GENERAL DISCUSSION

ROE: This next stage is a little bit experimental, what we are hoping for is something that is very informal; you are encouraged to ask questions and engage in debate. And we hope to draw out common themes or general issues as well as more particular questions that are prompted by the presentations that we have heard so far. I will take the Moderator's prerogative of asking the first question: in comparing the characterizations we have seen this morning of ESP and PK with what we may have heard in 1953 there seems to be a shift away from overt phenomenal experiences of ESP as found in spontaneous cases and Rhinean card guessing studies, towards a situation where we are dealing with a conception of psi that is much more tacit, implicit and unconscious. Do you think that is a fair reflection of the way the field is going? Do you think that is a fair reflection the way that psi operates? And do you think we should expect to find similar patterns here to the ones that have been identified with conscious psi responses?

NELSON: I think it is a fair characterization, but I believe there still is a good part of the spontaneous experience driving the design of recent experiments, and in some of the experiments psi is clearly operating, at least phenomenologically, at a conscious level—in the intention experiments one is 'trying to do' something. Whether it is really all happening at the level of real awareness or consciousness remains to be studied more, and there is considerable evidence that, for example, if you get out of the way and stop thinking about it they work better.

LOBACH: I am not as familiar with what was happening 50 years ago, but I would say that of course we now have more instruments to measure physiological changes so this inspires these types of experiments, but I would say they complement each other.

HINTERBERGER: When I started to get into parapsychology, especially in measuring telepathic phenomena, I thought measuring those phenomena, or proving their existence was not the main point I wanted to achieve; it is more important to apply this knowledge, to see what is really happening, how are they doing it, and probably learn something out of it about our own life; how it works, how it functions. And so in my life a central point that I want to focus on is what can we really do with these phenomena?

NELSON: Thilo's comment inspires me to add just one thing, and that is that I think one of the big changes is toward learning something. Earlier it was the task of most researchers to prove that psi exists. People were looking for critical experiments, looking for some way to make sure they were talking about real phenomena. I think in the meantime we really have come to the general conclusion that there is something there, and now we are more focused on trying to take it apart to find out what it is made of.

LOBACH: If it is allowed I would like to introduce another theme in this. It is related to what Thilo presented but it is broader, it's about what these events mean to us. You were showing there is an evoked potential when the picture is presented and then when it goes away again, but is there a way in which we can subtract the meaningfulness of the picture from the physical event of the presenting and the disappearing of the picture?

NELSON: You mean, does the content matter?

LOBACH: Yes, in the signal can you subtract the meaningfulness of the picture from just presenting it and letting it disappear again?

HINTERBERGER: I think the meaning of the picture is not reflected in the ERP. What is reflected is the information processing and possibly emotional arousal, but I think this is all we can see in ERP—more of the emotions which are associated to the meanings can be seen in other measures like skin conductance, and people often focus on skin conductance when measuring telepathic responses. But the question is still, what is important. I think the meaning is what we all assume is the most important issue. Roger's talk suggested to me that it is meaning that changes the random event generators, so all those big events *create* meaning, and that's why something happens. I could now be even bolder and say that all our transferred potentials experiments, all these correlation EEG studies, in which we find small effect sizes, maybe they are created just by the meaning. Not the meaning that the picture content gives to it, but the meaning which we create by our experimental set up. So, that would mean that our EEG studies are working like a random number generator. Then we can start again discussing whether the DAT Theory might be applicable to it or maybe its meaning to us is a magical thing which we create through our experiments. Is this the answer?

LOBACH: In fMRI studies, it has been shown that emotions are processed in particular areas of the brain. So if it is about the meaning of the experiment as a whole or the meaning of particular pictures, maybe fMRI or more fine-grained EEG may shed some light on this issue. If you can find that the activity of the brain is associated with emotional processing in the brain then it would suggest psi is more about transferring meaning between people in different places than sharing images.

ROE: Let's open the discussion to questions and comments from the floor.

CARDEÑA: Yes, I have a couple of things. Firstly about fMRI and the general issue of doing science with the brain. I think we are talking about a fiction. All fMRI give data that are essentially aggregate, they give averages. There is an enormous variation, not only in physiology but also in anatomy of the brain that has to be dealt with. I have done EEG studies for some years and what I see is such an extraordinary variation. When you look at the actual data of fMRI or whatever, you have an aggregate. Everyone is doing somewhat different things, so I believe the brains of different people who aren't even processing exactly the same information would react so differently that even if they were all producing psi they would not be very similar. The first general issue would be to try something like a biofeedback set-up with an EEG system for two people so they could learn initially to have the most similar kind of brain activity. When you were asking for ideas involving entanglement, I spoke to Harold Walach who agreed that in principle it might be possible to try and set up a feedback between two people that involved EEG elements. The feedback would be possibly auditory, based on the degree of coherence they showed in general EEG functioning. The psi step may be you take away the feedback and see if people could still converge even when separated by distance.

Secondly I think one thing we have not learned in more than 50 years is that despite having paid lip service to experimenter effects, there is no requirement from journal editors to say anything in our experimental reports about experimenters: gender, state of consciousness, nothing. We know that experimenters are supposed to have an effect—Dick Bierman says it all the time—and yet we act as if the experimenter does not exist, except when we are in conferences. I would challenge you to actually demand that, in the same way that

people must write about participants' information, they should have information about the experimenters.

ROE: Can I just qualify what kind of information you would include here? I'm thinking here that a paper in a qualitative journal would require a section on reflexivity that includes not just demographic information of the sort you mentioned, but also something about prior experiences and motivation for doing this particular study.

CARDEÑA: Yes, what is your motivation and when you were doing the study were you trying to get involved with the participants, were you trying to have an effective participation with them? Were you meditating, trying to blend with the participants, and so on? We mention it here but we do not see it in actual reports.

ROE: The SPR's *Paranormal Review* did include an interview by Caroline Watt with Richard Wiseman and Marilyn Schlitz that contrasted their different approaches to DMILS sessions — is that the kind of thing you have in mind?

CARDEÑA: Exactly, but I would like to have that with every article.

DELANOY: This is in part response to what Etzel just said and I think he has made an excellent point but I think in many ways you do find those data reported. There was a very interesting time in the PA several years ago that included a round table where very successful experimenters got together to discuss what they did during sessions, but also in preparation for sessions, what they were thinking for experiments, and so on. I suggest people might want to go back and look at that again to see what it was saying, as there were some important insights there into how successful experimenters did orient themselves overall to the studies. I know also in other studies this has been commented upon, for example in Edinburgh when Bob Morris, myself and Kathy Dalton were doing a ganzfeld-centered no-sender study, we stopped Bob doing it after 14 sessions because he just scored at chance. Kathy scored very well, I scored nothing and afterwards we were reflecting on the differences in our approach to the study and again there were very clear things that could explain the scoring differences between the experimenters. It is a good and valid point and one that has been addressed in the past that we should make sure to continue to include in our discussions.

GLICKSOHN: A question about the first two speakers today, Eva was talking about an impending sense of doom, which is a pretty neat idea but in Roger's data from what I remember, the data about 9/11 you see a massive effect from 9/11 and on but nothing prior to 9/11. So is this a case of absolutely no precognition?

NELSON: There is, in one of the measures where we can time things very precisely, a massive shift in the data for the first 4 and half hours before the first plane hit. We don't know how to explain that except as something like precognition, or presentiment on the part of a giant global consciousness, or something like a massive effect of the few people, the terrorists. I think we now have data in several cases that at least leads to the question, 'can we establish more certainly that this network of REGs around the world shows a reaction before the event that is believed to drive it?'

LOBACH: Weren't the earthquake data showing some sort of presentiment as well? At least it looks like it.

NELSON: With questions like this it is always a good idea to do some more work, to work harder to make sure that your first efforts in the analysis have not looked at things in the wrong way. In other words we need to do more work. But at the present time we have a pretty strong indication that at least 8 or 10 hours before the earthquakes, as shown on the slide with the sharp V-shape, the data starts changing in a way that clearly becomes significant well before the earthquakes happened and we do not know any way at all to think about that; if it is a real phenomenon we see, in other occasions we do not know how to explain that without invoking something like premonition or precognition, on the part of something like a great unconscious, global consciousness.

BANCEL: I just wanted to add one point concerning the data from the global consciousness project and to reduce a little bit the expectations one might have from the presentiment effects. I can speak for the global consciousness project at least when I say that we try to make statements when we have very significant statistics and when we have looked at the data thoroughly. In both of these cases, for 9/11 and the earthquake analysis, I myself would not be confident enough to say that there is evidence for something happening before the events occur. So I think it is very, very easy to take away a positive impression of an exciting potential effect by showing some data, without appreciating the uncertainties that are in the data. I have spent a long, long time looking

over both of those datasets and I am not ready at all to make any kind of statement to say there is some kind of precognition and I would encourage people not to go there because we do ourselves harm as a community if we overstate or are not very cautious. If we have to dial back later on it is not a good situation. I am sorry to be so negative all the time!

VARVOGLIS: I want to go back to this whole question of the sender-receiver pairing and the role of the experimenter, which Etzel brought up. We are developing a system at the Institut Métapsychique using an automated ganzfeld system, and the idea is to have similar induction procedures for the sender and the receiver immediately prior to the session: identical state induction procedures. So at least as far as the preparation of the 'wave function' is concerned it is similar on both sides. Then at the critical moment where the stimulus is presented, when the sender is exposed to the stimulus, that is where it cuts off and we see if there is some kind of continuity; if the shared state facilitates the 'transfer'. That would be one way of addressing this, making sure we take it as far as we can and maybe even alternating periods where we go back to having multiple drivers so that they are in a similar state. But I would like to go a little bit further, and this is not something we have planned so far, and to include the experimenter and say that maybe William Braud, Charles Tart and others who have spoken about this are right on target when they say that we have to evolve our thinking to think about the role of the experimenter and see the experimenter as part of the system. Therefore he/she has to be coherent with sender- and receiver-state as well. Today, given the fact that we can practically run our experiments automatically the experimenter actually has very little to do in some sense, in terms of tasks. We could imagine having the experimenter as well going through state induction procedures and being in the same state and operating from the same psycho-physiological perspective. This is conceivable and it might render things a little bit more fluid in terms of communication between everyone. I think in terms of meaning also William Braud and others spoke about the fact that there is a ritualistic aspect with psi experiments, and the more we get into the mechanics and technicalities of doing it, the less we are aware of the ritualistic aspect. It may not be politically correct to mention that, but a lot of good psi experiments were attached to that kind of ritual, which gave the experiment meaning for the experimenter, and they conveyed it to the subjects as well.

GERDING: Just to add something to this, at Utrecht we conducted ganzfeld experiments in which to encourage a sense of experiment togetherness the participants did some kind of magical introduction. They created their own magical procedures, lasting an hour or more before they started the ganzfeld session. Then we did one or two sessions in which the experimenter and subjects all participated and did very well.

DOBYNS: Since it seems as though we have got into an impromptu discussion about experimenter effects here I would like to point out that dealing with those competently is going to be a lot more challenging than any of the comments I have heard would indicate, since for example, on the simple matter of the same state of consciousness being involved, I know from direct first-hand experience I and Brenda Dunne were two experimenters at the PEAR lab and the exact same induction procedure that would put me in a blissed-out trance state would put Brenda into a screaming rage! So there are a lot of technical challenges before we can do anything intelligent with this concept. My actual question was for Thilo. Since you seemed to be finding pros and cons and to be unwilling to come to a direct and immediate conclusion about your results, have you considered simply applying standard meta-analytic techniques to your big array of independent scores, thus reducing them to a single bottom line where you can simply state that, with statistical confidence, my conclusion is 'whatever'.

WALACH: This is actually what I am trying at the moment, to summarize all those scores. But on the other hand one meta-analytical approach would be to just look at all the data to see whether there are more significant effects than we would expect by chance, throwing all the data together in one bowl. I am currently calculating a lot of things, but depending on how you do it you get different results, and this is a sign for me that some things are questionable; what is the correct thing? Usually if an effect is stable, if an effect exists, it does not matter if one changes slight parameters. What I wanted to add to the experimenter effect is that already this searching for significant results is perhaps the biggest experimenter effect in all our research. It is the analyzer effect, but we then ask is there a presentiment effect? This just adds another question which should be corrected for multiple analyses. All those searches we do for finding something and afterwards be presented as if it were the only search we did; but it wasn't, so we have to be very careful with this.

ROLL: Dr Hinterberger, I think the last question you asked from the list of questions in your presentation was: can we set up a real 'quantum consciousness' in the related equivalent to the Bell experiment to test the entanglement of consciousness. A paper from 1997 by Brian Josephson and Fotini Pallikari-Viras might be relevant; they claimed that whereas the experiments of Aspect and his colleagues in the 1980s were suggestive, the best basis for quantum entanglement came from parapsychological findings. What do you think about his answer?

HINTERBERGER: If that is the best basis then it would really be our challenge to define the real parapsychological experiment in a well-structured way, as precise as physics requires it to implement such a procedure.

NARANJO: I would like to comment on the correlation of REG outputs with global and often tragic events, particularly the fact that their significances appear and disappear in a very unstable fashion, and if we look at many cases from the past we see that this has been the case there too. This might mean that there is nothing to explain or that it is characteristic of the phenomena. It seems to me that it is inherent in the nature of the thing, and a fundamental issue is that the systems we study are not clearly defined or are defined in terms of what they are not so that we cannot be sure that we are bringing the system as a whole into the laboratory, especially where we think the system also includes the nature of the relationships and interconnections between the participants and experimenter. How can we ensure consistency of outcomes if we don't have consistency in what we bring into the lab? We do not seem to have any way to prevent this from happening in our experiments. We have to believe in the same system to in order to do it, and we have to positively define our phenomena and I hope there will be time for this in the next discussion.

NELSON: I think there is a single answer to your question, which is 'patience'. We really shouldn't be looking, given the kinds of signal-to-noise ratios we have, for the answer in any single experiment. Instead we really do need to continue for years. In the PEAR lab, for example, we found a well-defined REG experiment that with the first experiences of people, the effects were high, but they dropped off and they dropped off and it began to look as if they were going to go to nothing. But then they come back up again. So the patience there shows we actually have an interesting effect over time.

BANCEL: One last little point on ritual; Mario bought up this issue of ritual and I wanted to say something about secret ritual in physics, which physicists do during their experiments. This is actually a funny story because I was formulating my question in my head after your comment and then Professor Josephson turned to me and blurted out to me 'light a candle for the experiment!' So the story was that years ago I was doing low temperature physics experiments on superconducting tunnel junctions, and we used to make these tunnel junctions that are difficult make, and we would measure them electronically, and they would always blow out and we would have to go back and make another one. This was very tedious until we found out that the tunnel junctions wouldn't blow out on us if we did the experiments in the evening and if we lit a candle before we did it.