WINDOW INTO THE MIND: A PHENOMENOLOGICAL PERSPECTIVE

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The possible existence of a so-called "mind" and its relationship to a known source of physiological input, modulation, integration and output, namely the "brain" has been a source of debate since the times of the Greek philosophers who attempted to explain the relationship monistically. Rene Descartes in the mid-17th Century put forward his theory of mind-body dualism via an interactionism which he hypothesized to be the pineal gland of the brain.[1] This organ was chosen because it appeared to be the only unpaired gland of the cerebrum; however, the hypothalamus and the pituitary are also central, unpaired glands in the brain and may appear more logical. Gilbert Ryle has stressed how important Cartesian theories of dualistic interactionism have become[2] and, despite the major criticisms that have been lodged against this theory and the variety of alternatives, some semantic, which have been put forward, the Cartesian contribution to the mind-brain problem remains a fundamental source of comparison of all other theories.[2]

The advent of serious work into anomalous experiences in the form of parapsychological research, anomalistic psychology and, lately, my own development of the area of phenomenological psychiatry has allowed a more empirical approach to what was previously purely a philosophical problem. The possibility of being able to apprehend information from objects or events by use of faculties other than one's conventional physical senses (i.e., so-called extrasensory perception) and the ability to, in some kind of way, affect objects or events without using appropriate motoric outputs (i.e., psychokinesis) have profound implications for brain functioning. This input-output schema may be perceived as a first conceptual level. At a second conceptual level are events which cannot be explained purely on the basis of extrasensory perception or psychokinesis.[3] These require second level explanations. For example, the hypothesis of survival of the human personality after so-called bodily death would not easily be explained on the basis of

modulation via brain functioning and could be argued to require an independent functioning of a Cartesian timeless non-spatial, nonphysical, unextended component, i.e., mind.[4] Such ideas, if modified, may still be explicable within the framework of a philosophical idealism or possibly a modified epiphenomenalism.[4] A third conceptual level, of phenomena even more difficult to explain on the basis of pure brain, relates to the hypothesis of extended survival and the hypotheses pertaining to reincarnation.[3,5] Such explanations may, in fact, be philosophically difficult using any kind of mind-body framework. They require certainly a separation of a "mind" which may have a different form of mortality/immortality than "brain functioning."

Attempts to explain the level of integration, modulation, organization or experience of such phenomena in the brain necessarily meet with a major philosophical and scientific stumbling block, namely, do such phenomena exist? The outstanding contributions of parapsychological research in this area unfortunately have still led to the difficulty of proof being very different from compelling evidence. No matter how compelling evidence may be, either on the basis of spontaneous experience or structured empirical research, it could always be argued that the probability of such phenomena occurring approximates infinity, so that the existence of such phenomena would be regarded as nil no matter how substantial the evidence for it. Arthur Koestler (in *The Sleepwalkers*) summarizes this with his rather interesting statement: "Innovation is a two-fold threat to academic mediocrities. It endangers their oracular authority, and it evokes the deeper fear that their whole laboriously constructed edifice may collapse." If it were only academic mediocrities, one could ignore this. However, extremely astute scientists and philosophers have voiced the same kind of doubts, leading to a possible "no win" situation if one looks purely from the basis of spontaneous events or experimentation designed to prove objectively the existence of a fundamentally subjective phenomenon.

On the basis of such difficulties, I realized that there was a need to shift the area of emphasis in phenomenological psychiatric research, as well as research in anomalistic psychology and in the subjective elements of parapsychology, to the recording of the events as the person has experienced them in a non-prejudicial way, so that the focus was not whether or not such events were truly paranormal, but that such events could be analyzed on the basis of certain specific characteristics and classified ordinarily at a descriptive level. The term "subjective paranormal experience" seems to fit this requirement, implying any happening, either apprehension or manipulation of objects or events, which is perceived by the percipient or experient to be paranormal.[6]

Subjective paranormal experience (SPE) can obviously be broken down into a wide variety of different sub-categories so that if there is a specific perception of telepathy, this would be "subjective telepathic experience." If events are perceived in a clairvoyant fashion, this would be "subjective clairvoyant experience." In a similar kind of framework, one can talk about "subjective out-of-body experiences," "subjective mediumistic experiences," "subjective psychic healing experiences," "subjective psychokinesis," "subjective spontaneous psi" and "subjective psi experiences."[7] One may extend this framework to any kinds of anomalistic experience so that people may not necessarily perceive the experience as paranormal. It may be perceived purely as anomalous.

I have found this term "anomalous" extremely valuable in the analysis of such data. One can draw up a whole framework of anomalistic experiences leading from those involved at a subliminal level, in which case the nexus of predication could be called "latent familiarity," to those that are at a "parafamiliar" and "metafamiliar nexus."[3]

In similar fashion, it is useful to introduce neutral terms for such subjective paranormal experiences which may in fact be interpreted subjectively in their oldest kind of context as some kind of anomalistic experience or alternatively may, using objective methods of assessment, be disputably interpreted at a variety of levels of anomalous experience.[3,8] Because of this, I introduced the term "delta" and those phenomena that appear to relate to sensory perceptual afferent kinds of experiences are "delta afferentation."[9] Those relating to efferent motor experiences are "delta efferentation."[9] Finally, any study trying to link up anomalous experiences with brain functioning requires a detailed description of the form of each experience, because one fruitful hypothesis may be that not all subjective paranormal experiences are paranormal or, if not paranormal, derive from the same anatomical locus or are predisposed to by the same kinds of psychophysiological conditions or states.[10] Moreover, because one is dealing with subjective experience, both prospective and retrospective analysis of the detailed components of these experiences may indicate a certain pattern of uniform responses localizing to a particular area of the brain or to a particular psychophysiological general brain state.[11] This in turn implies using some kind of multiaxial classification system.[8,12] A multiaxial classification system is particularly worthwhile for a second reason: to attempt to unify these experiences in the same kinds of frameworks as is being done from a psychodiagnostic point of view, as in the American Psychiatric Association's *Diagnostic and Statistical Manual Three.* I have proposed a ten axes "multiaxial schema for anomalous events" in order to analyze these experiences easily.[8,12] These ten axes require an ad-

TABLE 1

Neppe's Multiaxial Schema for Anomalous Events (Names)

Axis A	Anomaly
B	Base
C	Content (includes perspective and concomitant symptoms)
D	Dimensions
E	Ego-consciousness
F	Focus
G	Gestalt (includes special characteristics and physical content)
H	Heuristic
I	Intention
J	Judgment (includes correspondence and prior knowledge)

Names must be described with demographic variables.

equate mnemonic and they run from A to J. The axes I have suggested which are in an early pilot stage format are reflected in Table 1.

We now have the phenomenological tools required for prospective or retrospective analysis of subjective paranormal experiences and any other anomalistic experiences occurring in patients. One useful approach is to use two groups, one of which has had a large number of subjective paranormal experiences based on stipulated criteria[10] (i.e., "experients") and the second of which has had no experiences ("non-experients"). Those with a large number of SPEs would be required to have these in a subjectively highly validated form. In other words, they should have been specific experiences generally mentioned to someone else or recorded in some way portraying a reality which came to pass in exactly the format that was required. In order to ensure that these people would not reflect a particularly homogeneous group with just one kind of subjective paranormal experience, they were required to have had at least four different kinds of experiences with a maximum loading per experience of five specific concretized descriptions and a total of at least 16 validated ("low-score") SPEs.[10,11] In contrast, those subjects who were used as so called "controls" without SPEs were required never to have recognized any form of subjective paranormal experience in their lifetime.

Using such sampling comparison techniques, various aspects of psychophysiology can be analyzed in detail. There are two fundamental approaches to an analysis of probable or possible association of the brain with psi. The first involves analyzing general experiences. The second involves analyzing symptoms and signs deriving from specific areas of localization. The most logical locus in this regard is the temporal lobe, possibly the non-dominant temporal lobe—as opposed to the Cartesian pineal!—as motivated later.[10,11]

Theories pertaining to nonspecific localization of brain functioning can again be subdivided into two areas. The first of those relates to specific psychophysiological states that, under research conditions, have been suggested to be psi-conducive. Possibly the most validated of such states is the ganzfeld altered state of consciousness.[14] Such other states as hypnosis, sleep, meditation, trance and various other altered states of consciousness may in some way modulate the brain psychophysiologically to appreciate anomalistic experience more easily. Once again it is emphasized that such anomalistic experience may in fact require the brain as a modulator, integrator or receiver of exogenous impressions. Alternatively, they may derive from within the brain, being entirely endogenous. A second general state has been hypothesized by psychiatrist Jan Ehrenwald.[15] This involves a second psi-conducive state based on deficits in terms of brain functioning. These flaws in brain functioning, deficits, produce a state whereby the so-called Bergsonian filter, which would ordinarily prevent the reception of psi-related information from outside,[16] is impaired allowing experiences which otherwise would not occur. Such experiences may occur with various kinds of brain dysfunction, for example frontal, parietal or temporal dysfunction. It may be accentuated under certain circumstances, for example, when the message is highly emotional. The emotive overreaction (or what has been hypothesized to be the sympathetic flavoring of the message), may produce a psi-sensitive state involving "resting physiology," a parasympathetic kind of state (alternative terms such as adrenergic and cholinergic states have been hypothesized). Such psychophysiological attempts, based purely on autonomic or certain other neuroendocrine system indicators, seem to me to be somewhat simplistic. In contrast, the hypothesis of "flaw related psi conducive states" mobilized by "crisis situations"[17] seems to be worthwhile. Unfortunately, Ehrenwald has not presented a great deal of detailed physiological evidence for this hypothesis. Nevertheless, his principle of differentiating between experiences which may be part psi and therefore modified by external experiences, i.e. "heteropsychic experiences," and those that derive from within the framework of brain functioning, i.e. the "autopsychic", seems to provide a worthwhile dichotomy.[15,17]

Several other areas of research have been attempted. An attempt to link up epilepsy with psychokinesis in field studies has been made by William Roll.[18] The evidence is inconclusive and the psychophysiological correlates are somewhat questionable. Peter Fenwick has been involved in studies of mystical and religious experiences in mediums,[19] and work on psychics attempting to link up aspects of brain functioning has also been done by Michael Persinger.[20] Both these areas of research

are promising despite limited results and have, in fact, followed on my own research in this regard.

A stimulus for my earlier research was the work of the neuropsychologist electroencephalographer, Gordon Nelson, who did some work on trance mediums.[21] His research suggested that there are substantially more temporal lobe abnormalities in trance mediums than there are in the general population. It is interesting that comparative statistics from the same EEG laboratory are available for normal healthy young adult males.[22] Gordon Nelson's work in 1970 on the electroencephalograms of trance mediums found evidence of temporal lobe EEG abnormalities in 10 of his 12 subjects, none of whom had a history of tonic-clonic seizures.[21] Although the criteria for temporal lobe foci appear to be somewhat broad, even using the EEG criteria of Gibbs and Gibbs,[23] five subjects had such foci.[10] Consequently, these findings are apparently impressive, but must be considered in the context of the frequency of temporal lobe accentuations on EEG. These may correlate with a wide variety of conditions ranging from fatigue and mild hypoglycemia to psychopathology, age and immaturity. At the same institution as Nelson, Murdoch found accentuations in 25 percent of 244 normal, young adult males, although most of the EEGs could be considered within normal limits.[22] Our further EEG replication has, however, been less substantial.[23]

As a consequence of Nelson's work and based on the theoretical evidence I had in my own work from 1979 onward, a far more definitive study proceeded.[10,11] I chose the temporal lobe to focus upon because it is the great integrator of the brain.[24] It receives information from all the perceptual modalities admixed with emotions and memories. Consequently, subjective paranormal experience could also be integrated in this area of the brain and any anomalous experience could most likely be in some way associated with this area.[25] Moreover, very little has been suggested to accentuate the role of other cerebral cortex areas. Nevertheless, the frontal lobe being the great executive, the cognitive-motor cortex in effect, could logically have a role in delta efferentation. However, subjective psychokinetic experience is particularly difficult to analyze. The parietal lobes are less logically implicated except for the potential visual-spatial aspects. It is interesting that certain distortions in alleged psi pictures resemble those of visual-spatial agnosias found in the posterior parietal.[17] The occipital lobe has possibilities because of its involvement in visual associations. Many ostensibly paranormal phenomena, apparitions, clairvoyance, aura perception, are predominately visual in kind and therefore must have some degree

of modulation via the occipital lobe. Again, it is extremely difficult to prove.

Similarly, attempts at localization of psi have frequently focused on the nondominant (the minor, generally the right) cerebral hemisphere. This work has derived from attempts at differentiation of function of each cerebral hemisphere and a hypothesis that such divergent ways of thinking as creativity and intuitive functions are nondominant hemispheric functions. Such research presents substantial difficulty. This is, first, because of the intangibility of obtaining data on psi (tested as it is by objective means) at the time of discriminating a particular hemisphere's functions and, second, because, in fact, it could be plausibly argued that it is almost impossible to test a single hemisphere's functions when what one is doing is to some degree blocking the function of the other hemisphere, which may be compensating for or accentuating certain kinds of pathology. Moreover, there are very few functions which are purely single-hemispheric and even such a fundamental function as speech has been shown to have its prosodic correlates apparently in the non-dominant hemisphere. It has been argued by Norman Geschwind and others that certain facets of speech involve bilateral hemispheric functioning.[26]

My own temporal lobe studies originated with the observation that several patients with apparent temporal lobe dysfunction claimed vivid subjective paranormal experiences. The temporal lobe was particularly useful to analyze because, whereas the other lobes of the cerebrum produced physical signs, features which must be elicited on physical examination, the temporal lobe dysfunction involves predominantly data about peculiar subjective experiences which can be elicited as history. I developed a measuring instrument, Neppe's Temporal Lobe Questionnaire,[11] which is still in a state of modification with very necessary alterations allowing it to be more easily administered by others. The major aspect of the TLQ is the eliciting of descriptions of "possible temporal lobe symptoms" (PTLS) such as olfactory hallucinations, as well as nonspecific symptoms such as depersonalization. Although both groups are found in patients with dysfunction of the temporal lobe, the possible temporal lobe symptoms are regarded as far more specific. Operationally, PTLS are required to have been evoked during neurosurgery under local anesthesia when certain areas of the temporal lobe, deep Sylvian area, insula and limbic cortex have been stimulated, and also to have occurred spontaneously in epileptics as epileptic aura when such epilepsy has had a temporal lobe base. Such experiences are just as subjective as SPEs, consequently, the phrase "possible tem-

poral lobe symptoms" is used as one cannot prove for certain that such subjective experience derives from the temporal lobe.

The population was derived from two comparative groups for which rigid criteria were laid down. One, of subjective paranormal "experients," was a group of non-professional psychics who claimed a large number of subjective paranormal experiences, i.e., greater than 16 low score SPEs (i.e., highly subjectively validated SPEs) of many different kinds (four or more kinds, e.g., out-of-body experiences, telepathy, aura, psychokinesis). A second so-called control group of subjective paranormal "non-experients" from the same population (members of the South African Society for Psychical Research and delegates to a parapsychological conference) denied any form of subjective paranormal experience. The Temporal Lobe Questionnaire was administered to both groups and the results were both statistically significant and substantive despite a small sample (N = 12, 6 per group).[10,11] The "experients" had a mean of 6.2 different PTLS and the "non-experients" 0.3. Excluding further altered states of consciousness, e.g., meditation, these means become 6.2 and 0, respectively. Absence of possible temporal lobe symptoms in the "non-experients" during clear consciousness was fully expected as such symptoms do not generally occur in the normal population. Thirty-seven different kinds of PTLS with a range of 2 through 11 per subjective paranormal "experient" is truly remarkable.

Could it be that such SPEs resembled PTLS? For example, a chilly feeling with a sense of an apparition would have been classified as a PTLS thermal hallucination. Eliminating the 17 PTLS which occurred linked up with SPEs (ranging from one to four different kinds of PTLS per subject) there were still PTLS occurring in all the "experients" at a statistically significant level. Further, one "experient" happened to have a diagnosis of temporal lobe epilepsy in the past (despite the criteria used for eliminating people with previous major psychiatric illness). But even eliminating her, the results are still statistically significant ($p < 0.01$).[10,11]

These results imply that the occurrence together of PTLS with SPEs may suggest anatomical-physiological continuity of anomalous temporal lobe functioning in the temporal lobes. This may be seen in a particular anomalous temporal lobe state. Independent existence of PTLS without SPEs may imply that such PTLS are not artifacts of the SPEs and may be arising because of a background trait of anomalous temporal lobe functioning.[11]

If these results reflect genuine psi experience then the temporal lobe becomes the prime organ suspect for possible mind-brain interaction.

This extreme speculation may not be necessarily so, as this mind-brain interaction may, in fact, just involve pathways in the temporal lobe and completely endogenous experience within the brain.

However, could it be that some of these PTLS that appear to be of temporal lobe origin have quite different sources? Because of this possibility the most common PTLS found, namely olfactory hallucinations, were examined. The sample was extended and the olfactory or smell hallucination analyzed in great detail. The "experients" consistently had perfumey or flowery, pleasant olfactory hallucinations invariably associated with the presence of someone unseen, sometimes thought to be dead. Pleasant olfactory hallucinations of any kind are rare in patients with temporal lobe epilepsy and non-epileptic temporal lobe dysfunction, although epidemiological figures are unavailable. The temporal lobe epileptic generally encounters unpleasant, rotten or burning smells. Such smells also have appeared commonly in the subjective paranormal experients. While a single conclusion for these results is impossible, an intensive analysis of results in the experients suggests that it is very difficult to explain solely on the basis of fraud, temporal lobe firing or common personality and socio-cultural features.[27] Consequently, such results could reflect genuine paranormal causes. If they do, that strengthens the possibility that the results found in the subjective paranormal experients may be genuine pointers to objective paranormal abilities. Moreover, the common occurrence of smell hallucinations of the kind found in temporal lobe epilepsy strengthens the hypotheses that anomalous temporal lobe functioning may be found in the paragnost.

If this is so, what subjective paranormal experiences are found in patients with temporal lobe epilepsy? This has been my most recent research and is still in process. At this point in time my major difficulty is attempting to conceptualize the presence of SPEs given the very high incidence of SPEs in the population and the resistance a population with pathology has to admitting new symptoms. I am not as yet persuaded that patients with temporal lobe epilepsy have a higher incidence of SPEs than the general population.

A further study in this direction is a two-family study with ostensible psi abilities and temporal lobe dysfunction involving Hurst and myself.[28] Whereas this study may suggest familial links to temporal lobe syndromes combined with subjective paranormal experience, it is a very small sample and I find the data not as persuasive as they could have been.

One way of attempting to discover whether or not SPE is in some way linked to temporal lobe functioning is to analyze the déjà vu phe-

nomenon. This is so as déjà vu has commonly been described as symptomatic temporal lobe epilepsy and déjà vu is common in SPEs. My doctoral thesis attempted to phenomenologically subtype déjà vu experiences to ascertain whether or not these experiences were of a unitary kind clinically, etiologically, symptomatically and prognostically. Using measuring instruments I developed for the purpose (Neppe's Déjà Vu Screening Questionnaire and Déjà Vu Qualitative Questionnaire), I was able to demonstrate that there is a specific quality to the déjà vu experience in temporal lobe epileptics with secondarily generalized tonic-clonic seizures. This does not occur in the nonepileptic nor in those with epilepsy which is generalized from the onset or with a focus that does not appear to derive from the temporal lobe. The subjective paranormal experience has a special quality of déjà vu qualitatively distinct from the temporal lobe epileptic. This déjà vu is also qualitatively distinct from "non-experients," (i.e., apparently the general normal population) and from schizophrenics. This research implies possibly that the causes of the déjà vu experiences may be quite different and, therefore, again here symptoms having apparent temporal lobe associations may be, in fact, reflecting something very different.

Two other researchers have been involved in related areas: the Canadian psychologist, Michael Persinger[20] and the British neuropsychiatrist, Peter Fenwick.[19] Persinger analyzed subjective responses to religious and God related experiences hypothesizing that these may be a continuum of temporal lobe phenomena. He found those with intense religious experiences but irregular church attendance score high on a special questionnaire on what he termed "mid-level temporal lobe signs" and "parapsychological references." He noted temporal lobe delta in a transcendental meditator during a peak mystical experience and temporal lobe spikes during protracted intermittent episodes of glossolalia. He cites theoretical evidence that stimulation of the mesial temporal areas (such as the amygdala) can rarely induce mystical or religious phenomena and that the temporal lobe is the optimal locus for the creation of such experiences.[20] This "replicates" my original standpoint; however, Persinger's work is uncontrolled and no adequate controlled research has yet been done on this population. Fenwick's work also attempted to relate mystical states to complex partial seizures. Although he believes that it is uncertain whether any particular brain area could be implicated, he believes there is supportive evidence (again, not controlled) for the right temporal lobe.[19] His work being predominantly mystical and religious, does not necessarily contribute to the hard data on the temporal lobe. His methodology has, however, suggested possible right hemisphere dysfunction in two-thirds of his so-

called psychic group, but this was not significantly different from the general population and is confounded by differences in terms of psychiatric history and head injuries.[19]

Using these approaches the temporal lobe and other areas of the brain can, therefore, be more adequately categorized at an anomalistic psychological level. Great caution should be exhibited in interpreting possible temporal lobe symptoms and substantial detail is required. My temporal lobe questionnaire should only be used after adequate training.

On the basis of the results at hand, however, PTLS seem overwhelmingly more common in subjective paranormal experients and it is highly probable that these symptoms reflect epiphenomena of temporal lobe functioning. It seems that an approach based on subjective experiences of interpreting phenomena as anomalous not as psi, of introducing neutral words such as "delta" and of detailing experience in as much "form" (as opposed to "content") as possible using some kind of multiaxial classification, will all greatly enhance the numerous confounding variables that may occur from analyses of subjective experience. These findings neither prove nor disprove the validity of the subject's experiences which may be endogenous or exogenous. If exogenous, they may need substantial modification via distortions of external information transfer, partly occurring as a consequence of anomalous functioning of the brain, partly in terms of certain global cerebral changes or unusual relationships between cerebral hemispheres and partly because of psychodynamic colorings. The localization model of the brain may only actually be relevant in the context of nonlocalization and states of consciousness may be more relevant than specific psychophysiological parameters. The next two or three decades may throw greater light on all these detailed phenomenological analyses of anomalous experience.

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DISCUSSION

ISAACS: Thank you for that whirlwind trip through the temporal lobe material. I found your talk really fascinating because I think that

the kind of detail which you bring to bear on the analysis of the phenomenological aspects of experience is very important. One thing that worries me about your presentation passed by rather quietly and I want to bring it up because it seems to me that the whole basis of this argument really rests upon it. That is your dichotomization of the group that you were looking at between the experients and the non-experients. You mentioned that you had got statistical significance. What seems to me to be very important is this: your South African colleague had 12 mediums whom he analyzed and he found ten of them with temporal lobe abnormalities, which seems very impressive. What worries me is that by pure chance he may have come across that very small number of mediums and have found that incredible stacking of temporal lobe anomalies. You mentioned that your replication attempt was not successful. What were the numbers of the original group which were used as your SPE group?

NEPPE: None. There was nobody from the original Nelson research.

ISAACS: What I mean is what was the number of the original? I understand that they were not any of the Nelson group, but how many people in your analysis were there? What are your numbers? What concerns me in the replication is the issue of generalizability, which obviously relates to the numbers.

NEPPE: Let me put this into a framework. Eventually I had ten subjective paranormal experients, which is not too many. A lot of statistics that I cited involved only six. In order to achieve statistical significance at the classical .001 level every single one of them had to have had that particular kind of symptom, which indeed they had. Nobody in the control group had to have had it, which indeed they had not had. Thereafter, as I have said, the numbers were extended. The original research, therefore, was based on six experimental subjects, six control subjects. It was extended population-wise to ten experimental subjects. Yet since then I have been able to find six or seven others in a non-experimental kind of way, because I have not been able to find a suitable control group from the same population, in whom I have been able to find the same kinds of symptom clusters that I have found before. I am mentioning it in this context because I felt that it was very important to be able to have a control group. I am using the word "control" loosely because, of course, to have a control group you must do some kind of manipulation within that group, which we were not doing. It is really a comparative group. I wanted to find a comparative group which I could compare on the basis of a lot of other parameters. The only way I could work out an answer to this one was to take the whole population of people involved in a particular subgroup. Also that pop-

ulation of people ought to know what I am talking about, otherwise linguistically I might find that they deny having had these experiences because they do not know what I am talking about. So I first took all members of the South African Society for Psychical Research as my initial sample and sub-divided them into two extreme groups of experients versus non-experients. I then extended it by including all people who were registered for the second South African Conference on Parapsychology. I was able from that point of view to get my third and fourth further experients that way, some of whom were obviously members of the South African Society for Psychical Research. So what I tried to do in terms of using my two comparative groups was draw it from the same population. We actually, face-to-face or by telephone, interviewed that whole population of people. We eventually got a 100 percent response, because when people did not respond they were badgered until such time as they did respond. So it was based at least initially on a sample of 100 percent of the population and the two extremes. I agree with you it is a slanted population. That is why I went one step further to consider that maybe this group of subjective paranormal experients who are interested enough in psychical research to join a reputably scientific body are very skewed. What happens to others? So I went to some of my spiritualist colleagues and asked them to give me a sample of people they regarded as genuine psychics whom I could also interview. We used the same kind of questionnaire system and the same kinds of criteria for validity. Incidentally one of them came up psychotic, whom we excluded. But all the same we still were finding exactly the same kinds of patterns, so that I did not believe it was reflecting this particular population who had a scientific interest. But now there was a problem of whom do I use from a control point of view. I could not use non-members as controls, because most of these people would report having one experience or another. I tried to use a control population based on hospital staff and hospital patients, but that is not a direct comparative population. I then was able in my déjà vu research to go one step further and use a population of temporal lobe epileptics, schizophrenics and temporal lobe dysfunction patients drawn from neurological and psychiatric out-patient populations. But they are not directly comparable because they are a completely different sample. The temporal lobe epileptics are to some degree at least comparable with the schizophrenics, because I took people with the same levels of functioning within the community.

ARONS: We have a student aged 76 years who is studying psi through the olfactory sense and has come up with the conclusion that the way to a woman's heart is through her nostrils. But I wish to make an

observation about your use of the term *phenomenology.* I am sure that you probably will agree with this, but it still is something I think needs repeating. You use it almost synonymously with subjective versus objective, where in fact to distinguish it from introspection we really are talking about being guided by the object or being object-centered. I wish you would say something about that.

NEPPE: I was not going into my usage of the term *phenomenology,* because I felt it was rather peripheral. But you are quite right. I have used it in a far broader perspective than many people would have used the term.

ARONS: Actually, I think more stereotypically. I am trying to break the stereotype of its being subjective.

NEPPE: Put it this way: I have used it in a non-stereotypical kind of way and in one stereotypical kind of way.

COLLINS: Your research on different types of subjective paranormal experience is very interesting. But to see whether it has any bearing on what, as an outsider, I understand as the topic of parapsychology, one would need at the outset to have some idea of what proportion of subjective paranormal experiences reflects actual paranormal experiences. If the proportion is very, very, very low then almost nothing you said is relevant to the subject matter of parapsychology. I wonder if you could comment on this.

NEPPE: That is what parapsychological research has been attempting to comment on for the past century and this is all I really can say. It is a question of making your choices. As I have indicated, if you belong to the kind of school that says that these phenomena are entirely impossible and, therefore, even if you generate results at the one in a million, million, million level it still does not mean anything, then none of these people in fact were having genuine experiences. There is what I would think is a more rational school that would examine these kinds of phenomena in the context of examining other kinds of psychological phenomena. This school would use the same levels of significance as for psychological phenomena. Alternatively you may want to increase those levels of significance a hundred times and use the same psychological research objectivity or also increase the level of objectivity in terms of recording of data a hundredfold. I believe that parapsychology, aside from anything else, has made a major contribution to scientific endeavor by developing a methodology which is more rigid than any other methodology in any other form of psychological scientific endeavor, just by virtue of trying to explain away discrepancies. But if you belong to that kind of school you might say that a variety of the phenomena that I was talking about offers a lot of very compelling

aspects to some of the evidence that has come out. From the point of view of my particular subjects, I have no reason to think that any of them were involved in fraud. All of them were non-professional. It is unlikely that I could explain what was happening to them on the basis of subliminal experience. As a psychiatrist I am firmly persuaded that none of these people were psychotic in any way. Therefore, I would try to dichotomize a perceptual experience and explain it by saying that either these are associated with genuine psi or they are associated with experiences which these people are interpreting as genuine psi and where a strong argument could be put forth for these being genuine psi. But as a non-physicist I cannot come along and prove that any of them have had genuine, ostensible paranormal experience. It is an important point none the same.

COLLINS: These are two entirely separate questions. There is a question of whether any psi phenomena are genuine or not. There is an entirely separate question about what proportion of purported psi phenomena are genuine. Now, I think you may have misinterpreted my question as being an attack on the existence of psychic phenomena, which it was not meant to be. It is merely something like this. If only half a percent of reported psi phenomena are genuine, then the importance of your results is quite different than if, shall we say, 50 percent of reported psi phenomena are genuine. It would seem to me you need to be in a position to make a guess at the global figure before one could get an idea of the significance of your findings.

NEPPE: It is going to depend on who is making that global figure. What I could say is I think that my subjects were reporting phenomena which they and the people they shared the experiences with were perceiving as genuine according to the highest levels of subjective validity criteria. But I am not going to be drawn into saying that actually I think that only one of these subjects in fact was genuine. All of these subjects appeared genuine. Unless these people are tested at a laboratory experimental level and generate results under those completely different circumstances, one can not even begin to argue it. But in the same kind of way this is the reason why I have made this point about subjectivity of experience. If you are able only to test out those people once they have been fully proven in a laboratory, your whole sample disappears before you begin.

TART: I want to ask a question that is probably 30 years premature, but might establish a research direction here. One of the best strategies for discovering how psychic phenomena work is to get some high quality talented psychic people in the laboratory and work with them. Well, where do you get them? You can screen everyone who comes along,

but this is highly laborious. It would be very helpful to have a short cut, some simple quick test you can give and then pick the good people. How well might you make a guess? Would it work if say I could give out 10,000 questionnaires that simply said some variation of "Do you sometimes smell pleasant flowery smells when nothing is there?" If I took the people who said "yes" would I get a good yield of people who might work out well in laboratory ESP tests? This is an unfair question, because there is no other question like that that works well at this point.

NEPPE: It is not really unfair. It is a very interesting question, a very interesting one indeed. Provided the idea of the sweet, flowery, perfumey olfactory hallucination is kept within these walls, the answer is "yes." As soon as the press gets hold of that then you will have the same kind of situation as with a person who thinks that they are telepathic or anything else. And this is the problem. At the moment it is limited to scientific journals and the general public has not got hold of it, so it might have some potential validity in terms of picking out people with genuine psi experience. The problem is we are going from B to A when my research has been from A to B. In other words I have taken subjective paranormal experients and said they have this kind of olfactory hallucination. The next step would be to look at everyone in the population who has this kind of olfactory hallucination. How many of them have subjective paranormal experiences? All I can say is that none of my normals had olfactory hallucinations. When temporal lobe epileptics have olfactory hallucinations they are invariably unpleasant smells such as burning. Some of the psychics also have unpleasant smells of burning in addition to flowery ones. But it is rare for temporal lobe epileptics to have flowery ones. I have approached it from the other side, looking at temporal lobe epileptics and asking if these people have subjective paranormal experiences. At this point in time I am still busy looking. I have encountered one major problem. Temporal lobe epileptics resist talking about some of these experiences because every time they do they get into trouble and get more medication. They really do not want to talk about them. What is interesting is that when I have found temporal lobe epileptics with flowery, perfumery olfactory hallucinations, these are the ones that would also tell me about their paranormal experiences.

ISAACS: It is fascinating to see you developing ways as Charley has suggested of pulling out psychics. My own psychokinesis research group has developed a questionnaire which we have used as a means of screening populations for ostensible psychokinetic experiences. One point that you made which you let drop and which I want to ask you about relates to something which I think we were all feeling during

the last question—that is that you are a very unusual psychiatrist because you make a dichotomy between psychosis and ostensible psi experiences. What do you think can be done strategically within the psychiatric profession to stop psychiatrists equating psychic experiences with psychosis?

NEPPE: I am a psychiatrist not a politician. I think your major point is an important one. I personally would like to see elements of basic parapsychological research or, if you want, anomalistic psychiatry/psychology and what I call phenomenological psychiatry being far more emphasized in the training of psychiatrists and psychologists. Depending on where people train, they might hear not one word about it. Every time they hear that a person has an experience which they claim is psychic, they already are busy labeling these people psychotic. Very obviously this is not to the benefit of the patient. It does introduce another component and that is pharmacological modulation of these experiences. People who do seem to have these subjective paranormal experience psychoses do seem to respond differently to anti-psychotic medication than the average psychotic, which is interesting. The second component is that there are various drugs which we can use to modulate various aspects of temporal lobe functioning. I am currently looking at people with temporal lobe epilepsy who also have subjective paranormal experiences to see whether or not these paranormal experiences are also modulated by these medications.

MINTZ: I just wanted to say a word. I am equally impressed. You must add clinical psychologists and psychotherapists to the roster of psychiatrists. A clinical psychologist said to me that if a patient insisted that some of his dreams were telepathic he would refer him for medication if the patient continued to refuse to listen to reason. This was a well-trained person accepted in the profession and I am still angry.