

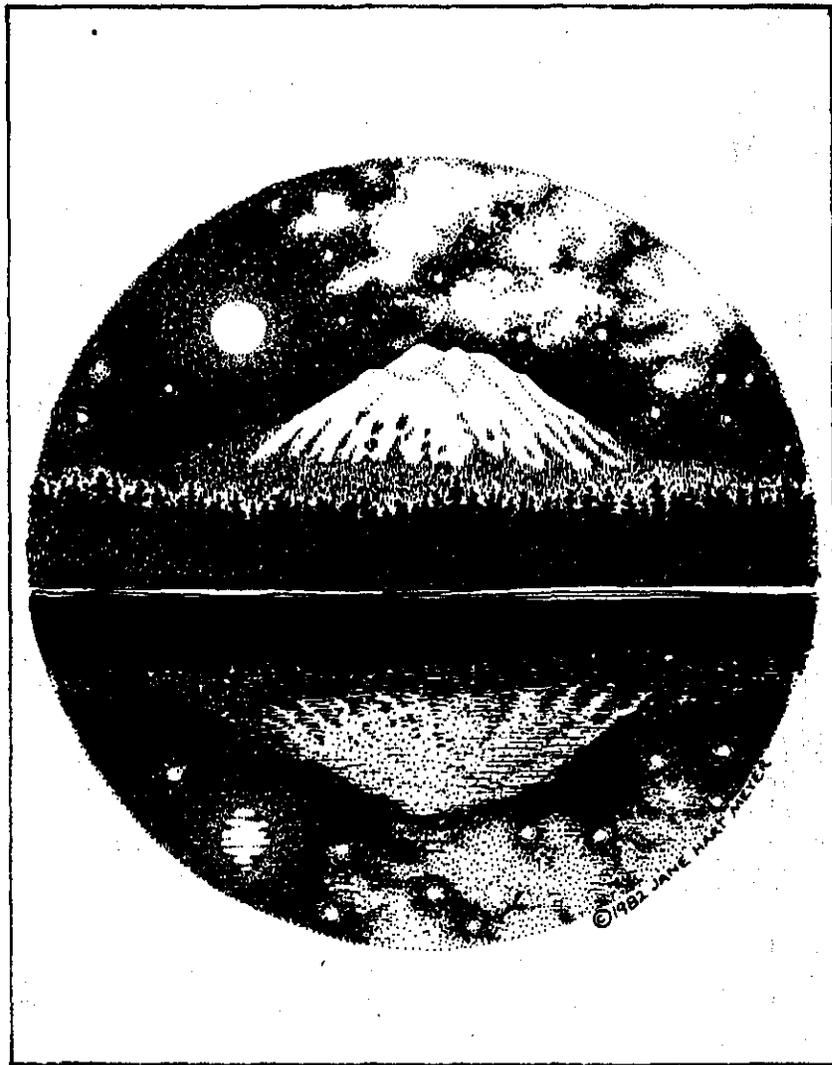


Foundation for Mind-Being Research

THE

# REPORTER

Spring, 1984



## Foundation Calendar

May 18: Stan Tenen  
"Torus -- The Search for an Ancient Code"  
Stan gives us a report on his research into the possibility of a hidden coded message in the ancient Hebrew letters which make up the opening statements in the book of Genesis.

June 15: William Gough  
"Patterns in the Cosmos"  
At this final meeting of the 1983-84 lecture season, William Gough reviews this season's topic: Patterns in the Cosmos. Previous speakers are invited to explore the interrelationships between their areas of study and to help us come closer to an integrated model of human consciousness.

## Editorial

by Robert Henley

Welcome to The Reporter. This quarterly newsletter publishes information about the activities of the Foundation for Mind-Being Research and articles about scientific research on human consciousness. For example, this issue contains reports on a conference sponsored by the Foundation in 1982. These reports cover the human aspects of the conference and its overall "feel", as well as the important ideas considered at this meeting. These two aspects of reality go hand-in-hand in human experience, and both will be examined in this publication. Thus, The Reporter will be publishing both technical and non-technical articles (of short to medium length) about consciousness research, and I actively encourage you to submit such articles to the address given in the fine print below. I am interested in publishing a variety of material: reports of scientific experimentation, theoretical studies, interviews, book reviews, general commentary on the state of the field, and so on. And, of course, letters analyzing previously published articles. But before you rush to your typewriter, read on; I think this issue will give you a lot to think about.

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## Introduction to the Westerbeke Conference

As a part of the Foundation's project on the Nature, Power, and Role of Thought, a retreat was held at the Westerbeke Ranch Conference Center in Sonoma on April 23-25, 1982. On Sunday, April 25th, a select group of scientists and researchers met to seek a consensus regarding representational models of consciousness. The participants are listed below together with extremely abbreviated descriptions of their professional backgrounds.

D.N. "Lynx" Crowe -- Buchla & Associates  
Background: computer design, linguistics.

Brenda Dunne -- Researcher, Engineering Anomalies Research Group, Princeton University. Background: Psychology and Parapsychology research.

William & Marion Gough -- Foundation President & Secretary.

Virginia Gruye-Cates -- then Foundation Executive Director.

Jack Houck -- Systems Engineer, McDonnell-Douglas Corporation  
Background: Engineering, PK and remote perception research.

Robert Jahn -- Dean of Engineering & Applied Sciences, Princeton University  
Background: Engineering, plasma physics, remote perception and PK research.

Karen Malik -- Trainer, Monroe Institute

Ann Palm -- Holistic scientist and educator. Background: physics & psychology.

Elizabeth Rauscher -- University of California. Background: Nuclear & particle physics, remote perception & PK research.

Rupert Sheldrake -- Biologist, International Research Institute, India. Author of A New Science of Life, and the originator of the theory of morphogenetic fields.

Henry Stapp -- Theoretical Physicist, Lawrence Berkeley Laboratory.  
Background: Quantum physics.

Eve Weir -- Author, Lecturer, and Psychic

# The Story Behind the Westerbeke Conference

by William C. Gough

A major focus of the Foundation for Mind-Being Research has been to facilitate the development of an integrated model of consciousness. To achieve this goal, we have sought interested scientists and researchers who (1) are open to a multi-disciplinary approach to knowledge, (2) recognize they are an integral part of any experiment, and (3) know and are prepared to extend their own level of consciousness. The format of the Westerbeke Conference evolved from working with such individuals and seeking ways to maximize effective communication across the diverse backgrounds and training that such people embody.

Our experience with multi-disciplinary meetings in this area has taught us the limitations and pitfalls of the use of verbal communications when discussing the "science of consciousness." The traditional brainstorming meeting is useful when working with persons with similar training, backgrounds, and approaches to the topic under discussion: for example, we sponsored a very productive informal working meeting of scientists to assess the status of consciousness research from the viewpoint of the physical sciences. The attendance for this meeting was limited to a group of experienced professional scientists and engineers who had performed experimental and theoretical research in the physics of consciousness or related areas. This group worked together harmoniously.

Difficulties were encountered, however, when we expanded this meeting format from a gathering of physical scientists to include researchers with medical, psychological, metaphysical, and psychic training. A half-day meeting encompassing this diverse background found the participants talking past one another. There were significant language barriers. Foremost among these was the lack of a general understanding of the specialized vocabulary used by various participants. This was exacerbated by the negative emotional reaction of those in the traditional sciences to the words and concepts used by those in more esoteric fields of paranormal research.

To overcome these problems, a longer two day meeting was held, again with a broad interdisciplinary involvement. To insure

that each person focused his/her ideas and was informed of the ideas of the other participants, position papers were prepared and circulated before the meeting. To provide time for participants to "listen" to the views of the diverse areas represented and to hear the reactions of others, a day of formal presentations to an audience was arranged. This was followed by an evening session in which linguistic facilitators aided the participants in working through language barriers and semantic pitfalls. The following day consisted of round-table discussions and brainstorming. With the aid of the linguists, this discussion was accompanied by an increased understanding of how words and language shape and restrict our thought processes.

The interactions at this conference were lively and exciting, and much was accomplished. But something was still lacking: we were interacting only on an intellectual, verbal level in our search for a model of consciousness ... a model that it was becoming clearer must encompass more than just this level of human experience. We were moving in the direction of an awareness and conceptualization of an underlying unity: a oneness out of which is created apparent difference. We were contemplating the idea that reality extends beyond our three dimensional world, and that thought is a power that molds or guides the universe. Further, there were among the group those who had experience and "knowledge" of areas for which no appropriate common language existed. A new kind of communications difficulty existed. The question became: how can we develop a science of consciousness unless those involved in the model building explore the territory for which they are building the map?

Thus our next meeting sought a new format. For a setting we chose the Westerbeke Ranch Conference Center. The location was originally a Miwok Indian healing ground in the Valley of the Moon. Now it is a private 150-acre oasis in the Sonoma foothills for small groups of fifteen to fifty to meet. The setting is rustic with ancient oaks, clear-water springs, and fresh, clean air. Our participants spent two and a half days in this atmosphere of solitude and tranquility, sleeping in redwood cabins, and

eating home cooked county-style food. Our goal was to provide a supportive environment that would help release the stress and tension of the participants so that creative communication and new ideas could evolve.

In addition to a setting conducive to communication and an exchange of position papers to provide a common intellectual basis for discussion, we sought to provide the participants a common experiential basis before initiating discussions on a model of consciousness. Two principal events were used for the experiential aspects of the two and a half day meeting.

The first event was a much abbreviated version of the Gateway Program of the Monroe Institute of Applied Sciences. This was carried out Friday evening through Saturday afternoon. The Gateway process uses a patented series of pre-recorded tapes which creates in the electrical patterns of the brain a frequency following response and hemispheric synchronization. This is accompanied by vocal guidance to achieve progressive states of consciousness and thereby experience profound areas of extended awareness. The sounds are heard through stereo headphones while in a relaxed position. The sessions were supervised by Karen Malik who represented the Western Division of the Monroe Institute and who has worked with over a thousand people using the tapes.

The second experiential event was a PK Party conducted by Jack Houck and Severin Dahlen. The goal was to provide the participants with a concrete demonstration of the power of their own "thoughts" upon material objects. Jack used a format for the PK Party that he had been developing and testing for over a year and in which 85 percent of the attendees learned how to bend metal and plastic. To help explain what's going on inside the metal Jack used electron microscope pictures which compared PKed with physically bend control specimens. This proved so interesting that people from another group staying at Westerbeke joined in with great enthusiasm.

These events made the potential range and effect of human consciousness apparent to the participants. This had mixed results, for even though intellectual openness to the concepts of the paranormal may exist, experiential events such as these can threaten or challenge people's underlying beliefs. They represent the

unknown and therefore can be perceived as dangerous. Not unexpectedly, and often wisely, many people approach such activities with caution and some fear. It is difficult to know the extent of such feelings in the participants; however, some behavior characteristics that were observed at the meeting could be attributed to such conscious or unconscious fears. Or they might be attributed to attempting to impose even a loose structure upon such an individualistic, highly intelligent group with diverse backgrounds. Thus, during the first day, a certain degree of turbulence and rebellious attitude developed. This was reflected by a desire to "get on with what we came here for -- an intellectual exchange of ideas."

However, as the group began to experience together, play together, and appreciate the qualities of one another, a cohesiveness and mutual respect developed. The cumulative effect of sitting around the fireplace in the evening, lying in sleeping bags on the floor of the large circular Redwood Room with the Monroe tapes flooding our minds through stereo earphones, intimately sharing our hopes and goals while relaxing on the sunny redwood deck, and enjoying the fun of the PK Party -- all served as a strange glue for the participants. There appeared to be another uniting force added as each participant joined in and observed others in the experiential activities: an acceptance and appreciation of the existence of different realities. One could not help but be impressed that those who had experienced altered states of consciousness were able to discuss and analyze common experiences with other participants.

On Sunday morning in the large living room of the main house, we began the intellectual discussions on the elements of a model of consciousness. I found this to be an amazing day. The destructive egos, the overbearing dialogue, the interruptions, and lack of courtesy often exhibited at the previous conferences were not present. The diverse backgrounds, education, status, age, sex, and viewpoints on reality in no way impeded the exciting flow of ideas as each of the participants built upon the contributions of the others. Somehow the participants really listened and heard each other. The flow of the meeting took on almost a magical aspect: there was a oneness to the group. The following report endeavors to capture this flow and the spirit of the individual participants as they contributed to this process.

# SPECIAL REPORT:

## The Westerbeke Conference on the Nature, Power, and Role of Thought - Part II

by Rae Montor

### Preface

In the attempt to summarize the conversations and presentations of the Sunday session of the Conference, it became obvious that one of the many problems with communications about an inter-disciplinary field such as human consciousness is that a vocabulary common to the practitioners of all the individual disciplines has not yet been developed. Further, the specialized vocabulary of each field is often meaningless to skilled practitioners in other fields. This communication difficulty forced each participant to use an unprecedentedly wide variety of examples, in the hope of conveying, through the communication of an emerging pattern, the various complex concepts that were involved. For that same reason, and contrary to the usual practice in the construction of a summary, many of these examples have been left intact.

### Condensed Summary of Part I

Henry Stapp discussed the role of thought in the universe from the physicist's perspective: from the perception of thought as irrelevant in classical physics, to the emerging possibility of its existence as an active force in quantum theory. Lynx Crowe pointed out that to have any perception -- any thought -- at all, the act of reference is required: the act of making distinctions between "this" and "that". He added that we must understand how acts of distinction are made, and how we form relationships between them, to understand reality. He noted that, with language, we are dealing with models of acts of distinction and the relationships between them, and the assignment of symbols -- for the purpose of communication -- to these particular events. He further discussed the way that personal views of reality occur.

Robert Jahn then spoke about Princeton's precognitive remote perception data, which showed a clear positive displacement with respect to a "chance" distribu-

tion. Jahn said that his precognition tests ranged in time up to 36 hours, and in distances ranging to global dimensions. There was much general discussion of the interactive natures of time, space, and preception/consciousness.

Lynx Crowe talked about the two primary processes of the scientific paradigm: observation and description. He noted that certain basic descriptive patterns appear to exist within each of the sciences, and suggested that these patterns are the crux of the way to form a unified science, incorporating all others.

Crowe then examined the way these patterns unfold. If, as evidence from many disciplines suggests, there is an underlying unity to reality, the first possible reference, mathematically, is self-reference. This act of reference is a creative act: it creates an apparent distinction between the part that is observing and the part that is observed -- an apparently different entity. From that idea of a unity, which by referring to itself, creates the idea of difference, you have a process which is recursive. If you apply difference to itself, you have a difference in difference: the idea of change. A change in change produces rate -- and there is already the beginning of a dynamic structure building up. And that can be carried much further.

Crowe spoke of J.L. Jolley's work, comparing different fields of knowledge, and finding similar patterns. In mathematics there are set concepts, groups, semi-groups, rings, and fields. In physical structures, there is the idea of fundamental particles forming one level of logical type, which particles are then group together on the atomic level, and then the molecular. In biology, this proceeds to the idea of cellular structure, and then organisms, followed by societies. The work of Eric Jantsch and Arthur Young were also discussed, leading to commentary on similar patterns.

## Special Report -- Part II

Lynx Crowe then spoke about the implications of this theory. He noted that, coming from the standpoint of psychology, Ken Wilbur suggests that on each level, there is a drive to recreate the initial unity, and that the dynamic tension between the divided pieces of this unity create the forms that we observe as energy and change. He added that Jung has made a similar suggestion.

When one observes a system, Crowe continued, one sees units which go together to make up that system. These units are treated as subsystems, which have an identity of their own as systems. One can, for instance, see atomic structure as a set of elements which have an identity of their own, when viewed at that particular level. Viewed from another level, however, those elements are made up of subsystems of fundamental particles.

Crowe said that he thinks the fundamental particles can be described in terms of the relations that exist between them. Crowe and Elizabeth Rauscher discussed the work of Saul-Paul Sirag, who has a model wherein he takes the idea of a permutation group consisting of four elements, and develops the elements into four Klein groups, making the S4 group, a 24-element group who appears to map onto the fundamental particles. Crowe said that his theory suggests that what Sirag is looking at is the different order in which one can begin to make distinctions and create dimensionality.

Rauscher said she found the idea interesting. She noted that the Klein group had interested Eddington and had been central to Piaget's attempt to systematize "the ability to conceive" in the study of perceptual development. The use of this one group structure in these disparate fields appears to have been the inspiration for Sirag's model. It was noted that Sirag has four dimensions left over that he's unable to account for, but that his intuition leads him to believe that these four can be consistently interpreted as space/time.

Crowe suggested that these four group elements are the distinctions that are made within the initial unity, and that one can, perhaps, condense the model further by noting that there is a mapping between two pairs of elements, which may be a result of the fundamental idea of duality. He said he is trying to see if

he can work from the idea of a self-referential initial unity all the way out into the rest of these concepts, and that, so far, he has had a fair amount of success.

He added that what he's suggesting is that looking at the structures that exist in the sciences in terms of the things described by those sciences might give a better idea of how these things (and therefore the sciences) can be related to each other: the same structures will become evident if one looks at the processes of consciousness, or of a biological organism, or of a chemical system, or of a language, for that matter. He wondered if there isn't something particularly fundamental about these structures, and added that, perhaps, some of these structures might correspond to what Rupert Sheldrake calls a morphogenetic germ.

Bill Gough interjected that Crowe's suggestion was the hope that he was seeing in the conference as a whole -- that there might be discovered, even without a strong data base, a conceptual framework for consciousness research.

The question was raised if the pattern under discussion merely reflected the way we think. Crowe said that his opinion was that the way we think is a map of the way this reality works, and that the structures involved in each are going to turn out to be the same. Henry Stapp commented that the fact that all of our theories use these ideas would certainly dictate that we think in terms of them, but not necessarily that the world operate according to them. He cited as an example that we thought for many years in the framework of classical physics, but that those ideas were basically incorrect. Crowe replied that the point he was trying to make is that any time one attempts to communicate with someone else, one has to go through the process of description, and then one is inevitably going to get these structures. A general agreement was voiced that, in that case, we have no hope of understanding the universe unless it does behave this way, so we might as well see what we can generate from here.

So far, Crowe added, it looks like we can generate all of the things which we actually observe and have been able to codify. He further suggested that there are properties that unfold on each level of organization as a result of adding new dimensions, and new kinds of relations:

the emerging properties of systems that Jantsch discusses. There was agreement that group theory seemed to be the best mathematical language to describe this.

Eve Weir asked if all of these additional properties could unfold as we rise, and develop our consciousness or awareness -- if thought, or the mathematics of thought, or the energy of thought, could provide us with the new relationships. Crowe said that quite possibly that was the case. Rauscher added that what Weir was saying was that we and the universe unfold together, and Weir agreed. Crowe asked, "If you start with the premise of an underlying unity, can it be any other way?" There was general agreement.

Rauscher said that she thought that group theory was the way to go. She has looked at some group theories with Karl Pribram in relation to his perception model, the holographic metaphor, and it seemed like a lot of things they considered involved a mapping from the mind to the brain in a very specific way. She thought perhaps discrete groups might be a good way to look at that mapping process.

Rupert Sheldrake then spoke about how these ideas might relate to the idea of morphogenetic fields. He said that any system (an atom, a crystal, a cell, or an organism, just to name a few) has a morphogenetic field which shapes, molds, and maintains the unity of that structure -- and, in fact, gives it that structure and organization.

In the history of any given thing, one finds that as it comes into being, the process starts with something which already has some of the characteristics of the organism. This is what he calls the morphogenetic germ: that which resembles part of the final structure, but is not yet fully formed. That process of coming into form occurs when the germ -- whether the nucleus of an atom or the egg of an organism -- enters into morphic resonance with past complete organisms/systems of the same kind, thus building up a morphogenetic field around itself. A morphogenetic field has a kind of unity at each level. Theoretically, Sheldrake added, organisms do not need to be actually connected with a common past for this to occur. They could, in fact, be in different galaxies. He suggested that similarity alone is enough to set up a morphogenetic field.

Sheldrake pointed out that since the morphogenetic germ differs in structure

from the completed thing, the coming into being of the final form involves the system taking up that form which is laid out by the morphogenetic field. This suggests that because such formations are conditioned by the past, morphogenetic fields are like habits: the more a particular pattern or form of organization is repeated, the more likely it is to be repeated in the future. This leads to the idea that the laws of nature (at least those that are governed by morphogenetic fields) are habits, built up through time. In the course of evolution, one can consider a creative act as a formation of a new habit at each level: as higher level systems are created, new morphogenetic fields are formed, unifying parts which were previously separate into a new, higher level whole.

Rauscher suggested that the process of evolution, therefore, is one of attempted unification. Sheldrake agreed that evolution can be seen as a series of higher level unifications. Rauscher likened the situation to the fall from Eden, followed by an attempt to return to unity. Sheldrake added that the laws of nature could, in this way, be seen more like habits than fixed laws that existed through all time -- habits that were built up through repetition, followed by new, higher level syntheses, made possible through creative acts involving re-unification. Rauscher said that view suggested that relativity was really created: that finding the breakdown of Newtonian physics created a new level that would allow the existence of the morphogenetic field for relativity. She asked how Sheldrake would describe that relationship.

He answered that he hadn't thought about it in the realm of ideas, but that the unifying formation of higher level concepts did fit the model of a morphogenetic field. He noted that one has the same kind of structure in language and thought. Crowe commented that all of his work has been derived from linguistics.

Sheldrake then spoke of the nature of this creative process. The process itself is not inside space and time: it's only after the first field of any given kind has come into being that it enters this realm, where it can echo through time and become habit, through the positive feedback that exists in building up the universe as we know it. The source of this process, therefore, is also outside the space/time system. Thought is a possible source, since, as it enters a

system, the realm of potential happens, leading to decision.

Rauscher said that the key to this is the link between potentials and how they are actualized. Sheldrake added that the interesting thing is that in every thought, there's an act of unification: the parts -- concepts, words, and so on -- are brought into higher level unities. So the basis of reality would have to be some kind of unity, which expresses itself through unification of things. He said one could relate the physical world to thought, in that certain acts that give rise to syntheses are like conceptual insights, or creative acts that we make through our conscious processes: having been manifested, they take on life of their own through habit, becoming more and more mechanical and physical. There seems to be a distinct parallel between patterns of thought and the way the universe develops, which makes it easy to understand how it is possible for us to think about things at all -- why thought can correspond to nature in a way that makes science possible.

Rauscher noted that this concept is like David Bohm's in Wholeness and the Implicate Order: that originally there is an implicate order, which contains thought and all potentialities. This unfolds to make the explicate order, which contains all that actually occurs. The explicate order then folds back into the implicate order to create new potentialities. Sheldrake noted that the implicate order has many things not in the explicate, but that the reverse is not true.

Stapp said that feedback didn't seem to be needed, since the idea of process is already within the implicate order. Crowe said that the feedback from explicate to implicate is the process by which the probability curve of the Schrodinger wave function might be formed. Stapp argued that if the collapse of the wave function was already in the implicate order, the explicate was not necessary, except for our own view. Crowe said that the explicate order corresponds to observed reality: the unfolding of the patterns of relations that are possible between the distinctions drawn. Weir added that things are more abstract in the implicate order, and have more form in the explicate: that there's a co-creative unit there.

Sheldrake said that his point was that explication of the implicate order involves the unfolding of the things in the

world we see, and without feedback, there would be no reason for consistency in nature at all. However, if there is that feedback, so that what's already been actualized is more likely to be actualized in the future, you have something more like what we do see. It was noted that Bohm's concept was similar to Whitehead's, and that both are representatives of the Platonic tradition of philosophy.

Rauscher added that Gould's idea of evolution being a discrete process, perhaps like a quantum process, rather than a continuous one -- that there really aren't any missing links -- seemed to relate to the issue. Sheldrake pointed out that this has been one of the hidden controversies in the concept of evolution since the beginning. One of the first attacks on Darwin in the 1860's was by someone who said that there was no reason that evolution should be gradual, as Darwin thought, but rather one could have new species emerging from other ones by sudden jumps.

The person who suggested this was a reigning Catholic theologian, who said that these sudden transformations could represent the creative acts of John, and that instead of the concept of God creating all species from dust, one could consider that He had created each species from other ones. And since each species was a new kind of form, one would tend to get jumps from one to the other. He put forward a coherent and clear picture of this.

In the last edition of Origin of Species, Darwin put in a whole special chapter to try to counter this view. He admitted that there were no missing links available in the fossil records, but said that perhaps it was because we just haven't found them yet. Darwin also admitted that we know of freaks, monstrosities, and sports which are not just minute continuous variations, but sudden jumps among domestic animals and plants. He himself had written chapters on them. But then he said that although these occurred in domesticated animals, they were unlikely to occur in nature.

And at the end of the chapter, Darwin revealed his real reason for this conclusion: that it seemed to him that one has to presuppose that all change takes place gradually, because only thus can we remain within the bounds of science. He added that, in his view, to presuppose sudden jumps is to leave the ground of science and go into the realm of the

miraculous. It was really, therefore, Darwin's anti-theological prejudice that made him incline toward his theory of gradual change: it had nothing to do with evidence. And that, Sheldrake concluded, is what has lain behind the heated controversy over evolution ever since.

Steven Gould realized, said Sheldrake, that there can be sudden jumps, and that evidence favors it, without supposing that such jumps are divinely directed. There are even certain kinds of new syntheses in evolution that must be sudden jumps. The step from the single-celled organism to a multi-celled organism must be sudden. You can't have an organism that consists of one and a tenth cells. And the step from invertebrate to vertebrate was probably sudden. Also, in spiders and insects, there are either four pairs of legs or three pairs. So major changes in evolution must have occurred by sudden jumps. Once the basic themes exist, there can then be variations on those themes: once there are birds with beaks and feathers, there can be birds with slightly longer or shorter feathers, or slightly bigger beaks or smaller ones -- but a bird has to exist first. So there had to be sudden jumps in the evolutionary process to account for the major distinctions in animals and plants.

Lynx Crowe suggested that the basic idea of quantization is implied in that act of distinction between and within classes of lifeforms. Elizabeth Rauscher agreed, adding that although it is not a conventional view of quantum mechanics, she would consider that discreteness itself could possibly come under some quantum description. Robert Jahn pointed out that quantization comes about through the imposition of boundary conditions upon the basic wave mechanical nature of a phenomenon, and wanted to know whether Bohm's feedback process operates at the level of the boundary condition, or at the level of the determination of the particular eigenvalue.

He said that if one examines the Schrodinger formula, one has a wave equation which defines a wave function, but it is a generic wave function. Only when one imposes boundary conditions on the existence of that wave function does one develop quantization, and discrete eigenstates that are accessible. But one still has not determined the state until one collapses the wave in accordance with the probabilities of the eigenvalues.

Jahn said that his essential point was that if one does a measurement, or if something actually occurs, then there's a real change, and that's also a discreteness. There are two elements of discreteness involved: one is the quantization of the eigenvalues, but even in an open universe, when one does a measurement at some point, information is changed, and there's another sort of discreteness at that level.

Sheldrake then said that if one thinks of it in a broader context than simply the laboratory -- for example, if at the cellular or molecular or crystal level the morphogenetic field is acting upon the atomic level to bring about the collapse of the wave function of particular waves, and to bring about particular patterns of atomic configuration -- one then has an overall form, and that form will feed back into the implicate order. And that form -- a cellular form, for instance -- would then, by having structure, have a lack of indeterminacy of its own. Every system at every level has indeterminacy; quantum mechanics is one example of this. The cell has a tremendous amount of indeterminacy initially. Jahn noted that if one feeds back the results of that effort into a modification of the boundary condition, one would also change the whole generic potential of the system. One can then unfold a whole new set of potential eigenvalues at the next level.

Henry Stapp suggested that in an open universe, the occurrence of an event does not modify the boundary conditions of the system within which it occurs -- for example, the wave function should still fall off at infinity. He concluded by saying that the fact that this happened and not that would still be the discreteness under discussion. Jahn commented that the fact that one is interacting at all imposes boundary conditions. The process of measurement imposes boundary conditions. Stapp concurred, and added that he thought that the idea of the collapse was probably going beyond measurement, in the sense that one thinks of a laboratory measurement, but rather that it is the analog in quantum theory of the fact that something has happened and has created some relationship or some structure that wasn't there before. It is the actual fact of the assertion that now it is this way and not that way that is the only discreteness. He concluded that he doesn't think one needs to impose that by changing the boundary conditions: that that is imposed by the factual statement

that something has now happened, and a new set of structural relationships are present in the universe which were not there before.

Elizabeth Rauscher then spoke about the multi-dimensional geometry she has been developing, and its relation to the previous discussions. First, she said, she had tried to quantify some of these ideas. She pointed out that any time one quantifies something, in a sense one limits it, because one is using mathematical language; but one also makes it have more impression than the physical world. This helps define issues in a more precise manner. She has looked at several other multi-dimensional geometries that remove space and time from being immutable primary constructs (as in the quantum view), and put them in a context which she calls a Descartes space (which includes concepts like energy and momentum as not being less or more primary than space or time), and found that these models have certain implications. They describe the possibility of considering certain Lorentz transformations as ways of creating local energy effects. (She noted that although a description of this might relate to PK, she in fact developed her geometry to look at some astrophysical problems.) The geometry she's been developing says that there may be a domain that would allow consciousness to interact with matter, in such a way that you preserve the causal connections in the way usually considered true, in physics. She also examined remote viewing, and noted that such things are macroscopic: they have to do with how events occur in space and time. She then took each dimension and included an imaginary term, and discovered that when one puts these terms in one gets a space with a real-valued metric which can be described as an eight-dimensional space consisting of the four space/time components, plus their imaginary mirror parts. And when one takes an eight-dimensional space and draws it in three dimensions, one finds that although one has an interval between, for example, the subject of a remote-viewing experiment and the outbound person in the experiment, because of the way the metric comes out, when one looks at that space/time diagram, there is a point at which those two locations look contiguous, as if from a higher dimensional plane. There is also a twistor algebra associated with this space, which maps to a spinor calculus on a Kalusa-Klein five-dimensional space. This algebra has very interesting properties which relate the theories of gravi-

tation and electromagnetism.

In looking at the implications of this geometry for other things, one can see where there are other physical descriptions that would be very interesting in this geometry. For instance, when one has the solution to a normal Schroedinger equation, one may have an envelope of a wave function, but it will tend to lose its amplitude, to spread out and disperse in time. But if one solves Schroedinger's equation in the eight-space, what one gets is a totally different kind of solution. It's a solution for the wave function in terms of a parameter times a hyperbolic secant squared, in addition to another parameter that comes in that depends on the imaginary value  $i \tau$ , giving you a second term. This gives one a part of the Schroedinger equation that is dependent not only on space and time, but on  $\tau$ , the imaginary component of time -- and this modified equation has a coherent, non-dispersive solution. That is, extending over space and time, the solution wave does not lose its identity. It's more like a wave that's a particle. These solutions are called solitons or solitary waves. Actually, in a detailed description, a soliton isn't something that doesn't disperse: the fact is that there's a dispersion term that's overcome by a coherence term, and that term works by being a slightly nonlinear component that depends on  $i \tau$ . There is a similar type of soliton solution for the Dirac equation.

Rauscher further said that she thinks the universe is not linear: that there are non-linear aspects which allow, among other things, discreteness in m-fields. This description, she said, also seems to fit well with certain unusual transition states in metals. Other descriptions tie in too, particularly the "Fermi sea" model which says that we live in a world of positive energy states. Dirac's view was similar -- that the world is an ocean of potential energy. This "potential sea" does have physical effects: if one measures conductivity and dielectric constant in a highly ionized gas, or even in a metal, it turns out that the idea of a virtual energy sea does make numbers come out right that don't come out right in a classical view. As a mathematical structure, all of these things, including the imaginary concepts, tie together. So it's not a theory that just has to do with consciousness, but also with certain types of physical processes. It allows a domain for consciousness to exist and to interface with the physical world. In

talking about how a conscious action collapses a wave function, one may be describing how that interface would come about.

The structure of this theory, and the structure of the geometry, show a particular solution to the Schroedinger equation so that Schroedinger's cat isn't dead and alive at the same time before you open the curtain to find out which state it is in. The geometrical description shows a way of the wave function collapsing, which may ultimately demonstrate that consciousness itself is universal, rather than particular to one observer. Rauscher acknowledged that in terms of traditional theories, this is a pretty wild statement, but she said that the structure of the Schroedinger equation with a small amount of linear coupling to this imaginary time component may say that consciousness, instead of just measuring one quantum event and collapsing a wave function, is really a universal entity that determines how these particular potentia are actualized in a specific event. If this turns out to be the case, it isn't just one person doing it; there's a collective consciousness also involved in determining the observed states.

Rauscher was asked for her physical interpretation of the imaginary components. She replied that it's hard to picture, because one has two kinds of models for looking at this. One is an orthogonal eight-dimensional space, but the other one involves looking at two intersecting light cones -- one imaginary and one real -- and then deriving certain topological structures describing how they overlap. She sees this as a mapping from the unmanifest state onto the manifest state. In response to the objection that this was a mathematical response, she replied that she doesn't have a physical interpretation of each dimension alone: it's the structure of the metric as a whole that seems to describe certain processes as individual coordinates. Imaginary time doesn't have a physical interpretation when taken by itself, but neither does real time. She asserted that one needs space and time to relate to, and also matter and energy. In other words, she continued, each of those dimensions alone doesn't make sense, because one doesn't have a reference to something else. She added that she thought that's what Lynx Crowe was saying, that no dimension -- not even space -- makes sense alone: each one is always a reference to something else.

## Conclusions and Last Impressions

Rauscher had to leave at that point, but each of the other participants then articulated his or her last impressions of and conclusions about the conference. Eve Weir said that as the implicate order evolves to the explicate; as we then interact, and that interaction returns to the implicate order; it is possible that we get "instructions" from even higher dimensions: that we, as co-creative units, then re-form and rise. Sheldrake commented that he found hierarchies of levels within consciousness reasonable, in that Bohm speaks of layers and levels, and the creative tradition is understood in terms of inspiration from higher levels. Karen Malik noted that there has been, historically, a sort of tunnel vision in the scientific approach to these questions, and that we should try to be more open to other dimensions. She said that in working with the Monroe Process, she has found that it is hard to get people's attention on "higher" levels, and that people would get more information and better results if they were more open.

Lynx Crowe said that to understand communication, we must understand description and representation. Brenda Dunne added that in all theory and concept, we attempt description, and must remember that the map is not the territory: that we must include the experiential. She further said that perhaps we should include the concepts of unity and distinction, and the motivations behind both, in all physical and mathematical and conceptual models. She added that her view was that the unity and the separateness -- and the love -- have to be under all of this, or it doesn't have any meaning. There was general agreement.

Robert Jahn said that as long as the mind of man stayed in macro experience, the observer concept was fine. When one gets down to particles or emotion or thought, however, or up to galactic levels, that concept no longer works. When considering quarks and like phenomena, there is no longer an observer in a traditional sense: one is forced to represent these phenomena in terms of aesthetic labels (e.g. charm). He said that he regards this as a ramification of a failure in the basic premise of physical models. He added that if parapsychologists talked in terms similar to the ones physicists use about black holes, they'd be put away. Physics, he said, survives because of the

immense inertia of the science, and, indeed, its tremendous data base of success when it's stated more traditionally. The point is that, as has happened so many times before in organized science, we're beginning to see test cases that fault the universal applicability of the paradigm, and of the mode of representation of it, and we're going to have to strike out to something that's yet more circumspect: something that will, as in the past, subsume within it the previous contexts of special cases.

He noted that there are lots of theoretical possibilities, and not enough data. He strongly suggested that we should try to build a data base from which to study these questions. He noted that there were many reasons for the previous inhibitions in this field, primary among them a lack of competent colloquy between the analytical minds and the aesthetic minds (what is jokingly called in his laboratory a marriage of white turbans and white coats). He said that it is possible to fail in experimentation in this field for either of two extreme reasons: 1) conditions of experiment so sloppy as to be unreliable, or 2) conditions of experiment so oversterilized as to suffocate the phenomena one is trying to observe. The only relief that he can see to this problem, he said, is the aforementioned vitally needed colloquy between the analytical and the aesthetic.

Sheldrake said that when we look around us at trees and flowers and each other -- the world that we actually see -- and think about our experiences and intentions, equations seems to have little to do with it. This new approach of trying to figure out what the structure of the mind is, how it produces equations, and how it experiences the world, can help people see physics in perspective, and help non-physicists see how the equations work. Stapp said that Whitehead's view is that there is a Platonic pool, a unity that you start with. What he calls creative acts (see Special Report -- Part I) establish some set of relations in a growing web. At each stage, some new relationships are formed and actualized in this web. At a certain stage potential is created, and each stage returns to all previous stages. Bell's theorem seems to confirm Whitehead's view, saying that space-like separate events are interdependent. The fundamental question is whether the basic processes of the universe are really one unified process, where each new relationship establishes some sort of connection with everything

that's gone before, or whether you have independent processes. And in trying to think about it in terms of independent processes, one finds that it is very difficult to even make a cohesive structure to think about.

Ann Palm said that meditation can help to explicate unity: unity exists, not as an abstract or hypothetical concept, but as a reality. There is unity and separation in everything: we have a oneness inside, but, in talking, have separate opinions. This is a representation of division and apparent difference. Virginia Cates pointed out that there is a relation between the act of knowing and the act of creation, and that the purpose of this conference is to try to find out what that relation is, and how it works. Stapp said that he did not feel there was a difference to relate: that he had equated the creative act with knowing and establishing a relationship. Bill Gough said that he felt that the conference had accomplished its objective: the beginning of a common experience with which to build a language and a model for evolving the science of consciousness. He added that he wanted this new paradigm to be an acceptable area of science, in order to make it more possible to work and gather information in it. Stapp said that he strongly agreed with Jahn: solid data is needed. Palm said that data is a response: nature answers the way we ask the questions, and if one assumes the data is there, one will find it. Stapp commented that we are beginning to ask questions that we didn't ask before. Dunne pointed out that data is a representation of information: that data from Princeton's laboratory came from an intermarriage of two worlds. What they've observed in both the experiential and the objective has been an act of creation: volition/belief/knowledge/information manifesting itself, growing, and changing. This conference group, she added, has pulled together people with diverse perspectives, and it is just such integration of perspectives that has produced paranormal data in the laboratory and theoretical models that can deal with it, and can create a belief system that can pull together the two sides of human experience into a single evolving process. Stapp concluded that if one of the results of this conference is a belief system that suggests that we can do something in this world, that alone would be its most important product.

# A Report on the Parapsychology Information Network

by Robert Henley

The Parapsychology Information Network has a new approach to the old problem of informing the general public about the scientific approach to parapsychology: a computer bulletin board available to anyone with a personal computer. Through it you can access information ranging from hard scientific results to collections of predictions and anecdotes. With this tool, the Parapsychology Information Network hopes to bridge the gap between the analytical world of the scientist and the experiential world of the layman.

More specifically, at this time the Network offers the following on-line services to the general public:

- An open forum for comments and questions.
  - A premonitions registry and anecdotal PSI logbook.
  - Sections containing information about dreams and near-death experiences.
  - A list of publications in parapsychology, such as journals & newsletters, with the addresses of the sponsoring organizations.
  - A list of books and materials for sale by various parapsychological organizations.
  - Monthly profiles of prominent parapsychologists.
  - A set of computer programs for testing PSI abilities, and addresses for suppliers of PSI-related computer games.
- For a small subscription fee, the following services become available:
- The Parapsychology Digest, which contains abstracts and original articles written in layman's terms. New material is added approximately every three weeks.
  - Access to all previous profiles of parapsychologists.
  - Applied PSI Newsletter which contains material from Jeffrey Mishlove and the Institute for Conscious Evolution.

-- Bibliographies for various branches of parapsychology.

-- A list of current activities in parapsychology, from classes to research work.

-- Aid in statistical evaluation of experiments.

And more.

Two of the most exciting aspects of this approach to information dissemination are its enhanceability -- new sections are being added to the Network constantly -- and its timeliness: new information is available as it comes in, instead of monthly or quarterly. Creative exchange of ideas between individuals is also facilitated by the Network's turn-around time; one doesn't have to wait a month for a letter to appear in a journal, and then another month for someone else to comment on it.

On the whole, the Parapsychology Information Network looks like a good idea that has been fairly well executed. Though the segment of the public that it can reach is restricted to those who own home computers and can afford long distance calls to Denver, it is to be hoped that the success of this system will inspire others to create similar ones in other localities. Until then the Parapsychology Information Network serves as a central clearinghouse for up-to-the-minute on-line information in this field and is well worth attention.

For more information, contact:

Director: William Tedder  
Asst. Director: Donald Beall

Parapsychology Information Network, Inc.  
Post Office Box 10456  
Denver, Colorado 80210

Computerline: (303) 722-6210  
Voiceline: (303) 722-9635

# The 1983-84 Foundation Calendar in Review

As the Foundation's 1983-84 season of lectures draws to a close, it seems appropriate to recapitulate the central issues that have been addressed:

April 13: Richard Unger  
"The Hand -- Body's Mirror of Consciousness" The hand, especially the palm, has long been regarded as revealing the inner self. Here we took a look at the mysterious process by which patterns in the mind -- both conscious and unconscious -- show up as patterns in the body.

March 16: Bob Shacklett  
"Mind-Stuff, Physics, and Reality"  
The Executive Director of the Foundation discusses the relationship of personal belief to the experience of "objective reality", and how physics can serve as a guide in the scientific exploration of this area of human consciousness.

February 17: Richard Ryal  
"Concentric Consciousness"  
Mr. Ryal discussed his model of the mind and how bridging the gaps between its many layers of identity can lead to new perceptions of reality.

January 20: Dale Walker  
"The Crystal Experience"  
An exploration of the "multi-dimensional" link that crystals provide, and of the properties that they possess beyond those described by physics and chemistry.

December 11, 1983:  
The Annual Christmas Party  
A Christmas Pot Luck Dinner was held at the home of Virginia Gruye-Cates. Members relaxed and got better acquainted. The evening closed with an I Ching discussion and reading by SRI mathematician Dr. Marshall Pease.

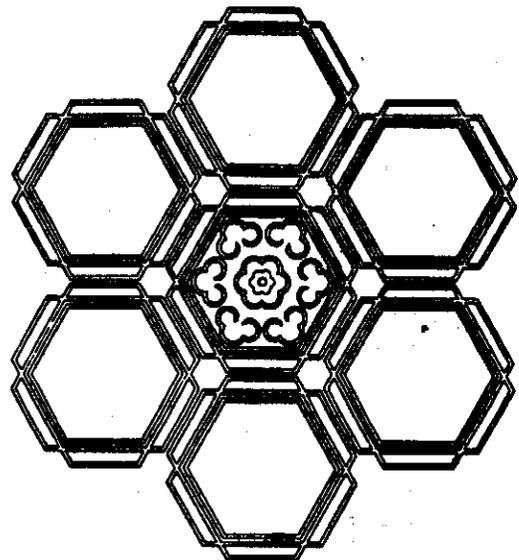
November 18: Ken Stover  
"Sound, Music, and Healing"  
Mr. Stover demonstrated a number of sounds and techniques using a synthesizer, and used these as examples in an exploration of the connection between sound/music patterns and healing-conductive states of the human body.

October 21: Thomas Condon  
"The Natural Hypnosis of Language"  
This was a demonstration of the language patterns of the clinical hypnotist, their similarity in form to everyday conversation, and the effect these patterns have upon our thinking and behavior.

September 16: Kathleen Appell  
"The Tao of Numbers"

This meeting was a discussion and demonstration of the relationship between numbers and the human experience. The connections demonstrated were impressive and are presently without explanation by conventional science.

The topic of this season's meetings has been "Patterns in the Cosmos." This topic and the relation of each of the preceding meetings to it will be discussed at the June meeting of the Foundation. We look forward to seeing you there.



## Foundation Officers

### PRESIDENT

William C. Gough

### EXECUTIVE DIRECTOR

Robert L. Shacklett

### SECRETARY

Marion M. Gough

### TREASURER

Louis Heynick

# About the Foundation for Mind - Being Research

The Foundation was established in 1980 to assist in the evolution of consciousness studies and to help bring this new field into wider recognition as a bona fide science. The interdisciplinary nature of the field is reflected in the activities of the organization and in the breadth of interests of its members.

The major goal of the Foundation is to facilitate the development of an integrated model of human consciousness. Toward that end, it provides encouragement and resources to a unique group of creative researchers and scientists. Because of the special nature of scientific inquiry in this area, the Foundation is interested in building its regular membership with competent individuals who (1) are open to a multidisciplinary approach to knowledge, (2) recognize that they are an integral part of any experiment, and (3) know and are prepared to extend their own level of consciousness. The intention is to develop high standards of credibility in all research activities and publications.

The Foundation is incorporated under the laws of the State of California and operates as a non-profit scientific research organization under IRS code 509(a)2 with tax exempt status. Donations made to the Foundation are tax deductible.

## Foundation Activities:

Monthly meetings (except July and August) which feature lectures and discussion on topics of interest to Foundation members.

Publication of this quarterly newsletter, The Reporter, which contains articles dealing with consciousness research and the activities of the Foundation.

Special working meetings involving local scientists, researchers, and other professionals, whose results are then summarized for publication.

Sponsoring and assisting research work.

Networking with individuals locally, nationally, and internationally.

## Foundation Membership:

Two types of membership are available:

Regular membership at \$30 per year carries with it the right to vote and hold office. The qualifications for regular membership include some understanding of and a willingness to participate in consciousness research through scientific inquiry and methodology.

Associate membership at \$20 per year is available to those who wish to support the activities of the Foundation and to exchange information and ideas.

All members are admitted free to Foundation meetings and receive The Reporter at no charge. Nonmembers may also attend meetings or subscribe to the newsletter for nominal fees.

## APPLICATION FORM (Please Print)



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