial field such as ours this level of education can be problematic, the demand for information from school children

and in turn their teachers is great; in contrast, the resources are extremely poor, which I hope to show in my review of some of the typical paranormal literature aimed at children. Efforts to come to grips with this problem have been made mainly through the education of teachers and I will discuss an optional course in parapsychology for prospective teachers which is presently run at the Polytechnic of North London, as well as a "teaching package" which is being planned and will be made available to all teachers concerned with the incorporation of parapsychology into their curriculum. Of course this is an optimistic prediction for our future, especially with the pressure of educational cuts, but I hope this education can be carried out with the minimal amount of cost and effort.

While concentrating on parapsychology and its relationship to the education of school children, I am not suggesting we ignore the education of other age groups; I support the idea of incorporating parapsychology into all levels of education: undergraduates, who have an interest in the subject and need a foundation for postgraduate research; postgraduates, who will become our future parapsychologists and advance the subject, who will study the literature and experimental techniques and know the questions to ask when working with technicians and experts in other fields; and of course, the general public, who might be better informed on this subject. The reasons I do not plan to concern myself with the education of these age groups is that I believe this is already of great concern to many parapsychologists, not least because of the jobs which are created through courses and the advantages in gaining funding for future research. These groups, undergraduates, postgraduates and even the general public, are to a large extent catered for through societies such as the American and British Societies for Psychical Research, who invite members of the public to join and supply information about conferences, lectures, study days, books and cassettes. In addition, the Education Department of the American SPR provides a comprehensive list of all the educational establishments in the world who offer courses and other study opportunities in parapsychology at the undergraduate and postgraduate level, not only courses leading to degrees, but also non-credit adult education courses. They also produce a "Selected Bibliography in Parapsychology for Instructors and Students."¹ Nearly all the reliable books published in this field are aimed either at other researchers or adult members of the public. In short, almost all the educational material in parapsychology is geared towards the already educated and (arguably) least gullible section of the population.

To begin with, when discussing the incorporation of parapsychology into the school curriculum, there are two important points which need to be questioned: the first is, have we established anything in this field which can be "taught"? If we cannot agree amongst ourselves about the existence of a particular phenomenon, from where it originates or indeed whether it comes under the auspices of parapsychology at all, how can we educate at any level, let alone school children?

The approach I would advocate is not one of teaching facts; it may be more of an exploration, a defining of terms, examination of phenomena, a description of experimental work and perhaps a discussion of the relationship of parapsychology to other disciplines and how it affects our view of the world. If a suitable "teaching package" could be devised and made available to teachers, then this approach could be implemented in a number of schools wishing to explore the area of parapsychology.

The second is the question of indoctrination. How can we persuade schools and, perhaps more important, parents, that we are not filling children's heads with fairy stories? There is bound to be a problem with parental resistance because of the controversial nature of this field, but this is a far more complicated problem which applies to the whole of education, not only to parapsychology. How much influence parents have in what is taught to their children and what subjects are to be covered, for example sex education, is a controversial area in itself, and I do not propose to tackle it here. However, there are two ways one may approach this problem of resistance: one, to make the study of paranormal phenomena a division of an already existing discipline, and two, to counter the resisters with the suggestion that indoctrination is already taking place on a large scale, through sensational "real life" stories in the media and, also, the rise of influential cults. One could take the line that the phenomena should be approached with a questioning mind and hopefully parental resistance can be softened by the suggestion that "to be forewarned is to be forearmed."

I would not like to spend too much time arguing the pros and cons of presenting parapsychology to school children. I believe that the choice has been made for us, largely by the enormous media attention our area has received in recent years and by the lack of sufficient responsible material to cope with this. Putting things into perspective has been thrust on us. There is a bad and a good side to this media exposure: bad, in that much of the media coverage of the paranormal is sensational, exaggerated and inaccurate; good, in that the glare of publicity has put paranormal phenomena in the forefront of public attention and gives

parapsychologists an opportunity to promote the field from a position of respectability, and draw attention to the serious research which is being carried out as well as the need for funding to continue this research. We are provided with a chance to establish a firm footing in the public eye; I do not believe that we should ignore this media exposure, nor do I think we should mount a crusade so that every individual knows the evidence for paranormality; what I *am* suggesting is that when the opportunity arises we should, as parapsychologists, present a reliable and accurate view of this field, whether it has been established or not.

A teacher who conducts a course on, say, health, may invite a doctor or nurse into the classroom to discuss nutrition; but what happens when a teacher (often in response to pupils' demands) wants to explore the paranormal? It appears that he or she would have four alternatives:

- 1) to dismiss the topic as ridiculous or perhaps too frightening, in which case many of the pupils will go out and obtain all the books (probably bad) that they can on the subject;
- 2) dismiss the topic on the grounds that there is a lack of, or no access to proper resources;
- 3) invite a speaker whose only claim to psychic fame is that he wrote a sensational book on a haunting; or
- 4) invite a reliable speaker who is knowledgeable in many areas of parapsychology and who is aware of the controversies, research, case studies *and* who can suggest a good reading list.

Option number 4 is quite unlikely as firstly, the teacher may not know where to contact such a person and secondly, there are very few people around who are this qualified *and* free or willing to talk to a class of school children. In addition, I know of very few suitable teaching materials for this age group and consequently, if this gap is filled with anything, it is usually at best a rather sketchy, wholly unsuitable collection of materials.

No matter how good a case can be made for educating children in the area of parapsychology, it may be academic unless there is a need for information of this type; for instance, material for teachers may be organized and made available, but it would be difficult and possibly counter-productive to press this on schools as a necessary part of their curriculum. However, if requests are made by teachers for information on paranormal topics, it should be possible to refer them to some sort of material suitable for teachers. I will discuss the development of such material later in this paper. If this material, or "teaching package" as I have chosen to call it, is used in some schools, it then may be publicized in others so that its existence and, even more important, its acceptance and use, can be widely known.

The first step towards preparing such a "teaching package" for teachers to use in the classroom with children was to see what kind of requests, if any, were made for information about the paranormal. I did this by collecting, over a period of time, a number of letters from children and from teachers requesting information from the Society for Psychical Research in London. The Society does not have the facilities for responding to many such letters and supplying information, although the librarian writes conscientious and helpful replies. Even then the information supplied by the Society is lacking, largely because suitable resources simply do not exist at present.

I divided the letters into those from teachers and those from children and further divided them into separate categories. By and large the requests from teachers were for a list of suitable teaching materials or a list of suitable books. Many of the teachers requested information about ESP and simple experiments which they could conduct with their classes; some wanted to explore the topic of ghosts (one in particular wanted to incorporate ghosts and spirits into a religious education course); others wanted guest lecturers. Few, if any, requested information about PK. The requests came from all over Britain, from small rural schools, large London comprehensives and public schools such as Eton College. Some came from as far away as America.

The requests from children were more varied, although an overwhelming number wanted information about ghosts; finding and investigating them, especially ghosts in their area. An enterprising group of children from Nottingham, England were even writing a book on ghosts in their area to sell for school funds. Many children were interested in spirits and seances, while some were carrying out projects on ESP or experiments in this area for their school science fairs. I understand that in America, the Midwest Psi Research Institute (MPRI) is offering a prize to the high school student who presents the best parapsychology exhibition for the Illinois Science Fair.² Others wanted information about psi and animals, reincarnation, dreams, or just general material on the "unexplained." Some wanted to join the Society, although they were too young—the average age of the children who wrote these letters was 13.

There were only a few letters from children who said they had some sort of psychic experience and these were those who said they could "see" or dream things which would then come true. Once again, there were no reported PK experiences, which I suspect is because less is known by the public about PK and its various manifestations. I believe this small number of reported events does not reflect the incidence of psychic experiences amongst children; there are probably many children who have unexplained experiences which they either keep to themselves

or do not recognize as paranormal, or do not know to whom these experiences could be reported.

In an article in a recent *ASPR Newsletter*³ Barbara Lovitts described the classes in parapsychology in which she taught 200 "gifted" 11-14 year olds in the University of Oregon's Summer Enrichment Program. Parapsychology turned out to be the most popular option in the program (only a small percentage of the children's parents refused them permission to take the course). She reported that 43 percent of the children related some sort of psi experience; most of them found out about the paranormal through media coverage (a typical book mentioned was *The Amityville Horror*) and none had heard of the Rhines or were aware of the scientific study in this area. From all accounts she presented a well-rounded view of this field: from discussions of their experiences, to ESP and PK, to Zener card and dream experiments. She also invited a magician to demonstrate how easily one can be fooled into thinking that something is "paranormal." Lovitts stressed the need for reliable and suitable material on parapsychology for children and said that her experience with this program showed her the "vast gap between their [the pupils'] curiosity about the subject and the accurate information that is available to and actually reaching this age group."

The suggestion here is that in many schools, parapsychology does not have to be forced into the curriculum; there is a demand from teachers and pupils from many areas of Britain and overseas, which shows that schools are allowing parapsychology into the classroom, mainly through summer programs, science fairs and school projects.

Having established that there is a need for information, the next step was to investigate the resources which are currently available to school-children and teachers. The good books aimed at the under-16 age group are very few indeed; there are many more bad books than good ones and libraries are often not able to differentiate between the good and bad books. It appears that libraries are not even sure where to catalog books on paranormal topics: when I visited the children's section of two London libraries I found a heading of "supernatural" in the card catalog and most of these books tended to be fiction stories about ghosts and fairies; some were cataloged under religion.

A chance look under the medical section of one of the children's libraries produced the book *The Senses: Sixth Sense* by Arthur Nicholls.⁴ I gather this was a part of a series of books about the senses for children around the ages of 8-10. I found it completely unacceptable as a book with which to educate children and like many other books of its kind, certain terms were used inaccurately and some descriptions were deliberately intended to frighten. The author lumped together all the "mys-

terious" and "unexplained" phenomena under the heading of a sixth sense. Apparently normal phenomena such as hypnotism, animal migration and nightmares, magical characters such as fairies and goblins and, finally, psi phenomena such as spoon-bending, "thought reading" and ESP (which did not encompass "thought reading") were all part of this mysterious sense. There was no indication that these phenomena were ever studied in a serious, scientific way. The most peculiar aspect of the book was the crescendo of excitement built up around all of these mysteries, yet on the final page the author says "perhaps the strange sixth senses are just our way of using our forgotten knowledge." I fail to see how paranormal spoon-bending comes under the heading of "forgotten knowledge," and since there is no previous mention of this dimension, I believe it must be terribly confusing for a child reader.

I singled this out as a typical example of a poor book—one amongst many—for the younger reader. I have also seen two of the MacDonald series of books on paranormal topics (mainly ghosts) which are also quite bad, but no doubt appeal to children *because* they are ghastly and gory. These seemed to fall between the serious and the silly, and had no educational value whatsoever.

One of the problems with producing a good book is that it needs to be visually attractive and interesting and, at the same time, balanced and accurate. In addition it must be written simply, which can present problems when trying to explain a difficult concept. At present, finding good books in this area is difficult. In a 1976 article in *Parapsychology Review*⁵ D. Scott Rogo surveyed a number of books on the paranormal aimed at children. In it he singled out *Psi: What is it?* by Louisa Rhine⁶ as the most "inclusive, comprehensive and balanced book to appear for the younger set." This book places an emphasis on laboratory parapsychology and includes examples of typical letters from students about paranormal topics and Mrs. Rhine's replies. Rogo also singled out the Dillon series of books, which had published two books at this point, both considered by Rogo to be of a high standard. I have not seen this series and am not aware of whether there have been any further books published beyond the first two. Rogo also reviews some of the bad paranormal books written for children. Some are "woefully incomplete and error-ridden" with no understanding of the research being carried out in this field. He emphasizes the need for established material for teachers and pupils and found (as I have) that there is much more emphasis on the qualitative rather than the quantitative material.

A good book which was not covered in the Rogo review is *Ghosts and Hauntings* by Aidan Chambers.⁷ Although the title is restrictive (and I can only think that this was so because it was to appeal to children),

Chambers seems to have hit the right blend of titillation and reliable information. He has a good, but now outdated, reading list in the front; the book gives detailed accounts of hauntings and then proceeds to examine them critically. He presents the phenomena as controversial yet critically studied; he defines terms and talks about the possibility that some people who see apparitions may simply be responding to suggestion and he does much of this with just the right amount of humor. There seems to be some confusion about whether a poltergeist is a ghost and whether a nightmare is a psychic experience, but on the whole it is a good book to be recommended to children, although I found some of the pictures rather frightening.

Another book aimed at children which is reviewed in a recent issue of *Theta* by Diana Robinson⁸ is *The Mischievous Ghosts* by Larry Kettelkamp.⁹ According to Robinson this book is a "commendable" attempt to introduce the concepts of PK and RSPK, although the author seemed to pick and choose the evidence for PK, sometimes discarding the more reliable findings for the interesting, but questionable, evidence.

There are more reliable books which can be recommended for teachers, although something like the *Handbook of Parapsychology*¹⁰ may be a bit daunting. A book published this year on behalf of the Society for Psychical Research entitled *Psychical Research: a Guide to its History, Principles and Practices*¹¹ should be most suitable for teachers interested in one reliable book which covers the field of parapsychology. There are a number of chapters covering most aspects of the paranormal, written by leading researchers and investigators in our field. Another reference book which might be suitable for teachers is *Psi Search*.¹² It has a great deal of information supplemented by nice pictures which might serve as starting points for discussions on various topics. A good pamphlet for suggestions about simple experiments is "Tests for ESP and PK" written by John Randall,¹³ who is himself a schoolteacher. Clearly, there are some good books for teachers and a few for children, but this is a neglected area in parapsychology and needs some attention. The question now is, what steps can be taken to promote parapsychology at this level? At present there are efforts being made to deal with this problem centered mainly around the education of teachers. One such effort is to establish some form of parapsychology instruction for students who are training to be teachers, so that they are prepared for the day when their own pupils ask for information about the paranormal. If it is not possible to introduce the subject at this level of teacher training, then information should be made available to teachers who request it; this could take the form of a so-called "teaching package."

The first effort, introducing parapsychology at the teacher training level, is taking place at present here in Britain at the School of Education in the Polytechnic of North London. This course, devised by Anita Gregory and taught mainly by herself with some lectures by myself, is presented as an option to the third and fourth year polytechnic students intending to be teachers. The course, called "Frontiers of the Curriculum," was designed to acquaint prospective teachers with many aspects of parapsychology: theoretical issues, laboratory investigations, the history of the subject, spontaneous cases, etc. The syllabus is divided into three sections:

- 1) historical and psychological perspectives such as belief in oracles, miracles, spirits, etc., and the relationship of parapsychology to psychiatric conditions such as multiple personality, delusions, hallucinations;
- 2) theoretical considerations such as criteria for acceptability of beliefs, what is proof?, possible theoretical models and so forth;
- 3) types of investigation, including spontaneous cases, qualitative investigations and quantitative experiments, in addition to a discussion of standards of evidence required, fraud and the precautions one must take when investigating different types of phenomena. It is not the intention of the course to promote belief or disbelief in paranormal phenomena.

The series of classes in this course are taken up with 50 percent lectures and 50 percent seminars and discussions and students are encouraged to relate their own experiences in this area. The classes are supplemented with excellent videos provided by BBC television and, in addition, slides are used to illustrate some of the lectures. Zener card tests are carried out using the various techniques and precautions for testing are discussed, as well as a demonstration of a simple statistical analysis for finding significance. Students are encouraged to talk to children about their ideas concerning the paranormal. Most of their experiences are similar to those of Barbara Lovitts, that children are incredibly curious about this area, but their only acquaintance with information is through sensational media stories or popular films and television programs.

Students in this course are provided with a good bibliography and are referred to articles on related topics. The assessment of this course is done through essays. It was thought that this was a far better test of the students' capability and command of the subject than an unseen examination with a time limit. Some of the essay questions tax the students' imaginations as well as their knowledge, for instance: "Write an article for a school magazine about a psychic experience and include letters to

the editor (both pro and con) concerning the article." (For more information about this course and the relationship of parapsychology to education, see Anita Gregory's chapter "Teaching psychical research"¹⁴ in *Psychical Research: a Guide to its History, Principles and Practices*.)

If it is not possible to introduce a parapsychology option into a teacher training program (and I fully appreciate the difficulties of establishing such a course), then the alternative or additional path to take is the establishment of some sort of "teaching package" which can be made available to teachers or institutions. I am at the moment working on such an information package in my capacity as research assistant in parapsychology at the Polytechnic of North London.

A package of this sort would need to serve two purposes:

- 1) to provide reliable information for teachers and pupils and
- 2) to provide ways of incorporating this information into the existing curriculum.

In addition, this package could be made available to libraries, local community centers and museums which offer courses.

The package is in its planning stages, but it is to be directed mainly at children in the 11 to 16-year-old age group, and we hope it will present a reliable appraisal of our field which will be simple enough for children to understand. One of the problems of incorporating parapsychology into the school curriculum is that this subject may be presented in a very over-critical way in reaction to some of the media sensationalism. This highly critical approach, which may ignore some of the good evidence for psi, can be as unsuitable as the exaggerated media exposure. This is one of the reasons why it is important to have a balanced teaching package available and publicized.

In this package we hope to include:

- 1) a bibliography for teachers and pupils which would include information about all areas of parapsychology, especially the different types of investigation (poltergeists, hauntings etc.) and how these are conducted, and experimentation (including research methods and findings);
- 2) a list of speakers in their area who would be willing to talk on the subject;
- 3) suggestions for projects, for example, the teacher may want to take a popular and sensational account such as *The Amityville Horror* and discuss it in depth, especially the way that the media approach a case; or, the children could write either about their own experiences or possibly an imaginative one and these may then provide a stepping stone for

discussion. They also may be able to apply what they have learned about spontaneous case investigation to their own examples;

4) simple ESP tests could be provided.

Teachers should be encouraged to discuss with their school librarians the acquisition and cataloging of suitable books on the paranormal.

It could be difficult to establish parapsychology in the curriculum, so I am not suggesting that it be treated as a course in itself, such as English or mathematics. It might be quite easy for the school to axe such a course when looking for ways to cut down the curriculum. However, there are several subjects which would allow parapsychology an opening, for instance:

1) History: perhaps the class could take a field trip to a local "haunted house" and "investigate" the case as an investigator would: interviewing the local residents, checking the history of the house's previous residents in the local records office, etc. A section on witchcraft in a history class may allow for a discussion of the paranormal.

2) English: children could be encouraged to write on a paranormal topic for a creative writing exercise, or the class could discuss the paranormal in relation to existing literature such as fairy tales and plays like *Macbeth*.

3) Anthropology: there could be a discussion of the different cultural attitudes to a phenomenon, for instance, reincarnation.

4) Computers: the rise of computer science in schools is an ideal place for a discussion of PK or even ESP; there already exists a PET computer program that provides a precognition test which is simple and enjoyable.

I have tried in this paper to make a case for educating schoolchildren in parapsychology. I am aware of the many problems one may encounter: resistance of schools and parents, lack of resources such as books and, in addition, the cutbacks in publishing which will prevent us from producing suitable books, not to mention cutbacks in teacher training colleges and school resources. Despite these problems, I believe the difficulties can be overcome and we should press for better resources for this age group. There is most definitely a need for information to be presented in a balanced, reliable fashion. Nearly all the educational material available in parapsychology is directed towards adults, yet teachers and pupils too are eager to learn about the paranormal and we as parapsychologists should provide that information. The resources which are currently available are not sufficient and we must try to improve them. Perhaps our course at the Polytechnic of North London and the teaching

package we are devising will go some way towards this. Some information, however little, may be incorporated into the curriculum without too much effort or alteration on the part of teachers. I hope I have made a case for the education of this age group: we never know when we might be teaching some of our future parapsychologists.

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DISCUSSION

HAYNES: I'd like to ask Kathleen Wilson how much evidence she has that children continue to be interested in parapsychology, once the thrill of the exorcist and the ghosts and all the rest of them is gone. Having had children and grandchildren of my own I have occasionally answered some of the children's letters to the SPR. I never got any comeback from any of them at all, not one. I have also had to go and speak to a college of further education whose pupils were supposed to be between O and A levels and I gave what I thought was a reasonably entertaining account of psychical research. I then asked for any questions and they sat like a row of suet puddings. They didn't seem to be interested. What they wanted was the kick. I also wrote for the end of the Aidan Chambers

book of which you spoke; a sort of guide to ghosthunting. I don't think either Aidan Chambers or I ever had any comeback on this at all. I don't want to cramp your project. I think it's most enormously interesting and I'm so glad you spoke about it. But I do wonder what the amount of curiosity in children is.

WILSON: I think it's difficult if you answer letters and they don't reply; you don't really know if they've dropped it. I think because there isn't very much information geared towards that age group, they do drop it. I do think that that's a problem that we have to solve. They obviously do want something exciting and if you don't present them with wonderful ghosts and horror stories they're just going to go onto something else. But I think it's a problem that we have to find a way of solving, how to mesh the two, not only making it interesting, but reliable and suitable.

SPINELLI: I have a great deal of sympathy with what you've said and having spoken to a great many 13 to 15-year-olds in the same situation I quite agree with a great many points you've made. But I think that the problem lies not so much in the topic of parapsychology, but rather with the lack of appreciation and understanding of the experimental approach which a great deal of parapsychology presents. I think we find this in schools and we find this in the media. Whenever scientific programs or quasi-scientific programs on the paranormal are presented in which experimental evidence is produced and shown the audiences drop off dramatically. The only programs that really succeed are the ones that, in a sense, evade this issue. I think this is because most people don't understand and don't value this experimental attitude. Now, until that approach or that point of view is appreciated by school children and by teachers as well, I don't think we are going to achieve the situation that you would like. But, essentially, I don't see it as a problem for parapsychology alone. It is a problem of the social sciences and of the biological sciences.

WILSON: I completely agree. I think the only way you're going to get around that is to actually do an experiment with a group and say for example, "Well, you know I could have known this normally because we weren't in different rooms." Point out all the difficulties and problems in running the experiment. I think the only way you're going to get them to understand is to actually do an experiment with them.

RONEY-DOUGAL: This discussion really takes me to the point of a suggestion I was going to make, which is incorporation of what one might call psi games—especially with the younger children. I know that five and six-year-olds especially are really very interested and intrigued by the magic of it all, of being able to find the hidden object, for example.

And if you can not only talk about it, but actually incorporate something at a games level which can then, as they get older, turn into more of an experimental level, I think that this is a way of keeping their interest, allowing the children to experience psi for themselves. According to Ernesto's work, a lot of them are doing so at home, but it gets sat upon because their parents don't understand what is going on.

WILSON: I completely agree with the idea of games. I think it might be a good way of finding subjects, too.

BLACKMORE: I have had very much the same experience as Renée Haynes. I've given a lecture to a lot of school children and asked for any questions, expecting a flood, and they sit there. But as soon as you force them to do something for themselves it all changes. And I've been able to tackle even fairly difficult things—I'm not talking about young children, but teenagers—even statistical questions, quite easily by simply doing an experiment. They get six out of twenty-five on average and you ask what it means, they'll come up with what are essentially statistical comments, such as "Well, how do we know it's not just chance?" The discussion can become quite lively, quite interesting, but it is very hard work to do and it is not something that I do for pleasure. I find it exhausting. I think one thing that would seem to be very successful in the SPR at the moment are the Study Days we're having, where you have a whole day on one topic with five or six speakers telling about something that really interests them and an audience participating a lot. I think we could have Study Days with much younger groups, where there would be time for them to actually take part in several tests and you could force them to discuss the topic. You're only talking about a small number, but I think it would be far more valuable to do something like that with a small number rather than try and push information unwillingly down the throats of a large number.

WILSON: I completely agree with the idea of Study Days geared towards children. As they stand now, I think the Study Days would leave children behind. It is a very good idea and not a difficult thing to do.

SARGENT: I've never had the experience of talking to a group of children and they had nothing to say at the end. I think it's really a question of how you take it on. First of all, when anybody with any inclination towards experimental work has the chance to talk to a group of any age or any size, you should immediately regard this as an opportunity for collecting some data, in addition to giving them a talk. It really should be mandatory. Another thing that occurs to me is that you can get over the problem of short concentration span and boredom effects very much more easily now than you could ten years ago and you'll be able to even more easily in a couple of years' time with the

advent of computerized and automated procedures, where you can carry a Sinclair Spectrum around in your pocket and plug it into your television. If you adapt a Space Invaders game or something like that, you won't have any problem with the children wanting to know what it's doing and why it's doing it. The only problem you will have is getting it away from them in time to get home at night. You'll have to pull them off it. I think their interest does persist, because I can remember a couple of occasions in which I had forgotten to leave a reading list or something of this kind and I have been phoned very quickly by the master, "For God's sakes, they all want to read things!" In two or three cases I had to deposit a copy, let's say of Gardner Murphy's primer, which is good as an introduction, in the school library because interest was sufficiently great that they would want something the children could read through.

BLACKMORE: Here we're talking about people like you and me, but Kathy's been talking about the ordinary school curriculum. The teachers are not going to have the same attitude as we have. So we're really talking about a very specialized in-school group.

SARGENT: I mean, people teach chemistry by showing experiments and they teach biology.

BLACKMORE: Yes, but that's a chemistry teacher; there aren't any parapsychology teachers.

SARGENT: I mean somebody who is teaching general studies. If he's going to be teaching, let's say, economics or geography, he's not going to rely entirely on charts and maps and such things; he should have something more than that to give the children. With automated procedures coming to many schools as standard systems, a simple ESP experiment should be a pushover.

WILSON: I always use the simple ESP experiment and then they get excited about it and start talking. I mean there are lots of levels one can fit into the school curriculum. Another is having parapsychologists in to talk to groups. I know a lot of people don't have the time to do that or don't want to do that. But I think there are a lot of practical ways as researchers we can help. We need to have a two-day conference on education.* If we teach courses for college students can't we design them for younger age groups? You know there are practical things I think we can do as parapsychologists.

BIERMAN: I'm much more pessimistic about the lasting effects of any such package in the schools, with computers or with tests or without. I

* See *Education in Parapsychology*, Proceedings of an International Conference held in San Francisco, California in 1975. Published by the Parapsychology Foundation. 313 pp. \$13.50.

think I agree with Spinelli that it's not up to us what should be taught to the children. What should be taught in my opinion is how to deal with uncertainty or ambiguity, not especially with parapsychology, but how to deal with uncertainty so that they should lose their fear of the things they are not certain about. Later on they can deal with parapsychological phenomena at a much more fundamental level.

WILSON: I would completely agree with that, but I think that parapsychology would be a way of teaching them to deal with uncertainty.

BIERMAN: Yes, but if it is introduced occasionally it doesn't work. It should be at the fundamental of teaching that you deal with uncertainty.

WILSON: Right, it is a problem for teaching.

BEYOND PARAPSYCHOLOGY: THE USE AND THE MEANING OF PSI PHENOMENA

EMILIO SERVADIO

Parapsychology's start was confused and confusing. We can hardly forget that its matrix was spiritualism. The latter moved along two lines of approach. One was a strong belief in human survival after death. The second was the hope that some phenomena—mainly manifested by exceptional persons—could some day give the actual demonstration of the aforesaid belief. Nay, for many of the first spiritualists, evidence in this respect had already been reached and they were, in fact, somewhat scandalized when some people dared to express a different opinion.

In spite of the fact that some philosophers and men of science contended that a certain amount of paranormality could be found, sooner or later, in every human being, the parapsychological pioneers were almost exclusively interested in rare subjects and in exceptional phenomena. Even those scientists who manifested a skeptical view about spiritualistic statements were keen participants of mediumistic sessions. They were mainly looking for extraordinary subjects even when they were studying—in their laboratories or elsewhere—such phenomena as telepathy or clairvoyance.

However, a difference of attitude was soon established. The first experimenters were more or less emotionally "involved" in the performances and, if we read their reports nowadays, we cannot refrain from wondering how some of them could at times, when attending a mediumistic seance, abandon their usual attitude of men of science as easily as one can leave an overcoat before entering the dining room. Nevertheless, the attitude that slowly prevailed was that of obeisance to the scientific method according to the classical, Galileian or Newtonian paradigm. The starting point was a general admission of the existence of strange phenomena that were on the fringe of those usually recognized by physics, psychology, physiology and science in general. The second point was the conviction that such phenomena had to be studied in a scientific manner, i.e. with the same detached attitude of the geologist who examines a curious stone. "Objectivity" was the watchword. Para-

normal phenomena were "objects," strange and rare as they might have been, and could therefore be investigated by scientifically-minded "subjects," with the use of scientific methods.

But *could* they? First of all, it became apparent, due mainly to the development of the quantitative approach, that in a certain way, those few old pioneers who believed in the existence of some paranormal possibilities, tenuous and latent as they may have been in every creature, were pretty right. But the main revolution was the overcoming of the subject-object paradigm in modern science. It is hardly necessary to mention here Heisenberg and the "principle of indeterminacy" (1926) and all the rest that followed. In the psychological realm, everybody knows nowadays that even in the administration of the simplest test, a particular rapport is established between the psychologist and the person who is being tested. In psychoanalysis, the recognition of the transference-countertransference interlock as part and parcel of the whole analytical relation has been made long ago. In parapsychology, a similar recognition has been slower, in spite of the views that have been expounded by some workers in the field, such as Lawrence LeShan, Jule Eisenbud, John C. Poynton or Elmar Gruber. At the 1971 Conference of the Parapsychology Foundation I strongly emphasized the necessity of taking most seriously the idea that parapsychologists should look into themselves with the same keen attention and zeal they develop when looking into the subjects of their studies.

Some time ago I wrote a paper, "Mysticism and Parapsychology," in which I tried to show that the "objective" approach to psi phenomena presented by many mystics was possibly the wrong one and that, perhaps, such phenomena were "at home" at the mystical level, whereas they still appear "unfamiliar" to us. I am wondering about the aims and the conclusions that might be reached by considering the psi phenomena of Saint Theresa of Avila or those of Saint John of the Cross, in a so-called "objective" way. And, of course, I wonder what advantage could come to our knowledge by the study that such eminent parapsychologists as Karlis Osis and Erlendur Haraldsson have made of Sathya Sai Baba. I am rather inclined to think that for the above-mentioned saints, and for the modern saintly man, the "phenomena" in question were and are quite "natural"!

The aforesaid examples could be enhanced by other ones. With a few exceptions, the same attitude ("our task has simply to be the study of the phenomena") has been shown by parapsychologists towards Yoga, Zen, Tibetan Buddhism and other doctrines and/or schools of thought, that aim at self-realization and assume the existence of a metaphysical Reality. Their tenets, doctrines, practices, rituals are largely *terra incog-*

nita for the majority of parapsychologists, who observe the effects and the processes, but do not look for their frames of reference, even less for their causes. They seem to avoid, or to shun, the very idea of an "explanation." Some time ago, a prominent parapsychologist told me that he was absolutely certain about some ESP phenomena that were presented by an Italian monk. He was nonplused and angry when I simply retorted "So what?"

I have asked myself sometimes to what extent the majority of parapsychologists have reflected about the very concept of "psyche" that is silently assumed by the discipline in which they operate, just as it appears in the words psychology, psychoanalysis, etc. In 1941, in a little book titled "The Myth of the Mind", a man by the name of Frank Kenyon contended that the very idea of a mind, or psyche, was preposterous, and that future generations would simply laugh at such a pseudo-concept. It is quite well known that contrary to Kenyon's expectations, the opposite has occurred, and that the essence and priority of a psyche has been defended and supported by prominent scholars belonging to different scientific disciplines, such as Sherrington, Eccles, Penfield, Sperry, Pribram, Charon, to mention just a few among them. Curiously enough, due probably to my ignorance, I have not found any such staunch defense of the concept in the parapsychological literature, although some of the above mentioned authors (such as Eccles, Pribram, Charon) have shown an interest in parapsychology as a side-line to their main research fields and theoretical views. In a psychoanalytic review, four years ago, I did my best to show that Freud himself believed in the "reality of the psyche," an expression that C. G. Jung has used as a title for one of his books. Could it be that some parapsychologists are afraid to show their acceptance of a concept that did not scare Freud, Jung, or—to mention one of our great pioneers—F. W. H. Myers?

My vindication of psyche as an immaterial entity goes much further. For several years now, the concept of "transpersonal" has gained momentum in the psychological realm and has had important reverberations in theoretical parapsychology. Among the few who have seriously considered the implications of transpersonal psychology for what concerns our search, W. G. Roll presents the psi field in a clear and uncompromising way, with his contentions about field consciousness and what he calls the psi structures. But long before him, in a chapter of *Awareness*, Eileen J. Garrett had written regarding what she felt when she practiced as a sensitive subject: "I have an inner feeling of participating, in a very unified way, with what I observe—by which I mean that I have no sense of I and any other, but a close association with, an immersion in, the phenomena. The 'phenomena' are therefore not phenomenal while they

are in process; it is only after the event that the conscious mind . . . divides up *the unity which, after all, is the nature of the supersensory event*" (italics are mine). Roll, as we know, purports that the psyche as a whole overcomes the empirical boundaries of the bodily Ego and permeates other "objects," psychical as well as physical, with which it becomes in turn permeated, whereby an indivisible continuum is established. Psi phenomena, according to Roll, are the outcome of processes that take place "inside" structures, not "between" structures. A French author, Francois Favre, wrote in 1976 that the very term ESP introduces a questionable and probably wrong assumption, that of a "psi transmission." ESP, he says, "is an interpretation, not a definition"; wherefrom an innumerable quantity of works has developed, regarding the different, objective kinds of psi transmission. "All perfectly useless," he says.

Summarizing what I have considered so far, I am compelled to state that the original idea of the parapsychological pioneers, who hoped to establish parapsychology as a science, with its well classified objects and abiding by the classical scientific requirements, has brought us to an *impasse*. This is no denial of what parapsychology has obtained and achieved in about a hundred years. We all know that much has been demonstrated, that many wrong assumptions have been ruled out, that many processes and mechanisms of ESP and/or PK have been classified. But all in all, we cannot be too proud of the results. In my considered opinion, to hope for a unifying theory that will some day encompass the whole of parapsychological phenomena, is futile and vain, if we should go on along the rails of a so-called "objective," scientific approach, that has already shown its shortcomings in several—much more official and academic—disciplines.

In this respect, and at this point, I would like to state that in my opinion, the so-called psychotronics promoted and stressed by Czechoslovakian and Russian researchers, has gone exactly the wrong way, trying to "squeeze" psi phenomena even more into a downright materialistic box, and refusing to pay any attention to a "psyche" which could have some independence from neuro-anatomical and electrophysiological bases. This, by the way, looks like the n^{th} repetition of an old mistake. We all remember how in the last century—and in *this* century, at that—several people have tried to assess, to measure, to capture the presumptive "fluid" of magnétiseurs. In recent years, some candid researchers have believed that the Kirlian photographs were revealing the existence and the essence of some preternatural—but not immaterial—aspect of human personality; the "aura," the "bioplasma," or other emanations. This persistence in trying to put immaterial entities in tangible and solid

containers reminds one of an old sarcastic saying, i.e., that the participants in certain spiritistic séances were, in fact, staunch materialists, because they wanted everything materialized, even the spirits!

But if, as I have contended, the above-mentioned way (I mean, the positivistic-psychotronic way of approaching and defining psi phenomena) is the wrong one, what could then be the *right* one? In this respect, I have to move into a quite different conception of things, of reality and our relationship with the phenomenal world.

May I quote, first of all, some illuminating lines from a book with which, possibly, not many parapsychologists or scientific researchers are acquainted nowadays, namely, the *Tertium Organum*, by P. D. Ouspensky. In my opinion, this book is one of the most important philosophical texts that were composed in the first part of this century. *Tertium Organum* was written around 1918–1919 in Russian and was published in English in 1920. The paragraphs I am about to quote are taken from the third American edition of 1955. Here they are: “There exist visible and hidden causes of phenomena; there exist also visible and hidden effects. Let us consider one example. In all textbooks on the history of literature we are told that in its time Goethe’s *Werther* provoked an epidemic of suicides. What did provoke these suicides?

“Let us imagine that some ‘scientist’ appears, who, being interested in the fact of the increase of suicides, begins to study the first edition of *Werther* according to the method of exact, positive science. He weighs the book, measures it by the most precise instruments, notes the number of its pages, makes a chemical analysis of the paper and the ink, counts the number of lines on every page, the number of letters, and even how many times the letter A is repeated, how many times the letter B, and how many times the interrogation mark is used, and so on. In other words he does everything that the pious Mohammedan performs with relation to the Koran of Mohammed, and on the basis of his investigations writes a treatise on the relation of the letter A of the German alphabet to suicide.

“Or let us imagine another scientist who studies the history of painting, and deciding to put it on a scientific basis, starts a lengthy series of analyses of the pigment used in the pictures of famous painters in order to discover the causes of the different impressions produced upon the beholder by different pictures.

“Imagine a savage studying a watch. Let us admit that he is a wise and crafty savage. He takes the watch apart and counts all its wheels and screws, counts the number of teeth in each gear, finds out its size and thickness. The only thing that he does not know is *what all these things*

are for. He does not know that the hand completes the circuit of the dial in half of twenty-four hours, i.e., that it is possible to tell time by means of a watch. All this is 'positivism.'"

Later in the same chapter, Ouspensky states: "The positivistic scientist finds himself in the presence of nature almost in the position of a savage in a library of rare and valuable books. For a savage a book is *a thing* of definite size and weight. However long he may ask himself what purpose this strange thing serves, he will never discover the truth from its appearance; and *the contents of the book* will remain for him the *incomprehensible noumenon*. In like manner, the contents of nature are incomprehensible to the positivistic scientist. But if a man *knows* of the existence of the contents of the book—the *noumenon* of life—if he knows that a mysterious meaning is hidden under visible phenomena, there is the possibility that in the long run he will discover the contents. For success in this it is necessary to grasp the *idea* of the inner contents, i.e., the meaning of the thing in itself."

Some years ago, in an article that was published in the *Parapsychology Review* (1976, 7, 1, 26–28) I rather boldly contended that in nature there are two totally different kinds of thinking, with many intermediate degrees of course, but of basic contrary essence. One of these would be a universal, non-conscious, timeless, spaceless thought, representing the inner face of nature. This could also be called, and has been called by thinkers and philosophers, Absolute Being, Unconscious with a capital U, Total Awareness, Brahman, etc. It would be the essence beyond manifestations. The other would be external, individualized thinking, concentrated in this or that animal or human daily consciousness, a point from which everything else would appear as "other," as an "object," including single bodies, personality, states of mind and all the so-called "phenomena"—including those that we call "Paranormal."

Along centuries and millennia, long before the time when the study of the outer face of nature was assumed to be the only legitimate and dignified one, many seers and sages have shown that the inner side of nature and the thinking that is proper to it were, by far, for them the true ways of experiencing reality and moving psychologically into it. Strangely enough, they were quite often involved, in one way or other, with those occurrences that, in times to be, were to be called "paranormal"!

It is quite true that no great seer, or saint, or initiate, either in the East or in the West, has given any particular importance to those phenomena. Nevertheless, the *Weltanschauung* that is typical of many traditional, ancient texts contains, so to speak, a complete interpretation of them. Some Christian mystics saw in such phenomena either natural

or divine or diabolical manifestations. This was obviously a transposition and a restrictive way of expressing something that was, at the bottom, quite reasonable. But in the Vedantic tradition, in some of the *Upanishads*, a complete assessment of paranormal occurrences can easily be found. In a rather simplified and synthetic way, the following scheme seems to adequately summarize the whole conception.

Beyond every form that appears there is a basic "presence-consciousness." Every appearance is a symbol of the One, which is primarily an inner consciousness of the Being, of which everything that we perceive is a refraction. At the highest point of realization, when the awareness of the One is reached, the categories and limitations of space, distance, time, duration, causes and effects, singleness and plurality, etc., are bypassed. The consequences of the complete overcoming of duality can be manifested in the phenomenal world: ESP, creativity, so-called intuitive knowledge, solid objects that move in "sympathy" with a particular yogi, healing of bodily ailments, objects that "magically" appear or disappear. All this becomes possible in a way which we cannot provoke at will, even if we can make it easier and control it to a certain extent. Fundamentally, they are phenomena that confirm the true nature of Being and reveal its universal identity.

This Vedantic way of considering what we call the "paranormal" does not rule out a scientific, empirical approach. Nevertheless, I am inclined to admit, following the Italian philosopher and essayist Giulio Cogni, that "the supernormal is the profound normal of Nature as a whole and that it gives the best possible evidence of the fundamental truth of the vision of the world as taught by Yoga and Vendanta."

It seems to me that the "intermediate levels" of thinking between the two extremes of the positivistic attitude and the total merging into the inner face of nature have much in common with the so-called "altered" or "different" states of consciousness, about which so much has been written and experimented on in our recent psychological and parapsychological years. I myself have written a paper on the subject. It was reprinted in 1977 in one of my books. A few points seem worth attention, namely:

- 1) some of the aforesaid "states" are probably less different from one another than somebody may have thought (e.g., sleep in the REM phases, hypnosis, meditative states and trance);

- 2) in parapsychological research, a particular attention was given to possible "psi-inducing" states, much less to what such states actually are *per se*, independently of the fact that they could, or could not, be favorable to the production of psi phenomena;

3) in particular, that most researchers have investigated the aforesaid states adopting the classical, experimental approach, without thinking too much about an unavoidable fact, i.e., that such an approach is bound to find the same limits that the old experimental psychology has always found.

Of such limits I tried myself to give a description some years ago, in an article concerning mediumistic states (*Parapsychology Review*, 1976, 7, 1, 26–28). It may come to mind—I wrote, more or less—that perhaps our approach is wrong; that maybe we have insisted on trying to understand mediumistic states from “outside,” as it were, instead of considering them from the “inside.” However, it has to be admitted that a parapsychologist trying to get a grasp of a mediumistic state by using the so-called “third ear,” or through a well-intentioned identification, could not have great hopes of obtaining a real understanding of what is going on in the mind of a trance subject. But what about the subjects themselves? Well, it can safely be said that, so far, not much has been obtained even from those who were seriously trying to comply with certain requests. Many times, when a medium comes out of his or her deep trance, he does not remember a thing. If the medium has gone into a not-so-deep trance, he will tell us that he felt somewhat “dreamy,” or something similar to a mild intoxication and, at the most, that he had felt a different way of relating with objects, as if the distinction between subject and objects had lost a good deal of its customary aspects. Really, such descriptions do not take us very far and, moreover, they are not typical of mediumistic states. A person who refrains from day-dreaming, or experiences a very superficial sleep, or drowsiness, would tell us more or less the same things.

My article went on as follows: “Having reached this rather frustrating point, we are bound to try some quite different approach, to start from a reconsideration of mediumistic states as different ways of contacting reality, which compels us to review our definition of what reality is for most of us.”

I concluded the paragraph with a question, namely, if “other ways of perceiving and dealing with reality could not represent respectable, important, perhaps altogether preferable alternatives?”

In one of my previous remarks, I showed some perplexity regarding our attempts, so far, to label several of the so-called “altered” or “different” states of consciousness. I want now to point out that these attempts are far from being “new,” even if some people may think otherwise. In one of the most profound of the traditional Vedantic texts, the *Mandukya Upanishad*, it is said that there can be four different states in the manifestations of the Brahman-Atman, namely:

- 1) the waking state, with "wide possibilities of outer knowledge of everything that is in the world";
- 2) the dreaming state, which is or can be an inner way of knowledge;
- 3) the sleeping state, which is unity of being, pure presence, pure undifferentiated knowledge, inner luminosity;
- 4) regarding the fourth state, I may only quote the lines of the *Upanishad*: "Invisible, unapproachable, beyond definition, unthinkable, undescrivable, sole selfsufficient Self, in which all manifestations are dissolved . . . This is the Fourth State, according to the Sages."

In the opinion of the already mentioned Italian scholar, Giulio Cogni, a more or less pronounced abandonment of the waking state (he calls it "a more or less intense, more or less recognizable trance") is the general premise of all psi phenomena. Cogni contends that trance can be compared to "putting one's own head under the water." He also writes: "conscious *attention*—that is, the phenomenon of the individual soul—slows down and leaves the center. The psychological essence of trance is absolute distension; he who is in trance becomes similar to things, completely passive and alienated. He who enters into trance *literally loses his own soul*, according to the saying of the Gospel: and, thereby, gains life eternal; in fact, it gains that immortality that everybody expects in vain for the particular, individual soul, whereas it is philosophically beyond doubt that no kind of immortality can be the lot of a particular soul, which by definition is limited, partial, and therefore dependent on time and on becoming."

It really seems that even the most down-to-earth and committed parapsychologists can reach a point in their search, where they are compelled to give up all efforts to "explain" the paranormal along the lines of so-called objective, scientific observation. Those who are not a priori attached to an "all or nothing," Galilean, positivistic approach to such or such parapsychological enigma have often been able to give some attention to other approaches, different from those of positive science, and identical, ultimately, with those I have expounded on at some length up to now. Towards the end of a masterly work on precognition, a book titled *Paranormal Foreknowledge*, Jule Eisenbud gives his readers a fine example of what I have just pointed out. In fact, he writes as follows: ". . . When I am tempted (as I sometimes am) to cede to Time all the intractable mystery that the profoundest minds of centuries have accorded to it, I feel somewhat secure in at least having left a place in the compound theory for a still obscure X-factor. I am aware, moreover, of a strong inclination to believe that we may never fathom the ultimate mystery of such a factor so long as we remain imprisoned within conventional logic (and our penchant for mechanical models)—or fail to

learn to translate into some set of communicable signs and symbols that ineffable unity and timelessness that mystics of all ages claim to have experienced directly."

It seems to me that such a paragraph by a brilliant psychoanalyst and parapsychologist like Jule Eisenbud should not be underscored by any open-minded researcher in our field.

Summarizing, I assume that in parapsychology, experiments or observations in the classical sense, as advocated by Galileo or Claude Bernard, are simply not possible or, at the most, insufficient and leading us nowhere. Parapsychology has always got something that can be considered arbitrary. Psi events always show an irreducible association of objective descriptions and subjective applications; hence the relativity of its assessments and of its interpretations. Psi events have transtemporal, transspatial and transpersonal characteristics. This is why they cannot be contained within an objective, rationalistic box. However, it has to be declared that parapsychology, besides disproving a lot of superstitions and false beliefs, has painstakingly examined and underlined many correspondences and analogies that have been intuitively perceived by many seers, poets and artists of all ages.

What will be, then, the future of parapsychology? Frankly, it is a question of changing or dying. If psi events cannot be located against the background of a purely scientific philosophy of nature, we have to go back to the approach of the Vedanta, of Yoga, of Zen, or, to quote some Western sages, of a Plotinus, of a Pico della Mirandola, of the neoplatonists in general, i.e., to a philosophy of nature that does not rule out imagination, self-realization, creativity, universality, and identity. Therefore, two things can happen. If the objective-materialistic approach, with its psychotronic, hyper-reductive aspects, will prevail, parapsychology will become a bloodless entity, a skeleton. If a renovated philosophy and a different frame of reference are adopted, parapsychology could have an important role in the torpedoing of the old ideological containers, a torpedoing that is visibly in progress and that seems typical of a revolutionary aspect of our present culture. It could really promote a spiritual, not spiritualistic, exploration of the so-called paranormal. The latter alternative will prevail if we accept that nowadays parapsychology faces a no-way issue and that its future depends only on our ability to carry out its complete transformation.

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DISCUSSION

BELOFF: Well, first may I say it's impossible to listen to Dr. Servadio without being well aware all the time that he brings to bear in what he says a lifetime of experience, knowledge and wisdom which must command the respect of us all. I can say more than that, but I agree with a great deal of what he says, in particular with the idea, which I share with him, that psi phenomena have something to do with the mind, with the spirit. It is a bloodless caricature of the field to try and convert it, as has been attempted in the psychotronics you mentioned in Eastern Europe and some of our Western theories, into some kind of quasi-material force. But having said that, I have certain very strong differences in my approach from his, because in his paper he again raises this apparent conflict which came up in Elmar Gruber's paper, the conflict between the participatory approach, eked out with references to these various mystical disciplines, which can lead to a more profound understanding than our Western idealogical approach can give us. What he failed to stress was that there are enormous dangers in abandoning the very contribution of being the most distinctive thing that the SPR and Western tradition has offered to the study of the paranormal, which is precisely the scientific method and the objective approach. And I think that there is always liable to be a certain confusion between the question of what is the nature of the phenomena themselves, about which we can speculate endlessly, and the method we've got to go about establishing the objective existence, the evidentiality of what we report and so on. It seems to me that the one thing doesn't commit one to the other. I mean Dr. Servadio could use Ouspensky to show that the scientific approach was really a sort of superficial, rather pedantic kind of positivistic approach that is in fact a caricature of what should be meant by a serious scientific study. Don't let us be misled by this sort of caricature into saying, therefore, that we can drop our safeguards, that we don't need them anymore. Documented reports and careful recordings and witness, we need all these things. Because we've got to tread very carefully, we may be misled by our own delusions, by our own beliefs, our own

wishes and so on. These one hundred years have taught us we've got to be awfully careful about this. It seems to me that tremendous dangers open up for the whole field if, at this stage, because of this kind of talk and because of our own doubts about the values of the scientific method, all this is just going to be dropped carelessly. I think the whole field would regress again to what it was when the SPR was founded.

SERVADIO: Thank you very much, Dr. Beloff. I think I am technically in agreement with all you said. I realize very well that the description by Ouspensky was a caricature of the positivistic approach. In my own talk I pointed out that the scientific approach has its great merits. I realize also the danger you pointed out, that is, that some people would just abandon a certain line of study and approach and go into a vague mysticism of some kind, completely abandoning the scientific field. But, I think that in this sense some saints gave us the great example, because they were mystics and at the same time very practical people. Just at lunch I was quoting the example of St. Theresa of Avila, who was certainly a great mystic, but she could really pull up her sleeves and work with the workers and aid them to build the seventeen convents that she founded. So she could stay very much on the ground, besides being an ecstatic and having all the mystical experiences that she relates. All in all, I don't think there is any great difference because I have stressed more than once the great importance of parapsychology as a science.

RONEY-DOUGAL: My question is difficult to ask in a way because I'm not too clear myself exactly how to formulate the questions. When I first started working, I worked at great depth with the people who were acting as the participants in the experiments. We saw psi successes as being in some way milestone markers in their own development as human beings, in their spiritual development, one could say. But on the other hand, I'm not too sure what relationship psi ability has to spiritual development, because there are many psychics and mediums who as human beings are no better than anybody who is totally non-psychic. And there seems to be a paradox here. You talk about the great mystics and the great saints who show intense psychic abilities, the Yogi, Sai Baba and so on. And then you have the mediums and some psychics who as human beings are not more spiritually developed than anyone else. Some of the people who work in depth in experiments do show clearer mental or spiritual development than others and yet some don't. There seems to be a confusion here for me, anyway. Maybe you could clarify it.

SERVADIO: Yes, I think I can. In the article that was published in the *Parapsychology Review* I tried to make a distinction between a medium and a mystic and an initiate. The medium can be a nobody—as a per-

sonality can even be a criminal. But let's call the medium just a person like anybody else. The medium opens doors without knowing what these doors are and what is behind them. Sometimes nothing happens, nothing comes through the doors. Sometimes many beautiful things come and sometimes very nasty things come. This is more or less the mediumistic state. Not all mediums are like that. Eileen Garrett was very exceptional in this respect. Although she was called a medium, she was much more than that. But many mediums are of this kind. The mystic is somebody who believes in a supreme entity, in God or Jesus Christ, and tries his best to get perfection in himself and sometime to reach paradise. So this puts him in a different ethical category vis à vis the usual medium. Then there is the initiate. The initiate thinks that this entity is not outside somewhere in heaven or in some particular place outside of himself, but it is mainly in himself as a sort of spark that can be augmented, whereas the mystic projects his inner sun outwards and venerates or adores it. The initiate works along several lines—meditation, yoga and so on, just to kindle this original fire that is within himself in order to become a god himself.

SARGENT: I would like to agree with John that the Ouspensky quote is rather unfortunate, because it is attacking a straw man. No scientist would behave in the way that is given in Ouspensky's example, so it's unfortunate. But I don't think that anybody is doing what John seems to think they are trying to do. That is to say that science is something nasty that the dog brought in and we'd like you to take it away now so that we can go back to the 16th, 17th century kind of prerationalistic magical thinking or something like that. What many people from different viewpoints have been trying to stress during this conference is that there are really limits on how wonderful science is. And there are doubts about what science is. There are doubts about the conceptual foundations of science. If I hear this word "objective" again, I am going to get very angry because what becomes increasingly plain from the studies of sociology and philosophy of science is that science is not objective and this standpoint really can't be maintained. And even if it were, that itself would be an interesting problem because true objectivity is arguably founded on a philosophical basis of alienation which is an ethical stance to take in looking at the world. There is an observer and an observed and you have driven a wedge between the two. If you decide to opt for that way of working and interacting with the world, that's an ethical choice. You decide to pursue that way of looking at things. I think there are doubts that the matrix of science is what it pretends to be. I think the more one works with science, the more one realizes what huge wedges of subjectivity and conventionalism are inherent in its the-

ory and in its practice. And I think also that we must realize that science is a tool that one can use and there are other tools. Charley Tart gives us an example illustrating this problem. He once asked his students which do you think is the better, more versatile tool, a hammer or a screwdriver? They took a vote and half the students voted for the hammer. Then a bright spark got up and said "It depends on what you want to do with the tool"—and I think this is the point. You know, I am very glad that science has made it possible for me to go upstairs and turn my television on and watch cricket from Australia. This is a great boon in my life. However, it also concerns me that a failed B movie actor can blow me to smithereens tomorrow morning by pressing a button. There are many things that concern me in my life where science is not the right tool for dealing with problems and where it actually takes attention away from the development of the pursuit of knowledge, from ways that might get us somewhere. The classic complaint is we have built a fantastic technology and we don't know what to do with it, so we sit in the pouring acid rain wondering what we are going to do now. And science cannot and will not do anything about these problems for us. Science can not grapple with problems of meaning. I think that's the problem we have, that is what we want to know and the title of Dr. Servadio's paper really brings this home. If we're going to deal with the meaning of psi phenomena, which has got to be a subjective and intersubjective issue, then we are going to have to turn to other academic and intellectual disciplines to be able to do that.

SERVADIO: You know, Carl, you are a rather exceptional kind of scientist, perhaps because you are a parapsychologist and a psychologist as I am, and this is why you have developed your lines of thought in this particular way that you pointed out. I agree completely. I know only too well that true scientists nowadays are not the scientists at the end of the last century, but I don't know if they are in the majority even nowadays. And perhaps in my country we are a little backward in this respect. I know many people who just have the old mentality, you know.

VON LUCADOU: Well, I want to come back to the problem of positivism. I think that positivism looks to you to be an evil thing. But I think this is a little bit misunderstood because when Heisenberg developed quantum mechanics, he used purely positivistic methods. He did not use mysticism, but he got a result which was very interesting for some mystics because they had said the same thing probably long before. The advantage of Heisenberg's results was that he could show that his findings were rather certain and that one could rely on them. But with the findings of some mystics you are not sure you can rely on them. You probably may believe them or you may not believe. I think that the task of pos-

itivism of modern science is to get more certainty in things and not to suppress philosophers and to say that their findings do not make any sense. I think there are two paths in the search for knowledge. There's one path, for instance, for mystics who will learn about the world in a more intuitive way and another for scientists who will probably try the same, but with another tool. I do not see any competition. I do not think that one is better than the other. Both have their own rights and I do not like it that positivistic science is regarded as less useful for getting knowledge of our world.

SERVADIO: It never came to my mind to think that the positivistic, objective attitude is evil in itself. It is limited if the one who adopts it thinks that is all he can do and there is no other tool. I think that Carl Sargent put this forward very well. You see, the positivistic scientific attitude, the objective attitude, has brought a great many good things to humanity, but also many evil things. Why? Because of the general neglect of other aspects of reality. If a certain look had been given to other aspects of reality there would possibly be less evil in this world. But this doesn't mean that the positivistic attitude per se is evil—it is irresponsible, many times.

VON LUCADOU: I think that mysticism or pseudo-spiritualism is similar to evil in some contexts. I'm not sure whether they have more knowledge and more experience of the world, because I find that those physicists who have developed quantum mechanics have given the basis to talk on problems which are very interesting and which go beyond physics. But if we did not have this basis, we couldn't say anything.

SERVADIO: Yes, I quite agree with that. And I also agree with what you said that in the spiritual realm there can be evil forces, evil attitudes. We know that, but this would take us a long time to discuss, because the fact is that we live in a world of duality. Put it any way you like, we are divided on a scientific level or on a spiritual level and the great aim of true mysticism is to bypass this duality and achieve unity, as I tried to put forward in my paper.

SARGENT: I think there is a book that summarizes many important points of these discussions and that is Paul Feyerabend's *Science in a Free Society*. I think the point about the scientific epistemology is that it is one of many. Most people would admit this and most scientists individually would admit it. It's the collective of scientists that represents the problem, because when they start forming groups you do get suppression of other disciplines and there's no question about that. I think that is the problem. Certainly one is not going to be burnt at the stake for insisting that the world is not the center of the universe any more. But people like Alfred Wegener and Paul Kammerer got on the receiving end of nasty things.

There was the suppression of publication of Velikovsky's work and the so-called Committee for Scientific Investigation of Claims of the Paranormal which suppressed the Starbuck material, and so on. Science is dangerous precisely because it is the dominant epistemology. Any epistemology that gets dominant tends to start suppressing the rest, unfortunately. Hence, Feyerabend espoused intellectual anarchism, because it is the most free society that one can imagine, different epistemologies have reasonably equal access to resources. It is not that science is a terrible wicked thing, it is perhaps no more terrible or wicked than anything else. But the scientific epistemology tends to be repressive, because it is overly dominant and the imbalance needs to be corrected, I think.

MCCAUSLAND: I started with a couple of doctors a few years ago an Association for New Approaches to Cancer. I have seen enough in my work in the last twelve years to realize that healing is real and that the mind is real. How can we demystify healing and use it for helping people to help others? You said in your paper that you were talking about the use of psi. These things are part of the paranormal and we are actually going to start using them in the near future.

AFTERNOON GENERAL DISCUSSION

HAYNES: I would like to put in a plea for two realities, not one; for two sides of one's head, two sides of the brain, not one; for reason as well as for intuition; and most of all for creation, as well as for the creator, a creation which includes mathematics *and* the dance of Shiva; the reality of created things, whose nature can be explored by reason, *and* the reality of a creator; the reality of matter (which matters!) *and* the reality of mind. And I should also like to plead that one of the tasks of parapsychology (as well, perhaps, as religion) is to study the living interaction of mind—creative or created—with matter.

SERVADIO: I quite agree with you because I just wanted to point out that, in my opinion, there are two faces of reality—an inner face of reality and an outer face of reality. This model corresponds with what you just said.

IREDELL: My comment is prompted by Kathy Wilson's having listed the subjects in which parapsychology might be studied, and this follows rather on Renée Haynes' comment just now. The area which I would think was the absolutely appropriate slot would be Religious Knowledge. In my own schooldays, which were way back in the thirties, paranormal occurrences or inexplicable occurrences were studied in Religious Knowledge. Discussion ensued when people recounted their modern counterpart of "miracles" and considered possible physical or paranormal explanations. I grew up in an area and in a school where we took these things for granted. I use paranormal faculties, telepathy particularly, nearly every day. There was the reference yesterday to the elusive quality of results—elusive results, in fact. I have had a dual interest in parapsychology, partly experimental and partly personal, and have come to a conclusion that there can be almost 100 percent positive results, but, in order to attain these, there must be the ingredient of crisis or urgency. I feel that man has developed his sensory powers to use and extrasensory powers should be only a supplement and not a substitution to supplant the normal senses.

HERBERT: I just wanted to ask Miss Wilson who presented a paper on education in parapsychology, whether she has done any kind of survey of different countries in this respect, which might be rather interesting. For example, in Switzerland, Dr. Theo Locher seemed to have achieved some quite considerable organization among secondary schools and colleges in courses in parapsychology.

WILSON: No, I haven't done any comparative studies, but I am interested in finding out about it. I've only really investigated the situation in Britain.

DUPLESSIS: I want to add information about education in Paris. For two or three years now I have been lecturing on parapsychology to students of about 17 or 18 years of age, with about 30 students in the class. They were very interested, particularly in ESP, telepathy, precognition and clairvoyance, though not much in psychokinesis.

ROUSSEL: I learned a lot from this conference, seeing the clash between what I would call the spiritualist wing and the more materialistic wing. I would like to know what is the explanatory value of the methodology of those two sides by coming back to the OBE. Sue, you were great, brilliant this morning with your exposition. You finished by saying that you would like to explore the OBE from the purely psychological point of view. This morning I mentioned that Robert Monroe was seeing the OBE as a continuum, a gradient of just first reaching telepathy or on a deep level to inhabit the world of thought or on an even deeper level to have the same experience that the physicists have when they describe the world. Would you use the OBE as a way of research, to have a dialogue between what physicists find and what some person like Robert Monroe, who has had much experience with the OBE, finds in describing the world?

BIERMAN: I share Sue's opinion that OBEs are purely psychological phenomena on the basis of just comparing the incidence rate of psi during those phenomena with the incidence of psi in normal states. So the apparent non-locality which is in the OBE is an illusion, as it were. However, I think non-locality in psi phenomena is fundamental and that's indeed something that is analogous to modern physical theories. It's not equivalent, though. So, as a physicist I'm interested in psi phenomena much more than in the OBE. For instance: in the artificial intelligence work that I am engaged in I think that I could simulate an OBE within a certain psychological model, and if I can simulate something on a computer my interest is somewhat lost.

BLACKMORE: You were asking what kind of tool the OBE can be and what kind of explanation you think we want. I think one of the things that I should have stressed more this morning was that I think what is interesting about the OBE is not whether or not it is a paranormal phenomena, but why it takes the form it does. Why it has the relationship it does, as you have described, to different levels that people can get into. I think we can use the experience of the OBE itself as a tool for getting to other places. The more I investigate induction methods, the more I find that when you're inducing one of these things you can start

to get closer to others as well. So that's one side of it. But I do very strongly believe that there is no good just doing this exploring in isolation. People have been doing this for centuries and centuries and they don't have the language with which to describe it. The point at which we will have some kind of breakthrough is where we can describe what is happening in terms that relate to the rest of psychology. Now my guess—and it's no more than that—is that the cognitive psychology we have now is going to lead us into it. What we need to talk about is the structure of thinking, the structure of memory which produces the capacity to enter these different states. Maybe artificial intelligence is going to be possible, because we can ask what kind of processing goes on in different machines. Obviously I'm talking on a simple level, but we may talk about how the structure will lead to the capacity for different states. Now, it is this kind of thing that I want to go hand-in-hand with the exploration. I don't think one is of much value without the other.

MAHER: I was interested in the tendency to regard out-of-body phenomena as purely mentalistic. It seems to me from what I've read in the literature as well as my own personal experiences that so often there seem to be physical components to the experience in terms of the sensations that are experienced and reported by the OBErs. What I'm trying to get at, what I'd like to propose is that it would be a mistake to denigrate the physical theory, or put aside this avenue of approach. I'm glad that the Russian school of thought is pursuing this track, not because I think that they are wholly right, but because I feel that it is an important aspect of trying to understand these phenomena. I think that it is the convergence of these different approaches that is going to make us come to an eventual understanding of the phenomena we are interested in.

BLACKMORE: What do you mean by physical aspects of the OBE?

MAHER: I'm talking about the strange physical motor sensations, the flying through space for example. It seems to be an experience of some principle of geomagnetic force or something of that sort, which appears to be translated physically in an experience. At least that is a possibility.

BLACKMORE: You may be talking about the sort of thing which I've taken a very great interest in—the vibrations. In reports of OBEs, Monroe, Muldoon and many others say that before the OBE you get the sensation of vibrating. It is described in different ways in spontaneous cases, but I think many people are getting the same thing—shaking, jittering, a movement up and down. I found a lovely description in psychiatric not paranormal literature; someone said "it was like when Mickey Mouse bumped into a gate and he goes boing." I can induce this with a reasonable reliability and I have tried to explore it. Personally, I found two forms of it. One is to do with our eye movements and I

think we've got to clear that one out of the way. You get certain rapid eye movements when you are awake and it can give you that kind of a sensation, but I think that is probably not what most of them are talking about, although it can come in. I think the other one is something to do with the jump I was talking about this morning. You can get yourself to the state where you seem to have two positions and you're just going boing-boing between the two. You've got yourself into a split. Now I don't really know what is happening there, but it strikes me as being a cognitive process that is going on. A flashing between these two constructions of the external world which produces a very powerful physical response. Your muscles tense up; it has very definite physical motor effects. I believe that the thing to understand is the internal mental cognitive side of it and we'll then understand the physical. You presumably disagree and think that it's something to do with magnetism or energies out there. I think the energies are all in here.

REIN: Can I go back to Dr. Servadio's lecture and the phenomena of scientific methodology and basically say that in the end it may turn out that the scientific methodology may not distinguish between physical and non-physical phenomena. As a biologist, I am very aware of the relationship between psychic states and the physical body. The use of scientific technology should allow us to distinguish between what is actually biological in origin and what is in fact psychic in origin. This should help with the whole scientific approach to psychic research in terms of determining whether or not OBEs are part of such an investigation. The human aura may, in fact, be entirely electromagnetic or may contain a psychic component to it. A similar conclusion was reached in a meeting that I went to of the scientific and medical network, which said basically that the existing scientific methodology was probably not adequate for studying psychic phenomena and it required a certain amount of paradigm shift in order to incorporate and study these phenomena.

SERVADIO: In principle I agree with you. I was reminded immediately of what happened to Freud, who tried to create a scientific psychology based on neurology and then, after this brilliant tour de force, realized that he had come to a dead end and so developed psychoanalysis. He abandoned the purely material terrain of neurology and went on with the psychological approach.

ANGOFF: Ladies and Gentlemen, this 31st Annual International Conference of the Parapsychology Foundation is adjourned.