

Presenting Scientific Concepts with Forms and Methods from Primal Cultures: Mixed Media and Installation Works

Dennis Summers

... And we have to remember that what we observe is not nature itself but nature exposed to our method of questioning.

—Werner Heisenberg, *Physics and Philosophy, the Revolution in Modern Science* [1]

Like some number of *Leonardo* readers, I came to the arts from the sciences. Although I felt my scientific education (in chemistry) to be intellectually fascinating and challenging, something was missing. Unable to articulate it at the time, in retrospect I can see that, although I was taking in a great deal of information, I needed a creative outlet with which to organize it. I needed to relate this information to my life and to the rest of my world. At the time, with no good reason, I gravitated toward the visual arts. It was some time before I returned to themes from science, and some time until I found the media and forms with which to communicate information related to science. I believe that themes from the sciences are appropriate to the fine arts and necessary to the cultural dialogue of our time.

I have come to feel that the three most important issues contemporary artists need to address are as follows: (1) encouraging the active participation of people in art events; (2) meaningfully incorporating information not normally associated with the arts—such as that from science—into this experience; (3) for the participants, increasing the social and political understanding of our community through art events. (For me, at least, this last issue remains a goal; I have yet to come close to accomplishing this in any meaningful way.)

What I find particularly interesting in working with scientific concepts is that science, which our culture has long believed to hold a value-free mirror to reality, is just as influenced and dependent on ideology as is everything else. Nonetheless, owing in large part to the philosophy of logical positivism, the influence of science on our society has been immense—both as a method to be emulated and as a source of value-free information. Although still a common paradigm, positivism has more or less been discredited in philosophical circles [2]. However, its effects still remain as a partially articulated memory of rules learned in high-school science courses. These rules suggest that science is always advancing; that it does so by proving or verifying new theories with empirical evidence; and that these advances lead us ever closer to the truth.

Much recent philosophical research (although endlessly debated) has shown the sciences to depend on and be guided by metaphors and ideologies as much as the arts do [3]. Recent feminist philosophy of science, for example, has been particularly perceptive in pointing out the androcentric nature of science [4]. Thus, it seems that the kinds of knowledge gained from the sciences turn out to be not all that different from those gained from the arts; they have no special hold on “truth,” especially that defined by the positivists. We find that we understand concepts, even highly abstract ones, by comparison and habit, rather than through simple, contextless, empirical descriptions. Accepted scientific truths are negotiated—politically and sociologically—rather than “proven beyond a shadow of a doubt.” Science dissolves into art.

By saying this I do not mean to devalue the sciences. The point of all this is two-fold. First, I want to show that science

ABSTRACT

The author argues that scientific information is not objective, but is in fact a product of our culture. As such, there is a need to incorporate science into the arts. In doing so, artists can strive to create a complete worldview similar to that found within other cultures. The author describes selected projects showing his evolution toward this goal.

Fig. 1. *Niels Bohr/Round Midnight*, mixed-media artist's book created in an edition of 10, comprised of a box containing many objects, illustrations and texts, including “New Problems in Quantum Theory” by Niels Bohr, 1987.



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is as much cultural artifact as anything else and so deserves no special respect. And second, I believe that it is imperative that science be included within the ongoing cultural debates we call the arts. We often discuss the similarities and common goals between the arts and the sciences, but more often than not the sciences are still seen to have different kinds of validity. Once we have removed science from its rarefied position of absolute truth and into one of aesthetics, its relationship to the arts takes on new perspective. The arts may be the best place to address issues of science. Here we can create contexts for understanding, we can communicate non-discursively, and we can relate ideas across the full range of human experience. The arts have traditionally been seen as sites for emotion, subjectivity and personality. The sciences have traditionally been seen as sites for logic, objectivity and impersonality. We see that these distinctions do not necessarily apply. In anthropological studies of non-Euro-American (or "primal," after Highwater

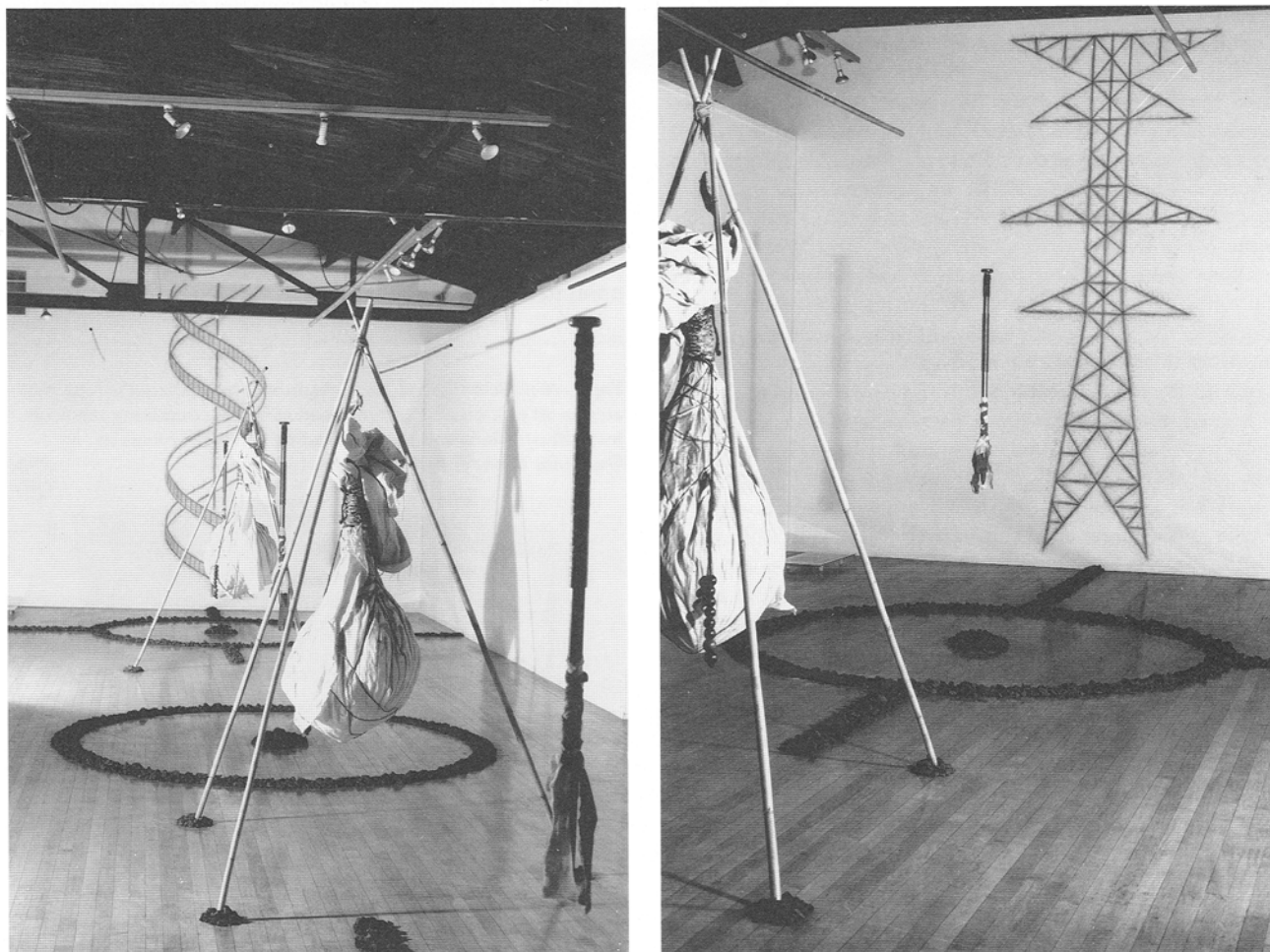
[5]) cultures, we find that cultural expression consists of all of these attributes and addresses both concerns. Within our culture, when the arts address the sciences we can create new holistic forms where science becomes part of our lives in non-technological ways. The many truly fascinating "objects" of scientific information can be displayed within environments that ask us to see them in new ways. I would like to clarify that I am not asking for a fusion of science and art per se, but rather an inclusion of the scientific within the artistic.

Why am I asking so much of the arts? The burden has fallen to the arts because no other discipline or activity appears interested in or capable of producing the multidimensional, multimedia environments that are necessary to this task. When we look to older European traditions and primal cultures, we see that ritual ceremonies and many of the so-called "crafts" fill this need. For example, the Catholic Church supplied an environment of visual art, song, theater and public involvement that defined ev-

ery aspect of reality from physics to biology to sociology, and so on. In many primal cultures, the objects we see as crafts actually help define that culture's worldview through form and pattern. Things such as bowls and fabrics are created as part of life's total ritual and not as casual decoration. I believe that we need to unify the knowledge of our world into one coherent system. This may no longer be possible, yet to lesser or greater degrees, people are attempting it. There have been several books that, for example, try to show how Eastern philosophies or Shamanism and physics are consistent in their description of reality [6]. Historically for Western peoples, this coherence once existed and was found within the Church.

In a cultural history extending several thousand years back, it was not that long ago Roger Cotes wrote in the preface to the second edition of Isaac Newton's *Principia* that "Newton's distinguished work will be the safest protection against the attacks of atheists, and nowhere more surely than from this quiver can

Fig. 2. *Quantum Dance Site II*, two views of a mixed-media installation within a space measuring 20 × 60 × 18 ft, 1991. The work functions as a site where the kinesthetic activity of the viewer increases appreciation of the themes addressed.



one draw forth missiles against the band of godless men" [7]. At that time, Newton was considered a "natural philosopher" because the word "scientist" did not yet exist, and he considered his research in alchemy to be of equal importance to that of the motions of visible bodies. Since then we have seen Natural Philosophy divide and subdivide until we are left with a myriad of scientific, mathematical and philosophical disciplines. I believe that, although this division, separation and isolation of disciplines may have been necessary in order to gain new knowledge, our culture has also suffered because of it. Fortunately, today we have many examples of people working toward new kinds of unity; many of these people are artists. In my artwork I have chosen to express themes taken from science using approaches and goals taken from primal cultures.

It was through the study of anthropological linguistics that I found the approach and model I use in my work. Here I learned that almost all of our knowledge and understanding of the world eventually depends on the structure of spoken language [8]. Furthermore, metaphoric structures, linguistic and otherwise, supply our general mode for understanding new concepts. Metaphors are much more complicated, ubiquitous and powerful than we generally think [9]. Finally, and perhaps most importantly, many primal cultures supply models of coherent and complete ontologies or worldviews [10]. These models show that the cosmological, the theological and the sociological can be connected and combined into one. My awareness of these issues was initially raised by studying several Native-American societies, including the Hopi, the Navajo and the Oglala Sioux. Recently I have more fully developed my thinking by researching Native Australians.

The artworks I will describe here are all informed by these issues. I have chosen to discuss the artworks not necessarily on the basis of quality of expression, but rather to show a path of development and to focus on the points presented in my introduction.

NIELS BOHR/'ROUND MIDNIGHT

In much of my earlier work, I simply (and I suppose obviously) placed objects, texts and images representing various types of information into close physical proximity. In short I was learning for myself the same sorts of inter-

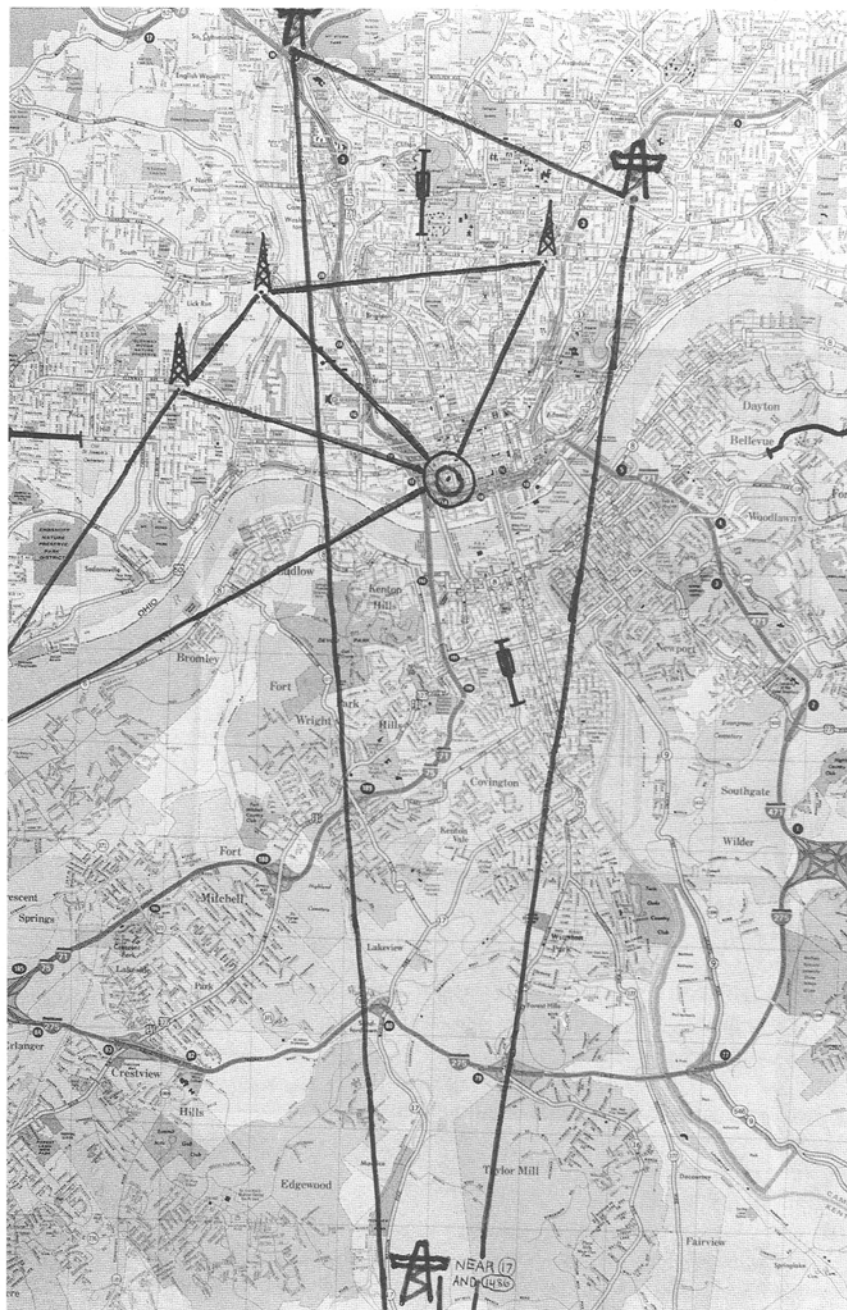


Fig. 3. *No Material Existence: Cincinnati*, diagram showing the locations of three different kinds of iconic objects, 1993. The diagrams were placed on or near telephone poles (the four, short dark lines), electric power strain towers (the cross-like symbols), and TV and radio towers (the triangular-shaped symbols). The concentric circles show the location of the Central Axis. The strain towers delineate a triangle with the axis at its center, and the TV and radio towers delineate an arch to the north, west and south of the axis.

connections between things that I was asking of my audience. The best example of this, and a project I used as a stepping stone to future work, was an artist's book entitled *Niels Bohr/'Round Midnight* (1987) (Fig. 1). I was heavily under the influence of my readings about metaphor at that time. Metaphors have applications to all types of communication, not only grammatical ones [11]. With this in mind, I more or less allowed the juxtaposition of differ-

ent concepts (in whatever form they took) to communicate meaning. I felt, and still do, that by producing elements representative of different ideas and physically bringing them together I would induce natural comparisons on the part of the participant. This juxtaposition functions metaphorically. What I believe differentiates this work from my more successful subsequent projects (aside from some of the themes) is the degree to which I convince the viewer



Fig. 4. *No Material Existence: Cincinnati*, 1993. An example of an Axis Magnifier nailed onto a telephone pole. This icon consists of an iron spike coiled with copper wire, a plastic magnifying glass, beads and feathers.

that what they are experiencing is all of one "system."

The book, created in an edition of 10, is a decorated wood box (10 × 13 × 2½ in) of varnished Honduran mahogany filled with a variety of items. Images varnished to the book's outside surface included a reproduction of cloud-chamber tracks, a diagram showing the technological details of radio transmission and reception and Nordic runes. Inside, the first thing one sees is a death-like face mask of papier-mâché. Underneath the mask are a small (3 in) iron spike wrapped in coiled copper wire, a small (5 in) medicine or spirit bag, a text on schizophrenia printed on seven hand-torn 4-x-6-in sheets of paper within an envelope, a diagram of the human eye, and a block (3 × 4 × ½ in) of beeswax. Embedded within the beeswax are three glass vials. One is filled with air; another with earth; and the last with salt. A piece of translucent paper with the emission spectrum of hydrogen painted on it is wrapped around the beeswax block. Beneath all of this is a reprint of "New Problems in Quantum Theory" by Niels Bohr, published in *Nature* in 1928. This text is printed on onionskin paper, which is placed between covers of handmade paper. The article is a summary of all the major aspects (at least in Bohr's view) of quantum theory up to that time.

This book was intended to function as a manipulable collage. As I myself considered ideas—holding them in my mind and turning them over and over, comparing them side by side—I wanted to create an environment for others to share in the beauty of this experience. By including scientific artifacts along with other sorts of more traditional arti-

facts, I present them on the same level without judgment. The book is visually attractive in order to seduce viewers into "playing" with it. In doing so, viewers create new and individual contexts for each combination of elements. In this work, I ask the viewer to create a situation in which the conceptual overlap between, for example, a spirit bag and radio transmission (e.g. invisible forces of communication) or between the death mask and quantum physics (e.g. discontinuity and definition of state) could be found. Overall meaning is not entirely open ended, as it was circumscribed by my choice of included elements. Furthermore, the whole of the box can be seen as a kind of medicine bag—a container for spiritually charged icons representative of powerful forces within our universe.

This book became a sort of template that influenced a series of my subsequent gallery installations in which viewers could participate in a physical and kinesthetic way with the environment for an added layer of interaction and meaning. The physical location of objects and the events caused by the participants helped to communicate a sense of structure and relationship. For example, in order to communicate the idea of action at a distance I commonly used one or more electric eyes that would switch lights on and off when a beam was broken. I was interested in neutrinos at the time, as they seemed an ideal symbol for the "insensible" yet "real." These infinitesimally small par-

Fig. 5. *No Material Existence: Cincinnati*, 1993. An example of an Electro-Power Intensifier placed on an electric power line strain tower. Media include wood dowels, an iron washer, copper wire and a small medicine or spirit bag.



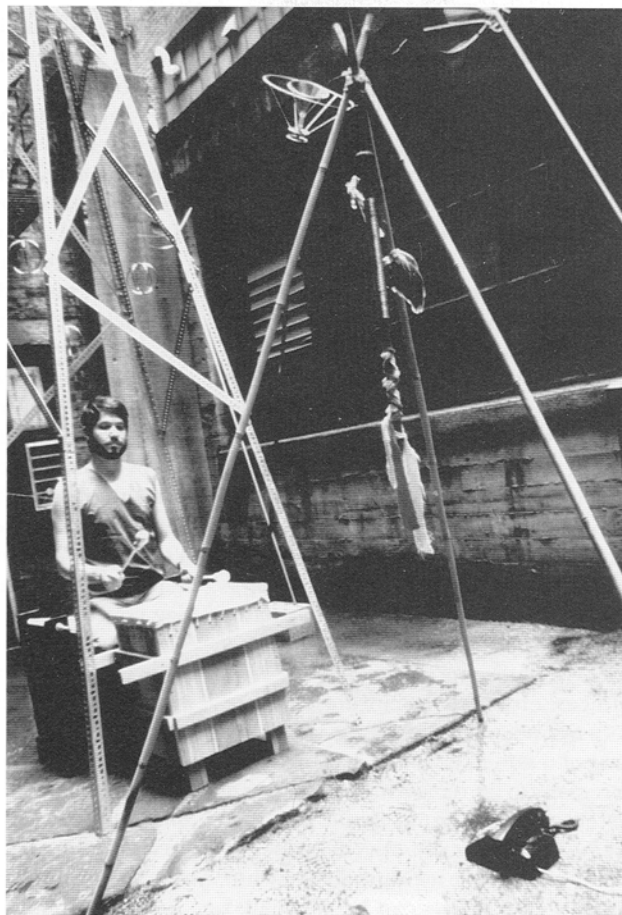
ticles, which are produced in the sun 8 minutes before we meet up with them, pass through our bodies without effect on their way to the furthest reaches of the universe. This idea fascinated me and was a useful reference to other less scientific and more spiritual concepts; it was an idea that I used many times. Neutrinos got me thinking about other insensible events, including those that carry information—such as human-made electromagnetic radiation and perhaps even quantum relationships.

Without going into excessive detail, let me summarize some of the points I have taken from electromagnetic field theory and quantum physics that have bearing on my work. Electromagnetic fields are heuristic mathematical constructs that have no “physical” reality. They are designed to define the force that would act on a hypothetical charge (or magnet) placed in a given location. Alternatively, they are mathematical constructs designed to show the forces caused by charges or magnets. Each of these approaches has conceptual implications on one’s perspective of events. Furthermore, with quantum physics, forces can be seen as the exchange of force-field particles between “matter” particles—a third perspective (hence the well-known problem of wave-particle duality). Although there is no philosophical imperative to use such concepts to interpret nonphysical realities, they do make useful metaphors.

Seeing things in terms of fields gives events an “all-around-us-all-at-onceness.” Given the earth’s electromagnetic field, this way of seeing can provide a productive perspective. One uses a compass, for example, and feels part of a vast force that connects us and envelopes us anywhere on the planet. On the other hand, taking the quantum-physics approach gives one the sense that any action we take links us one to the other, from the past through the future, by the act of exchange.

I also started thinking about the physical concept of power in its many forms. For Native Americans, the medicine bag is an immensely powerful object. Medicine bags are filled with items of personal value to the owner, which were collected and saved because of their connection to the forces of nature and spirit beings. Furthermore, I started paying attention to the networks of electrical power towers and the almost primitive and archetypal forms these towers take. I developed the electromagnetic ideas implicit in the iron spike wrapped in copper wire

Fig. 6. *No Material Existence: Cincinnati*, 1993. Photograph showing the drumming performance at the Central Nexus. The artist is within a tower made of angle iron and is facing a copper-wrapped, 48-in iron spike, and bird wings suspended from a bamboo tripod. Beneath the tripod is a telephone and a deer skull. This mixed-media installation was erected in the courtyard of the CAGE gallery.



(from the book). All of this came together in a gallery installation.

QUANTUM DANCE SITE II

The installation *Quantum Dance Site II* (1991, Flint, Michigan) (Fig. 2) was my next watershed project. The gallery space was 20 ft wide, 60 ft long and 18 ft high. On the space’s two opposing walls I drew in charcoal the images of a DNA double helix and a high-voltage power-line strain tower. Perpendicular to the walls, parallel to and suspended 10 ft above the floor were six 10-ft lengths of 1-in-diameter copper pipe. Vertically hanging from the ceiling were three 48-in-long iron spikes coiled with copper wire. Beneath them were spoked rings of red and black mesita rock. Between the three spikes were two large pseudo-medicine bags suspended from 8-ft-tall bamboo tripods. In each of the four corners and elevated slightly off the floor were four pieces of 12-x-24-in pieces of plate glass. To each of these were varnished scientific diagrams.

With this work I simplified what I considered to be relevant issues into a tight, visually coherent work. The symbolism was not particularly difficult. Under the

general umbrella of transmission, we have energy (power) with the strain towers, energy and information with the double helix, information with the spikes, and a kind of spiritual energy and information with the medicine bags. The copper pipes acted as a conduit in transmitting the information and energy among each of the elements of the site. To describe this work in these terms—as the sum of various symbols—is to do it a disservice. Much like the book, the work is given its full meaning by the relationships created by human participation. Like ritual ceremonies, the site gains significance only with active intervention. Many participants involved themselves in the work in this way. The difference in response was obvious between these “dancers” and those who simply viewed the pieces as sculpture.

After this work, I began giving serious thought to escaping the confinement of the gallery and began to learn more about Native Australians. Both of these directions came from my increasing awareness of the artificiality of the gallery environment and my desire to bring the work into the “real” world. What I learned from Native-Australian thought was very useful in helping me conceptu-

alize an approach for the interrelationship of things over great distances. My interest in this idea originally came from reading about quantum physics, in particular the philosophical implications of Bell's Theorem. Without going into a lot of detail about quantum physics, the general ideas of which have often been written about in *Leonardo*, let me make the few following points. As far as the atomic realm was concerned, Bell's Theorem was the final nail in the coffin of classical physics. It mathematically described a setup to measure the characteristic of "spin" of atomic particles. This type of experiment was subsequently carried out and confirmed the results of the theorem. These results seem highly paradoxical to those of us used to thinking in the terms of traditional Newtonian physics. The interpretation and philosophical implications continue to be debated [12]. In short, we are faced with two choices: either the quantum universe does not obey rules of locality (that the state of a system is unaffected by events in regions so far removed from the given system that no signal could connect them), or it does not obey the rules of separability (that measurement within systems and events can be separated from the larger universe). Or to put it less technically, either subatomic particles at great distances appear capable of "communication" among themselves faster than the speed of light, or the whole of the universe is one interconnected system, from which its parts cannot be isolated.

When I began to read about the thinking of Native Australians I immediately began to notice parallels and similarities to quantum physics. I would like to go into some detail about this subject as I think that others may share my interest in this as a new perspective on things.

In the book *A Place for Strangers*, Tony Swain [13] argues that pre-contact Native-Australian Aborigines thought in terms of place (space) and not time. In contrast, the overriding conceptual organizing principle within the European-based tradition is time. Most of us are simply incapable of imagining anything without such an underlying foundation: we spend time; we run out of time; time advances. Time permeates the metaphors that we use to describe activity. Native Americans who stress the value of place are considered to be against progress, or the "march of time." The importance of Swain's thesis is that it supplies an alternative method to assess our environment.

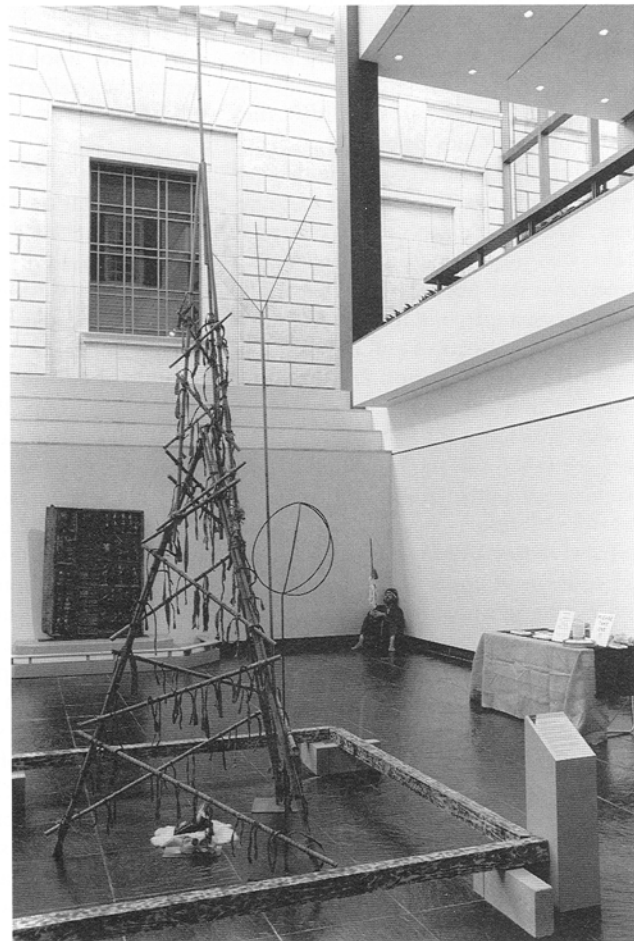
Before discussing the Aboriginal sense of space we need to look at their sense of time. In the European view, time "is prior to events, and not determined by them. . . . [Time] ticks on even if nothing occurs; its emancipation from events is ensured by its own subjugation of an ongoing numbered measure" [14]. The Aborigines are extremely sensitive to events, and can for example, divide each day into many uniquely differing occurrences. These are simply patterns that are descriptive and not serialized. Swain states that they do recognize a rhythm to life. It is not a rhythm, however, that is counted in any way. Thus, they lack a linear sense of time. Neither do they use cyclical time, which is commonly assumed to be the only alternative. What has occurred, is occurring now.

Without time the Aborigines had no history and no creation mythology with which to describe the events of a distant past. The stories that describe topographic features of the continent are typically called the "Dreamtime." Swain abhors this term, instead using "Abiding Events" to stress that they are occurring always, without reference to time. It is

the concurrent physical nature of these Abiding Events, or in other terms, landscape, that determines the matrix of Aboriginal conceptualizing. Swain refers to research by Graham Davidson when he writes, "Davidson postulates that the Aboriginal storage of information is synchronous and spatial rather than serial and temporal"[15]. For example, Aborigines do not add card numbers together but proceed by "see[ing] which cards fit together" [16].

This sense of fitting together describes the Aboriginal sense of place. A place is created by the action of an Ancestor emerging from the earth, moving across it, and then going back in. This is not a from-to movement that would imply time. Rather, the Ancestors link these sites together with a simultaneous presence and a "common intentionality of place" [17]. The landscape is the evidence of these transformations. Each location, in turn, is linked together in a vast network of shared intentionality. Because of the simultaneity of events, there is no central locus that organizes the other sites. Each location is unique yet inextricably tied to all others. Consciousness, human and otherwise, is in

Fig. 7. *My Nature Is to the Ground*, 1995. Central Axis showing a bamboo "radio tower," an Axis Magnifier and a Broadcast Resonant Filament. At the base of the tower is a telephone with feathers tied to the handpiece with copper wire, and a deer skull with an electronic connector in place of horns. (Photo: James A. Steel)



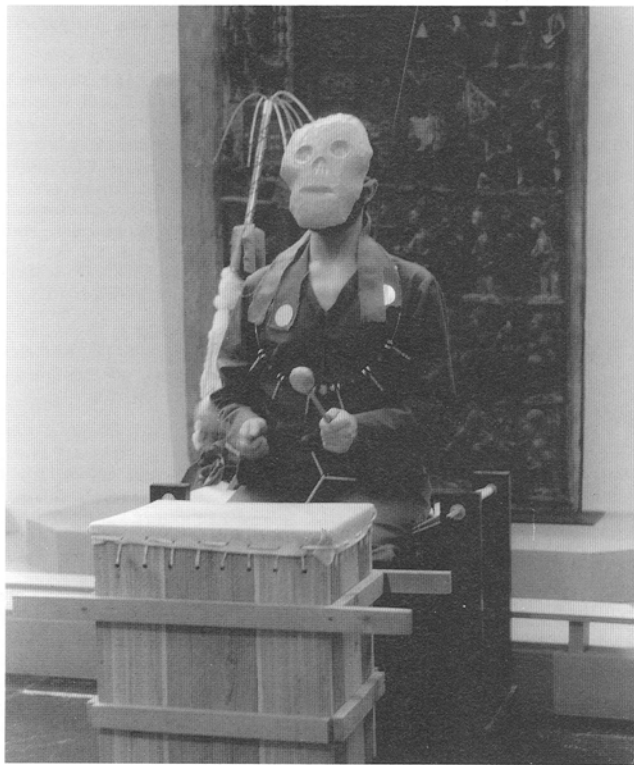


Fig. 8. *My Nature Is to the Ground*, 1995. In different locations each day, the artist played the drum in a simple repetitive beat for roughly 30 mins. After drumming he read short texts chosen for their relationship to the work within that gallery. (Photo: James A. Steel)

turn connected to place. “[A]ll that is land-derived—people, knowledge, cultural objects—is related along lines of place” [18]. The Aborigines play an active role in creating and supporting their environment. “The cardinal human endeavor is to maintain the shape of the world” [19]. Through their ceremonies and general activities they keep their country alive. You could say that consciousness is the act that brings the material world into existence.

If that last line brings to the reader echoes of quantum physics, it is my intention. Not only did this way of thinking mimic my own in some important ways, it helped give me a direction to pursue in thought, action and form. This took its most realized form to date in the project titled *No Material Existence: Cincinnati*.

NO MATERIAL EXISTENCE: CINCINNATI

With the *No Material Existence: Cincinnati* project (1993, Cincinnati, OH), I “marked” actual strain towers, radio and TV towers, and telephone lines by leaving small icons on or near these structures. The placement of these icons described geometries throughout Cincinnati and northern Kentucky. The patterns were notated on a road map (Fig. 3), which along with photo documenta-

tion was exhibited at the CAGE gallery in downtown Cincinnati. Icons included small copper-coiled spikes from each of which was hung a magnifying glass, beads and feathers. These I called “Axis Magnifiers” (Fig. 4). They were nailed into contiguous telephone poles in four groups of 30. Each group described a spoke with the gallery at its center. Small medicine bags within three 12-in-tall pyramids were placed at three strain towers, creating a thin inverted triangle, again with the gallery at the center. I called these icons Electro-Power Intensifiers (Fig. 5). I placed four steel-and-wire trident-shaped forms called “Broadcast Resonant Filaments” at the bases of TV and radio towers that described an arc to the west and north of the gallery. At the gallery I erected an outdoor environmental installation in a courtyard roughly 10 ft wide, 35 ft long and 20 ft high (Fig. 6). Elements included a 12-ft-tall tower made of steel angle iron. Within the tower I played a handmade square drum with a simple beat for several hours on opening night. Facing me, a 48-in spike with coiled copper wire was suspended from an 8-ft-tall bamboo tripod. Beneath this was a deer skull and a telephone. There were also six 10-ft-tall vertical copper pipes with a kind of stylized receiving dish atop each one.

With this project I created a model for a functioning system, albeit one in a

non-empirical manner. I appropriated the power grid, radio and TV transmission towers, and telephone lines to create the “No Material Existence (NME) Grid.” The Electro-Power Intensifiers could channel energy in order to power the NME Grid. The Broadcast Resonant Filaments could claim and filter communications frequencies. The Axis Magnifiers could focus information signals along new lines of force. These icons were placed in particular locations designed to maximize the NME potential. The drumming ceremony was done to initiate the system function. The tower and the dishes at the installation would respectively transmit and receive information from throughout the grid.

Although this system could not *function* as we traditionally understand the word, it could function as a model in describing certain accepted sciences and technologies. References made included those involving electromagnetic field potentials, quantum field potentials and information theory. The form of presentation brought these sorts of issues into contact with issues of a cosmic, spiritual nature. As an unintended side effect, social issues were also included. For example, I planned the placement of the Axis Magnifiers in advance, yet when putting them up I discovered that each spoke was in a differing socioeconomic neighborhood. Any of the local participants looking at the map would have recognized this and seen the way the four lines tied the four neighborhoods together within a common structure. I hope the reader also detects the parallels with the Native-Australian concepts of common intentionality of place, among other things. Furthermore, there was the very real parallel that as I walked across this landscape I brought into being new forms, each with very specific references to structures of information and power. Although I believed that *No Material Existence: Cincinnati* worked for participants mainly on an intuitive level, I recognized the need for a more explicit formulation of the project. To this end I wrote *No Material Existence: Cincinnati—The Book* [20]. In retrospect, I should have had this prepared in time for the actual exhibition. I see it as a guidebook that works much the same way a tourist guidebook operates to help give the tourist a deeper appreciation of what they are experiencing. In the book are short essays and illustrations that describe the work and document many of the pertinent themes.

MY NATURE IS TO THE GROUND

Finally, I would like to discuss a recent project. In one sense it is a step away from the outdoors and back into the "artificiality of the gallery." However, it involves a greater attention to aspects of performance and interaction with the public.

I was asked, along with other artists, to "interact" with the collection of the Detroit Institute of Arts in some way. I chose to create a project that would make the point that the so-called artworks of primal cultures were more significant to the lives of the people than much art from the twentieth century is to ours. In my opinion, too much recent artwork has been created with the intention of going straight to the museums, never to have a "life amongst the people." In contrast I wanted to try to reinject some of the life found in the ancient icons of other cultures that were now languishing in the cold, sterile museum environment. Needless to say, the museum would only let me go so far.

I erected *My Nature Is to the Ground* (1995), a structure consisting of a bamboo tower, a Broadcast Resonant Filament and an Electro-Magnetic Dream Catcher (Fig. 7). This was my central axis. Included on a nearby table were small (2-x-2-in) cards available for the taking. Each had an illustration of the double helix surrounded by emanating radio waves on one side and a Feynman diagram showing the transfer of a photon between two electrons on the other (all of these to be seen as kinds of information transfer). I performed every Sunday afternoon between 4 June and 3 September from 1:00 to 4:00 P.M. I dressed in a costume that included an antenna, a necklace of iron spikes wrapped in copper and various other items. I had a sign asking interested viewers to telephone me on Sunday afternoons. As a part of the performance, I took phone calls on a cellular phone that I carried with me as I wandered throughout the museum, performing a variety of behaviors. This choice of technology has a natural connection to the themes of the project and added a new social element. I interacted with the central axis in several ways and played my drum in various locations of the museum (Fig. 8).

CURRENT WORK

I currently see my research going in two different directions: one, an outgrowth of the book; the other, an outgrowth of

NME: Cincinnati and *My Nature Is to the Ground*—both, into new realms of interactivity. Taking the book as a starting point, I am creating an interactive Compact Disk-Read Only Memory (CD-ROM) using an authoring/hypertext software package [21]. I will collect many pieces of texts, diagrams and pictures, which people can access in linear, random and nonlinear methods. The user will have different ways of interacting with the same set of data, resulting in a flexible environment determined by each individual.

FUTURE PLANS

More interesting than this, however, are plans I have that are currently in the proposal stage. In several neighborhoods within a large city, I will ask people to write for me a text that describes an important event (listing the exact location) that has occurred to them within their neighborhood. I will then take these stories and weave them together along with my scientific concerns into a book. There will be one book per neighborhood. With the help of members of each area I will set up an exchange site with sculptural elements. A representative will be stationed there. Dressed appropriately I will begin by walking through the first neighborhood, reading aloud from the book. I will walk from story site to story site along a predetermined path. As I reach each site I will be reading the relevant story. I will leave an icon at each site. When I arrive at the next neighborhood, I will exchange books with the representative and continue until finished with all neighborhoods.

References and Notes

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