

AFTERNOON GENERAL DISCUSSION

HONORION: I'd like to make a comment or two on some of the issues that Ramakrishna Rao brought out, and particularly a counterpoint that Hoyt Edge raised that I've heard before relating to the English sociologist Harry Collins' work on demarcation criteria in science. Having studied Collins' papers and discussed issues with him at length, I think he has some very valuable insights, but as a practical working scientist who interacts with other scientists outside parapsychology, I can not imagine that if we had a solid 50 or 60 percent replication rate we would not build up a sufficient critical mass of people that would make the diehards form the parapsychological equivalent of the Flat Earth Society. Regardless of differences in metaphysics, the point comes down I think very clearly to what Ram said at the end of his talk and that is if you've got replicability you then have the basis for application and our culture is a very pragmatic one. Perhaps a very important awesome topic for a future conference might be suggested and that is how can parapsychology responsibly deal with success; something that many of us haven't thought about too much. At any rate, if we have something that can be applied, then all the philosophical and intellectual arguments fall by the wayside.

EDGE: I agree with you, but I think then the aim becomes the use of psi. The pragmatic criterion becomes the important criterion and not the criterion of replication. Obviously, they're interrelated, but what you're saying is that what is foremost is the application and insofar as you're emphasizing that I would entirely agree with you.

ROSEN: Before we opened our general discussion, Martin Ruderfer stated his view that quantum physics has failed. In a general sense I would agree with him, but would raise the question of *how* it has failed. Physicists such as David Bohm, Henry Stapp and Steven Bardwell appear to be telling us that the inadequacy of quantum physics lies in the standard formalism it employs: the formalism is essentially designed for entities while quantum events have the basic character of *processes* (to use Hoyt Edge's distinction). Therefore, the development of a more thoroughgoing process approach would seem to be the appropriate way to respond to the failure of contemporary quantum physics noted by Ruderfer.

RUDOLPH: This is a delayed reaction to Don McCarthy's paper. There

is a difficulty in the idea of one laboratory shipping computer programs to another laboratory. Ramakrishna Rao mentioned the problem of replication, that creative people don't really like to replicate other people's work. Running someone else's computer program is even less interesting; you become a remote data collector. We may feel duty-bound to do this, but I wonder if we might not consider shipping metaprograms that would allow the person at the other end the freedom to write his or her own specifics. I think it is important to allow some freedom for creativity, because I think creativity is involved in the things we're trying to measure. Going one step beyond that, perhaps we should think about writing a special computer language for the field of parapsychology, much as COBOL is a language for the business community; this could remove the restriction that everyone have the same computer.

WALKER: Of course, quantum mechanics is recognized as something that is developing. There are problems in quantum mechanics. There are two things that I want to say. One is that parapsychology with its limited resources should not take it upon itself to throw all of science away and replace all that has been done, but should try to show that the phenomena we're interested in are compatible with the phenomena that have already been very well handled by the rest of science. The people who are saying that quantum mechanics is not satisfactory are pointing to characteristics of quantum mechanics that are exactly like what we are finding and talking about in parapsychology. Nonlocality is one of the problems that people talk about in quantum mechanics, and that they find bothersome. It is the fact that there is an observer effect in which the act of making a measurement, simply observing the system, causes the physical system to do something odd, something that is unique and not incorporated in the basic equation. But we must remember that quantum mechanics is extremely powerful and handles such a broad, sweeping range of phenomena that we should not take these issues of difficulties in quantum mechanics to mean that it is near collapse. Far from it.

I want to say that this has been a marvelous meeting and that I have enjoyed participating.

MCCARTHY: I just want to make one comment about some of Harry Collins' ideas, since his name has been brought up a couple of times. There is some of Collins' work that I think would lend strong support to Dr. Rao's suggestions, in particular to his opinion that the success of replication efforts depends largely on spreading more of what he would like to call "psi culture" among the participants. Just this idea has been put forth strongly by Collins in some of the work that he did on the success of people in building lasers of a certain type. In particular, he

regarded his results as strong evidence of the failure (or the inadequacies) of what he calls an algorithmic model for transmission of information. In this algorithmic model all you need is a recipe for how to do it or how to run the experiment and then that's it. But in fact things are not always that simple. Collins made it clear that there were many cases where, in order to construct lasers successfully, people had to actually go and spend time at the laboratories where lasers had been constructed successfully. The point that I'm trying to make is that I think that the proposal that Rao has made, that some attempt be made to organize periodic workshops to discuss successful experiments with the intention of sharing that experimental culture, is really a very good one and an important one and I would like to see this carried out.

RUDERFER: I agree with Walker that we can't replace quantum theory; we have to just go beyond it. I'm very glad that Steve Rosen brought up the point about where do we go beyond it. In 1979, at another Parapsychology Foundation conference, on *Communication and Parapsychology*, I presented an experiment that could decide whether there is an energy source which is the carrier for psi phenomena. To put this into perspective, let's just look at all the sciences from a distance. When we do we see that parapsychology stands out from the rest in a basic respect. All the established sciences are based on some observable or measurable phenomena—electrons, atoms, molecules, animals etcetera. There is no such thing in parapsychology. The primary phenomena that are investigated in parapsychology involve thoughts and thoughts have never been weighed or otherwise measured so we really cannot call parapsychology a science.* If fact, any phenomena that could be measured would automatically be excluded from parapsychology, because parapsychology is based on the fact that there's an extrasensory method of transmission of information. In order to find out what that is we have to look for an unseen energy carrier. If you ask conventional physicists where that may be found, they will cite neutrinos and, under certain circumstances, maybe gravitons or tachyons, and that's about it. The ones that we know most about, the ones that we have a handle on are the neutrinos. We cannot jump over these to look at anything else, tachyons or gravitons or unknown field effects or metaphysics or whatever. The neutrinos are like mountains compared to the pebbles that are the others. We are forced to look at them first. Now, the proposed

* In regard to the following comment by Schechter, this is the consensus view which determines whether or not parapsychology is generally accepted as a science; my personal conclusion, as set forth in my writings, is that thoughts originate from an as yet unseen microscopic form of energy and this suffices to establish parapsychology as a valid science in the conventional sense.

experiment I mentioned involves solar neutrinos. These solar neutrinos are flooding the earth at all times and the question is are they being detected by human beings? If they are being detected by human beings then we have an unseen energy source which could be the carrier for psi phenomena. It involves just a physical experiment. The experiment is a little costly, but it's less costly than some of the similar experiments that are being proposed for detecting solar neutrinos and it would also have the advantage of showing whether a living thing can detect them.

SCHECHTER: I'd like to take exception to Mr. Ruderfer's statement that there's a fundamental difference between parapsychology and all other sciences in that parapsychology studies unobservables while other sciences study things that can be observed. Among the examples used was physics' study of electrons. Physicists don't observe electrons, they observe the effects of electrons on other systems. Similarly, psychologists study the effects of hypothesized internal systems and processes on behavior; they do not observe perception, motivation, cognition, learning etc. directly. In this respect, parapsychology is the same as these other sciences. We do not study psi as such—we study the effects of psi on our subjects' behavior or on the behaviors of target systems.

ANGOFF: Ladies and gentlemen, the Thirtieth Annual International Conference of the Parapsychology Foundation is adjourned.