

**The Choreography of the Soul**  
**A Psychedelic Philosophy of Consciousness**

**by Ed D'Angelo**

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## Foreword

This work is a recently revised version of my dissertation, submitted to the Graduate School at the State University of New York at Stony Brook in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Philosophy. The original title was *The Choreography of the Soul: Recursive Patterns in Psychology, Political Anthropology and Cosmology*. The dissertation was presented to the dissertation committee at my defense held in December of 1987 and was published by University Microfilms International in May of 1988. The Dissertation Director was Robert C. Neville (1939- ), an American systematic philosopher, metaphysician, theologian, Confucian, Calvinist, and ordained Methodist pastor. Also on the committee was Hugh J. Silverman (1945-2013), a Continental Philosopher who specialized in deconstruction and postmodernism, and Edward S. Casey (1939- ), a Continental Philosopher who specialized in phenomenology and Freud. John A. Schumacher (1945-1999), a philosopher, metaphysician, anarchist, hippy, and Director of the Department of Science, Technology and Society at Rensselaer Polytechnic Institute, served as the outside reader. Prof. Schumacher had also served as the advisor for my Master's thesis at Rensselaer. He was my friend and mentor. In this Foreword I would like to tell the story behind my dissertation.

I came to Rensselaer in 1976 to study mathematics and engineering, not philosophy. I had studied Thoreau in high school and like most members of my generation I had been exposed to the counterculture through friends and the media. But my interest in philosophy did not become serious until I took a class with John Schumacher in the spring of 1977 titled *Telepathy, Buddhism and the Universe*.

Prof. Schumacher had studied mathematics at Rensselaer before getting his doctorate at Oxford in philosophy. He was well versed in both the humanities and the sciences. In fact, he knew the great physicist David Bohm and taught Bohm's (1980)

holographic theory of the universe. The question Prof. Schumacher posed to us in his class was, assuming that telepathy and other paranormal phenomena are real, how would you explain it? What theory of the universe can you create that would explain non-local causation (that is, immediate action at a distance)? To this day I don't know if Prof. Schumacher believed that telepathy was real or if he just wanted us to learn how to construct metaphysical systems, but a highlight of the class was a visit by a local psychic, a blind man with a bald head who didn't need eyes to see.

Relativity theory would seem to prohibit any such non-local connections since they would require information to be transmitted at superluminal speeds. Einstein disliked quantum physics because at least on some interpretations of quantum physics, such as Bohm's holographic interpretation, and even on the standard Copenhagen interpretation, it does seem to allow for non-local connections. Indeed, Bell's theorem in quantum physics, published in 1964, was believed to be a proof of non-local causation, especially by a circle of young, countercultural physicists in the 1970s in Berkeley, California (see Kaiser, 2011). These ideas spread throughout the counterculture, especially among those who were more scientifically literate, because they seemed to explain exactly the sort of "mystical" or occult experiences that members of the counterculture were having, sometimes after ingesting psychedelics. In Prof. Schumacher's case, there was a political motive, too, because he wanted to debunk the individualistic, atomistic view of human society that pits people against one another in a competitive struggle to rise in a hierarchical system. If people were in fact immediately connected to one another across distances (and time), such as they are when they seem to communicate telepathically, then the atomistic view of human society would not be based in reality.

In the fall of 1977 I took another philosophy class that left a lasting impression on me, this one taught by Prof. Lou Hammer, on the great German philosopher, Friedrich Nietzsche. Although I was only a college sophomore, Prof. Hammer taught the class like a graduate seminar. Once a week a small group of us would gather around a table in the

newly constructed library overlooking the Hudson Valley and talk about what we had been reading. It was a thrilling intellectual experience. From that point on I used all my electives to take courses in philosophy, including ones on existentialism, Buddhism, Indian philosophy, and metaphysics. In 1980 I graduated summa cum laude with degrees in both philosophy and computer & systems engineering. I worked at IBM one very cold winter in Poughkeepsie, New York, and in the summer after I graduated, after obtaining a secret security clearance, I worked for a defense contractor in McLean, Virginia. But what I really wanted to do was to solve the riddle of existence.

So I returned to Rensselaer to study philosophy for two years. After the completion of my studies in philosophy, I attempted to return to engineering, but my heart wasn't in it. Stony Brook offered me a fellowship to study philosophy and it had a strong Continental department. So off to Stony Brook I went—not, however, with any serious intention of making a career out of philosophy, but in search of Truth. After applying to Stony Brook I received a letter from the American Philosophical Association warning me that there were no jobs for graduates of doctoral programs in philosophy. No matter; if I had wanted a practical career I would have remained in engineering.

It was in my final year at Rensselaer when I attempted to return to engineering but spent most of my time reading Freud and Derrida and Deleuze that I first experimented with LSD. I didn't do LSD again until the fall of my second year at Stony Brook, in October of 1984. However, that experience proved to be the most powerful of my life. I spent the remainder of my time at Stony Brook doing research in Stony Brook's vast library in the humanities, social sciences, and medical sciences, trying to understand what I had experienced. My dissertation was the culmination of that research.

The LSD trip I experienced in October of 1984 was, like most trips of its kind, largely an unanticipated accident. One of my roommates had come upon blotter acid that was touted to be twice the strength of the typical "hit" at that time. The blotter was imprinted with the image of a Christian cross overlaid on a triangle, symbolizing death

and rebirth. I didn't believe it was double strength so I took two hits. It came on strong. There were the usual body rushes that I had experienced before, similar to an orgasm but lasting much longer and spread throughout the body instead of being confined to the genital area. Then came the waves of laughter, until my roommate and I were rolling on the floor. And then all of a sudden the world was gone and I found myself in another reality. In this alternate reality there was no space and no matter, only consciousness. It was a reality out of time; a reality that has always been and always will be. Therefore my trip to this alternate reality was not so much a "trip" at all but a return to a "place" where we have always been. It was not so much a new experience as a recollection, a Déjà vu experience, similar to Plato's recollection of the forms. Nor was I alone in this alternate reality. There were others: discrete personalities. Since there was no space or matter to come between us, we were able to communicate directly—telepathically—as if we were parts of one mind. Although we were out of time and space, there was, paradoxically, great movement. I led the others in a spiral dance performed according to precise rhythms, round and round in tighter circles. With each rhythmic pattern a new emotion arose, each of which was extremely intense—in fact, unbearably, dangerously intense—and extended out to fill the universe. The emotions I experienced alternated between positive and negative in apparent dialectical fashion, with conflict and resolution, cosmic doom and cosmic orgasms. This went on for hours. For hours there was nothing—*absolutely* nothing—but the *dance of emotions*. I was convinced that if I didn't continue dancing the universe might be annihilated, and it would all be my fault. As leader and instigator of the cosmic circle dance I bore a terrible responsibility. Until the dance *did* end, and there was just peaceful emptiness. And then I awoke, back in the kitchen where I had disappeared from the world. What a relief! The world isn't gone and I haven't destroyed it! It's still here and I've returned.

That's how I experienced the trip from the "inside." From the "outside," something different occurred. I did actually perform a circle dance inside the house that we rented

on a block that ended at a cliff overlooking Sound Beach. In fact I performed the dance so energetically that my roommate, and our neighbor in the basement apartment who heard the ruckus, became alarmed. They decided that to prevent me from doing damage to the house they would guide me out the front door of the house. They were both high themselves and they didn't use good judgment. As soon as they turned around I was gone, dancing down the street. At some point the police stopped me and managed to get my ID from my pocket, handcuff me, and return me home. They allowed my roommate to get me out of the police car and into the kitchen where a little while later I came to my senses.

LSD was a dirty little secret in the graduate program in philosophy at Stony Brook. Probably half the graduate students had taken LSD at some point in their lives, and an equal percentage of undergraduates, particularly in the humanities, seemed to have taken it. Although by the early 1980s the standard street dose of LSD had declined to about 125 micrograms or less, about half the standard dose in the 1960s, and although most people taking LSD in the early to mid- 1980s were not looking for cosmic consciousness so much as a good time, graduate students in philosophy were more likely than most to be intellectually fascinated by the drug. It was, after all, a "head" drug that changed the way you thought, and philosophy is all about thinking. However, it was understood that to write about your LSD experiences was professional suicide, especially in a field where there were no jobs anyway. It would have been professional suicide at any time, but it was especially risky in 1987/88 during the Reagan/Bush war on drugs. So people pumped out dissertations on Heidegger or Derrida or Critical Theory, went to the appropriate conventions, networked, and after long years of exploited labor and obeisance to the academic establishment, got real full time jobs.

It wasn't necessary for me to write specifically about LSD to get my ideas across. According to the research I did, LSD was just one way to induce a trance state of consciousness. What was important was the trance, not how you induced it. So I wrote

about trance states and only mentioned LSD a few times. But word in the halls of the philosophy department was that my dissertation was about LSD experience. Dissertation defenses are usually routine bureaucratic affairs, but my dissertation attracted a large group of students who wanted to see what would happen to someone who wrote their dissertation about LSD experience. Prof. Schumacher added more interest. Unknown at Stony Brook until he arrived for my defense, he was a tall, brilliant, charismatic man with a deep, booming voice and a beard and hair that he hadn't cut since his days at Oxford in 1970.

In the end I was granted the degree but never got a full time job. I got one or two interviews for full time jobs. One of those was with a philosophy professor who had done LSD himself and who interviewed me because he recognized what my dissertation was about. We corresponded for a few years but he never had any intention of ever hiring me. He knew better. Nor did any other philosophy professor know how to help me get a job. Very few were even willing to discuss my dissertation with me, including my good friends. Besides the political hazards involved, I don't think many had any idea what I was talking about. I became convinced that very few people had had experiences like mine and those that had didn't want to talk about it. Hence I made no attempt to publish my dissertation as a book.

I taught philosophy as an adjunct professor at Rensselaer and other local schools for four years while I picked up a degree in library science. Late in 1992, after the leaves had fallen, I became a librarian at the Brooklyn Public Library, where the intellectual climate proved to be even more repressed than in the academic world. It was so bad, in fact, that in 2003 I wrote a book about it, *Barbarians at the Gates of the Public Library*. It was published in 2006 by Rory Litwin, a progressive librarian who started his own publishing house, Library Juice Press. The book was lauded by some highly respected professionals and it was sufficiently abstract that it didn't offend anyone. I kept my job for another eight years until I retired in 2014.



All the while I worked in the library I kept my head down and worked the daily grind, never daring to take on the daunting task of revising my dissertation, until the Psychedelic Society of Brooklyn reignited my interest in 2015. There is a psychedelic renaissance occurring in New York and around the world. Marijuana is being legalized. Stage III clinical trials have begun to test the effectiveness of the psychedelic drug MDMA in the treatment of PTSD. If the clinical trials are successful, and there is every reason to believe that they will be, MDMA will soon be legal for use in psychotherapy. Ayahuasca ceremonies are already being conducted legally in Peru for psychedelic tourists. People are talking again. And this time, the genie isn't going back in the bottle.

## Preface

It is a misconception to think that a person will have a certain type of experience just because they have taken a certain type of psychedelic drug. In addition to the type of drug that a person takes, there are three other factors that determine the type of experience that a person will have: set, setting, and dosage. “Set” refers to a person’s intentions in doing a drug, their expectations for what will happen, what they have done to mentally prepare for the experience, and their mental state at the time that they do the drug. “Setting” refers to the physical and social environment in which the drug is taken—where you do the drug and who is with you when you do it.

In the case of the psychedelic experience that I had in October of 1984 and that provided the basis for my dissertation, the drug was LSD and the dosage was approximately 500 mcg. The setting was provided by a fellow graduate student in the Philosophy Department and a suburban home on the North Shore of Long Island overlooking the beach. The set is by far the most complex of the several factors that determine the nature of a psychedelic experience because it is nothing less than the state of your mind at the time that you take the drug. But the state of your mind is determined not only by your intentions and expectations but by everything you have previously learned and experienced. In my case, my intentions and expectations were shaped by my exposure to the psychedelic culture of the 60s and 70s. I intended and expected to expand my consciousness, and maybe even experience cosmic consciousness. But the state of my mind was also shaped by my formal education in mathematics and philosophy. It is this education that provided the backdrop not only for my LSD experience but also for my dissertation.

In October of 1984 I had just taken and passed the comprehensive examination in the history of philosophy in partial fulfillment of the requirements for a Ph.D. in philosophy

at Stony Brook University. Among the figures in the history of philosophy who contributed most to my state of mind in October of 1984 were Nietzsche, Plato, and Hegel (in that order). I had also studied Jungian psychology, with particular interest in Jung's alchemical studies and in two books by his most brilliant student Erich Neumann, *The Great Mother* and *The Origin and History of Consciousness*.

My set was also shaped by my education in mathematics. I was born just a few months after Sputnik was launched. Out of the anxiety that we Americans were losing the race to space, the United States federal government launched a sort of program, including various attempts to improve the quality of education in mathematics and the natural sciences. In Ft. Lauderdale, Florida the National Science Foundation built an "experimental" high school with the intention of producing students who would become the innovative scientists and engineers of the future. Nova High School was distinguished not only by its advanced science and mathematics curriculum, but also by its experimental methods of teaching that encouraged independent thinking.

After exhausting all the mathematics courses offered at Nova I studied differential equations at the community college next door. I can still vividly recall the day when the professor lectured on the differential equations which describe damped harmonic motion. I was deeply impressed by the explanatory power and beauty of these equations and my enthusiasm for them continued through four and a half years of engineering studies at Rensselaer Polytechnic Institute. At the time I knew nothing about their significance for a study of human nature. However, once I began my study of philosophy at Stony Brook and addressed the question of human nature, which is the fundamental question of the humanities, I arrived at the thesis that the essence or "soul" of the human being is itself a harmonic system, or a "dance." Such a vision of human nature is remarkably consistent with Pythagorean philosophy and with Plato insofar as he is understood to be a Pythagorean. It is a vision of human nature and, indeed, of the entire universe as a beautiful arabesque whose structure is both precisely mathematical and musical.

In addition to my exposure to the psychedelic culture of the 60s and 70s, and my formal education in philosophy and mathematics, my set was also shaped by my love of American popular music. In particular, I listened to the blues and to blues-based rock. And since I usually listened to music during a psychedelic experience, American popular music also provided an important component of the setting within which I did psychedelics.

One example of a blues-based rock band that influenced me was Jim Morrison's band *The Doors*. Like Nietzsche in his final mad moments, Jim Morrison identified with the god Dionysus, the leader of the choral dance. Jim Morrison was also a serious student of Nietzsche and read his collected works (Hopkins, 1980). In ancient Greece, devotees of the god Dionysus entered possession trance states by means of dance or intoxication. In Louisiana, practitioners of Voodoo entered possession trance states by means of dance alone. These dance rituals, accompanied by rhythmic drumming and music, were an important precursor to the blues and blues-based rock 'n roll (Ventura, 1985).

By the 1980s if not even earlier the psychedelic movement of the 1960s had morphed into the New Age movement and several other closely affiliated streams of thought. These also contributed to my "set." Among these was body-oriented psychotherapy, which challenged the traditional mind-body dualism of Cartesian and Platonic metaphysics.

In *Body* Johnson (1983) points out that Americans have an egalitarian and anti-authoritarian tradition that was opposed to the hierarchical institutions of Old World European society. Johnson finds the resources for an egalitarian, anti-authoritarian society in the "body," which contrary to traditional mind-body dualism turns out to be equivalent to what I am calling the "soul." Political liberation presupposes the liberation of the body. Political oppression (such as is found in any hierarchical organization which depends on the use of force), on the other hand, presupposes the repression of the body.

In contradistinction to egalitarian, anti-authoritarian political forms which are modeled on the structures of the body, oppressive political forms are modeled on the structures of ego-consciousness. I proposed in my dissertation that virtually the entire history of Western European philosophy can be read as an articulation of the structures of ego-consciousness. The body, or as I also called it, "system X," has been neglected. If Johnson was correct then this neglect derives from politically coercive institutions.

According to Capra (1984) several American cultural movements converged in 1984 to form a "powerful force of cultural transformation." These movements included the holistic health movement, the human potential movement, the ecology movement, the feminist movement, consumer groups, and ethnic liberation movements. Together they constituted the "rising culture." In trying to understand this rising culture Capra (1984) identified several key concepts. These too contributed to my "set."

One of these concepts is the concept of "dance." Capra (1984) believed that the transformation of American culture and society that was occurring in 1984 represented a shift away from the mechanistic world view of Cartesian-Newtonian science and toward the world view of modern physics and Eastern mysticism. In the old world view "objects" were taken to be the primary building blocks of the universe. In the new world view, on the contrary, objects are illusions created by a "continuous dance of energy."

The metaphor of the dance naturally comes to mind when one studies the dynamic web of relationships that constitutes the sub-atomic world. Since mystics have a dynamic world view similar to that of modern physicists, it is not surprising that they, too, have used the image of the dance to convey their intuition of nature. (Capra, 1984: 138-139)

The second key concept is that of a "system." Systems can be described in three distinguishing ways. First, they are wholes which cannot be reduced to their parts: "the whole is always different from the mere sum of its parts" (Capra, 1984: 139-140). Second, systems are stable processes in which "opposites are unified through oscillation" (Capra, 1984: 140). Third, systems are relatively autonomous and self-organizing. In this respect

all systems resemble living organisms: "A living organism is a self-organizing system; that is, its order in structure and function is not imposed by the environment but is established by the system itself. Self-organizing systems exhibit a certain degree of autonomy" (Capra, 1984: 140). Self-healing, regeneration, and self-renewal are three ways in which living systems maintain their own order in structure and function. It is easy to see the connection between this concept of a system and political movements "based on decentralized, cooperative and ecologically harmonious life styles." (Capra, 1984: 146). A community which is self-organized is one which is not ruled from above or from outside itself. Rather, its order rises from within itself as does the order in structure and function of a living organism.

The last key concept identified by Capra (1984) is the concept of the Goddess in feminist spirituality. The most basic opposition developed in my dissertation was between "matriarchal" philosophy, which is the philosophy of the Goddess, and "patriarchal" philosophy, which includes, but is not limited to, the Western European philosophical tradition. According to the view presented in my dissertation the liberation of feminine spirituality would produce the most profound and most positive transformation of our society and culture. The concept of the Goddess therefore had a privileged position among all other revolutionary concepts. However, I understood this concept through the lens of Erich Neumann's theory of the unconscious, symbolized by the archetype of the Great Mother. Therefore my concept was primarily psychological, not sociological. The Goddess represents the unconscious, while the Patriarch represents the principle of ego-consciousness.

Of course I did not expect the old culture to give up its power without a fight. As Capra pointed out, with each increase in the power of the rising culture we can expect the declining culture, which includes "the traditional political parties, the large multi-national corporations, and most of our academic institutions," to "cling ever more rigidly to its outdated ideas" (1984: 148). With each increase in the power of the rising culture we can

expect the violence of the war between the old and the new to escalate.

One way in which many writers (Bohm, 1980; Comfort, 1984; Bentov, 1977; ... the list is very long) tried to understand the world view of the rising culture was in terms of the hologram. In the case of an ordinary photographic plate each part of the plate contains information about a corresponding part of the scene which was photographed. In the case of a holographic plate each part of the plate contains information about the whole of the scene which was holographed. In other words, it is possible to recover a picture of the *whole* scene from any *part* of the holographic plate. This means that

holographic models are recursive, that is to say, if they were visually displayed, each cell or unit of structure would repeat the structure of the whole, whether we viewed the pattern with a telescope or with a microscope (Comfort, 1984: 10)

Suppose the cosmos is holographic. Then each part of the cosmos (each microcosm) would repeat the structure of the whole cosmos (the macrocosm). This is how the rising culture views the world, as a series of recursive patterns.

Now, one of the most frequently recurring patterns resembles the birth process. Stanislav Grof discovered that LSD experience resembles the experience of being born. John Weir Perry (1953, 1976) and R. D. Laing (1982) discovered that psychotic experience also resembles the experience of being born. In general, whenever the psyche undergoes a radical transformation it tends to do so in a way which resembles the process of being born. But what is especially interesting is that this pattern of psychological transformation may be repeated at the level of social and cultural transformation. Perry (1953, 1966, 1974, 1976) discovered that the stories told by psychotics provide us with historically accurate information about the ancient institution of divine-kingship in the original agricultural civilizations. And Grof (1985) believed that American society and culture was undergoing a process of transformation which resembled the process of being born. More specifically, Grof believed that American society and culture resembled the most violent (and also the most libidinally intense)

period of the birth process when the baby is moving through the birth canal. Grof's description of American society and culture was consistent with Capra's (1984) belief that we were at a turning point in history and helped to explain the violence that we were experiencing as the old and new cultures engaged in battle with one another.

This process of psychosocial transformation was described in chapter IV of my dissertation. One particularly important aspect of this process is the absence of "teleokinesis" during the transitional period between the destruction of the old and the birth of the new. "Teleokinesis" is a concept developed in a series of articles by the great neurophysiologist Paul Yakovlev (1948, 1968, 1970). "Teleokinesis" refers to the perceptual-motor feedback relationship between a living organism and its external environment. Human dialogue is a highly developed form of teleokinesis. If the pattern of the process of transformation at the level of the individual recurs at the level of society and culture then the dialogue which is human culture must at some point stop if a new socio-cultural order is to be born. Therefore, a "turning point" in history is a "singularity." It is a point of discontinuity between two dialogues or between the languages within which those dialogues are spoken.

Thomas Kuhn (1970) distinguished between "normal science" and "revolutionary science." Although normal science may consist of affirmations and denials of particular positions within a given language, revolutionary science, which occurs during periods of cultural transformation, does *not* enter into dialogue with the declining culture but constructs a new language for the rising culture. Kuhn's (1970) description of the structure of scientific revolutions is strikingly similar to Perry's (1953, 1966, 1974, 1976) description and analysis of psychotic experience. In particular, both the psychotic process--which is a process of radical psychological transformation--and scientific revolutions include a period of chaos, a violent battle of opposites, and a period in which communication or dialogue breaks down. Political and scientific revolutions necessitate the "partial relinquishment of one set of institutions in favor of another, and in the interim,



society is not fully governed by institutions at all."

In increasing numbers individuals become increasingly estranged from political life and behave more and more eccentrically within it. Then, as the crisis deepens, many of these individuals commit themselves to some concrete proposal for the reconstruction of society in a new institutional framework. At that point the society is divided into competing camps or parties, one seeking to defend the old institutional constellation, the others seeking to institute some new one. And, once that polarization has occurred, *political recourse fails*. Because they differ about the institutional matrix within which political change is to be achieved and evaluated, because they acknowledge no supra-institutional framework for the adjudication of revolutionary difference, the parties to a revolutionary conflict must finally resort to the means of mass persuasion, often including force. (Kuhn, 1970: 93)

To enter into dialogue with the declining culture would be the most certain way of perpetuating that culture, because transformation requires that the dialogue stop before shifting languages. What remains when the dialogue has been silenced is what I alternately called the "body" or "system X" or "*physis*" (the Greek word for nature), which is the true agent of transformation. Both personal and cultural transformation require that "system Y" (which includes dialogue) temporarily cease operation. Psychologically speaking, this is the point of ego death and rebirth. In terms of the images I developed in my dissertation, it is the apex of the spiral dance.

During periods of transition there is always the fear that change will not be accomplished. Wilshire pointed out in 1985 that physics in the twentieth century replaced "the picture of discrete things forcing each other around" with the metaphor of the "dance," and added that there "may be connections forming here between physics, cosmology, ethics, and religion." For these connections to form it would be necessary for the university to be re-organized so that disciplinary boundaries could be more easily crossed. But Wilshire was pessimistic that the university would be capable of re-organizing itself along these lines due to institutional inertia.

Cultural transformation—like the biological process of birth—can be a painful and

difficult process, fraught with conflict and even literal violence. Nietzsche, who more than any other philosopher understood the psychological complex of the birth process, said that the beginnings of everything great on earth were "soaked in blood thoroughly and for a long time." In fact, as I predicted, in the past thirty years since I wrote my dissertation, the culture wars produced a bloody war on drugs and have culminated in the most severely polarized politics since the 1960s.

## Introduction

In what follows I present a theory of consciousness (the “soul”) with implications for how we may understand the historical development of the state and our experience of the world (the “cosmos”). In short, I claim that consciousness can be divided into two distinct but inter-related systems which I will call "system X" and "system Y." Although they are distinct systems in the sense that the structure of each can be described without reference to the other, I claim that system Y lacks meaning and purpose without system X, and that the process of transformation through which system Y is created and re-created is dependent upon system X. An attempt is made to describe each system separately and to show how they are related to one another using three different theoretical frameworks.

There are three reasons for using not one but three theoretical frameworks to articulate my thesis. First, by doing so I hope to reach a broader audience than any single theoretical framework would reach. Second, by sending my message through many "channels" I reduce the chance that "noise" in any single channel will scramble the message. This second reason is based on a principle of modern communications theory, but anyone who has attentively read Plato's *Republic* will have noticed that he used the same method to get his message across. The third reason is related to the principle of recursion—in other words, to the fact that in a holographic universe the same pattern gets repeated in a variety of different mediums and at different levels of analysis.

Within the Platonic and Neoplatonic tradition it is believed that a series of different metaphors circulate around and point toward the One, which is Truth. The "*logos*" which is rational speech and thought performs a choral circle "dance" *around* the "choragus" (the leader of the circle "dance") who cannot be spoken yet is the principle behind all philosophical speech. In contrast to the Platonic tradition, however, I take the choragus of the *logos* to be, not an unmoving point, but yet another circle dance, the dance of

"*physis*" (the Greek word for nature), or of system X. The purpose of any *logos* which circulates around the dance of *physis* is not to substitute for that dance or pretend to be that dance but to point the human soul toward an immediate experience of it.

In chapter II and in section A of chapter III an attempt is made to articulate the thesis of the present work from within the theoretical framework provided by the writings of Nietzsche and Plato. Within this theoretical framework system X is given the name "*Physis*" and system Y is given the name "*Nous*" (the Greek word for mind). Throughout this work an opposition develops between "Nietzschean-matriarchal philosophy" and "Platonic-patriarchal philosophy." According to Platonic-patriarchal philosophy *Physis* depends upon *Nous* and is derived from *Nous* in a way that *Nous* is not dependent upon nor derived from *Physis*. In fact, *Physis* has such a lowly place in the Platonic-patriarchal world view that we get only a much distorted picture of system X from Platonic-patriarchal philosophy, although we can, indeed, learn much about system Y from Platonic-patriarchal philosophy.

Section A of chapter III provides a bridge between chapter II and sections B and C of chapter III by presenting a reading of Nietzsche which will prove to be identical in its fundamental concepts with modern neuropsychology. In sections B and C of chapter III an attempt is made to articulate the thesis of this work from within the theoretical framework provided by modern neuroscience. Within this theoretical framework system X is correlated with the limbic and autonomic nervous systems whereas system Y is correlated with the neocortex.

System X and system Y, it is important to understand, are immediate *experiential* structures and processes which can be *correlated* with neural systems but which must not be confused with neural systems. Neural systems are *objects* constructed and projected by system Y. Of course, if we are rational we do not arbitrarily construct and project objects. We have evidence and reasons for why we construct and project this object rather than that. But in general we do not possess knowledge of any objects apart

from our own consciousness (system Y) which is conscious of them. System X on the other hand is not, like system Y, an immediate experience of an object, but is an immediate and subjective experience of *being a body*. Hence, neither system X nor system Y are objects in general or neural systems in particular. However, since both system X and system Y *correlate* with neural systems, within the context of neurophysiology the term "system X" (or "system Y") is sometimes used as an abbreviated way of saying "the objective neurophysiological correlate to system X (or system Y)."

The main theoretical framework of chapter IV is provided by Jungian psychology and political anthropology, but as the final and culminating chapter it also incorporates and builds upon the neuropsychological theories developed in chapter III as well as the Platonic and Nietzschean concepts introduced in chapter II. The main conceptual link between chapter II and chapter IV is provided by the opposition between *Nous* and *Physis*. Chapter IV tells a story about how *Nous* is created and transformed through and by *Physis*. Thus, chapter IV explains how system Y is dependent upon system X (not the reverse). But in order to understand this process of transformation we need to add to our understanding of system X the mathematical theory of harmonic systems.

In chapter IV I treat the limbic and autonomic nervous systems as two coupled harmonic systems. But the sun and the earth's ecology also form two coupled harmonic systems, with the sun driving the earth's ecology in the way that the autonomic nervous system drives the limbic brain. So the cosmos repeats the pattern or structure of the soul. A further analogy is developed between the political history of human society and the annual course of the sun, with the institution of divine-kingship situated at the center of human history just as the winter solstice is situated at the center of the solar year. So society repeats the pattern or structure of the cosmos and of the soul. Chapter IV offers both a mythological and a mathematical description of this pattern. Mathematically it has the form of a spiral etched along the surface of a cone. Mythologically it is the story of

the divine-king's eternal death and rebirth through marriage with the divine-queen.

This work is an interdisciplinary study that combines Jungian psychology and philosophy. Since most academic philosophers do not combine psychology—let alone Jungian psychology—with philosophy, it is important to state up front that according to the theory proposed here philosophers are wrong not to do so. Consciousness is not, I am asserting, an autonomous, self-originating domain of experience. The ideal of reason, which seeks to isolate a domain of thought from psychological motivations is impossible, and unnatural. Logic can be studied apart from psychology, but philosophy cannot, because philosophy is essentially thought, and thought cannot be studied apart from psychology. Logical reasoning does not take place out of time or nature, but is merely a particular kind of psychological process, embedded in other psychological processes such as emotion. On the theory proposed here, consciousness, including our most abstract reasoning, must be understood as the product of an embodied process. The insistence by the founders of modern academic philosophy that philosophy be separated from psychology because logic should be (any use of psychology in philosophy risked the fallacy of “psychologism”) was an error. By contrast Nietzsche was the most psychologically astute philosopher in the history of philosophy. He inherited the concept of depth psychology and the discovery of the unconscious from his nineteenth century German predecessors, such as Schopenhauer. But he went far beyond his German predecessors and became a foundational figure for both Freud and Jung, who both appreciated his psychological acuity and, I believe, extended his work.

In spite of the strong influence of Nietzsche and Jung, this work is also similar to Plato's *Republic* and *Timaeus* insofar as it is more than either psychology or political anthropology or cosmology alone. It is an attempt to uncover the recurring patterns common to psychology, political anthropology and cosmology. Looked at in this way, psychology, political anthropology and cosmology become merely different expressions or “displays” of the same underlying pattern of harmonic vibrations. Comfort (1984) calls

this the "world model of recursive explication." It appears throughout Western history in Pythagorean and Platonic traditions such as alchemy and Rosicrucian mysticism, but was often suppressed, at first by the Church, and later by Cartesian-Newtonian science. Today, however, due to the power and prestige of modern physics, and the popularity of the psychedelic experience, it is being seriously reconsidered.

In this work I describe the cosmos as a sacred body ("system X") covered by a visual surface ("system Y") from which are projected objects, causal relationships, egos, moral relationships, logic and linear, sequential time. Comfort (1984) uses images and metaphors very similar to the ones I will use in his account of the world model of recursive explication. Modern physics--or at least Bohm's (1980) interpretation of modern physics--would have us conceive of an object or causal relationship as a display or "explication" of an "implicate" order which is not itself a network of causally related objects. Comfort (1984) presents the following as a model of explication.

Consider a computer game consisting of a black box (B) with controls for two players, which generates a VDT display on a television screen. The display consists of a field (X,Y: t) representing a three dimensional space (3-space); with additional circuitry it could equally well depict a 4-space, like an ordinary in-depth television picture. Objects--asteroids and space ships--travel across this screen in a randomized manner. If two objects collide, there is a simulated explosion and the objects disappear. A space ship can also fire at an asteroid, and, if it scores a hit, destroy it. The controls alter the speed and coordinates of the imaginary objects and the firing of missiles; the aim of a player is to prevent or cause collisions respectively.

Now the plane of the screen can be treated as a real world, subject to cause-effect: collisions cause explosions. It is, of course, nothing of the kind. What appear as causes and effects are actually numerical correlations, hard wired in B. The entire game would operate as well with the display turned off--its sole object is to exhibit correlations to the players, so that they can aim. B's output is a series of modulated pulses which are not isomorphic with the screen display and are non-local with respect to the symbols appearing there. Further, the symbols are not objects and both their continuity and their interaction are entirely virtual. There are no things there. (Comfort, 1984: 21)

What appears to be a three-dimensional network of causally related objects must not be

taken as an independent reality but as a symptom of what lies behind the screen. The VDT display on the television screen is the "skin" or surface of the "sacred body." In a mystical or "oceanic" experience the display screen is turned off (Comfort, 1984: 5). What remains is the "music of the spheres," in other words, a system of harmonic vibrations (system X).

According to Comfort (1984: 9)--and I agree--myth and mathematics are the two most effective ways of modelling the "music of the spheres" within the optical world of ordinary experience. Although the mythological images needed to model the "music of the spheres" have been available to human culture for millennia, some of the mathematical tools were invented relatively recently. Perhaps the most important of these is the Fourier transform.

Nonhomuncular, non-Democratean models of the world--David Bohm's holomovement, for example--become much easier to comprehend if we recognize that any such non-positional observer model basically differs from ours, or can be brought into line with ours, by the intervention of what amounts to a Fourier transform, the conversion of quantities to a sum of frequencies. This involves the invention of an observer who perceives, by our standards, holographically. (Comfort, 1984: 26)

The optical world of substantial objects belongs to what I will call "system Y." "System X" on the other hand is a system of harmonic vibrations defined by a sum of frequencies ("harmonics"). Fourier transforms and inverse transforms allow us to translate between these two systems. But which is primary? The West has always believed that system X (if it is recognized at all) is derived from system Y. In this work, however, I claim that system X can operate without system Y, and that system Y is derived from system X. Comfort seems to believe that my thesis may be correct.

All western, non-Pythagorean scientific thought prior to Heisenberg has tended to regard the conventional or intuitive focused version as in some way primary, even if it required relativistic correction, and its Fourier derivatives as convenient mathematical transformations. It is just as possible, however, to regard Fourier patterns as the primary objective reality and the conventional world as derived by a transformation, produced by evolution



because of the great convenience of space-time and causality in dealing practically with middle-order living and therefore adaptive. (Comfort, 1984: 27)

Psychologists are finding the same Fourier patterns by looking *in* towards the soul as physicists are finding by looking *out* towards matter. According to Mindell's (1985b) process psychology the "collective unconscious" is a non-causal field similar to Bohm's (1980) implicate order. A "channel" of emotional expression is an explication of the collective unconscious. Dreams, relationships, and somatic symptoms are each channels of emotional expression. Just as we would not explain the events of a dream in terms of the apparent causal efficacy of dream characters, so we must not explain the dynamics of interpersonal relationships in terms of the apparent causal efficacy of individuals. For example, in the case of the client-therapist relationship "many of the therapist's so-called counter-transference reactions to his client are dreamed up, that is they belong primarily to the dreamer's process and can be located there in terms of his dream figures." (Mindell, 1985b: 42). So we should not believe that individuals in society are the causal agents of their actions any more than we should believe that dream figures determine the events of a dream. Rather, individuals in society must be understood as the "nodes" or still-points in a unified field of harmonic vibrations.

Mindell (1985b) describes psychological reality using the same concepts which Bohm (1980) uses to describe physical reality. Clinical observations have convinced Mindell that

Causal attitudes towards dreaming up and towards relationship problems are natural, unconscious but almost always opposed by negative feedback from the environment. The very attempt at explaining to someone that they have dreamed you up or that you have dreamed them up always contains an element of blame because of the presence of the causal belief that the dreamer is 'doing' something. Dreaming up is a noncausal phenomenon, it is an aspect of a field whose localities are not connected through direct causal interchange alone.

Thus, though blaming and causal accusations are normal aspects of relationship phenomena, closer study of the secondary processes behind relationships indicates that an implicit or dream-like order is trying to enfold

by means of individual lives. (Mindell, 1985b: 54)

The "holomovement," as Bohm (1980) calls it, is beyond both causality and morality. In this work we will study the holomovement by looking *in* towards the soul rather than *out* towards matter. But then, especially in chapter IV, we will move out again to describe society and the cosmos in the light of what we have discovered about the soul.

In part the present work can be understood in opposition to "logocentrism" and to "egocentrism." Logocentrism and egocentrism are particular philosophical expressions of the view that system Y somehow precedes or grounds system X.

An example of a logocentric philosophy would be one that claimed that all communication (and therefore all socially shared knowledge) must occur through the medium of "signifiers." The paradigmatic example of a "signifier" is the written word (such as the word "tree"). Signifiers are always coupled to "signifieds." An example of a signified would be the concept or mental representation (such as the idea of a tree) of an external object (such as a tree) referred to by a written word (such as the word "tree"). The most important property of signifiers for our discussion is their arbitrariness. More than one signifier may be associated with a single signified, and so for the purpose of communicating ideas one signifier can easily replace another. The paradigmatic example is the substitution of the written word for the spoken word. In this work I will explain how the signifier-signified relation belongs to system Y and is not to be found in system X. I will go further and say that system X is the ultimate basis for all communication. We can understand and communicate with one another only because all code systems (all signifiers) ultimately refer to possible states of the Body (= system X), to which we all have immediate access.

A second type of logocentrism is to be found in Plato's *Republic* and continues to play a prominent role in academic philosophy. The divided line described in Plato's *Republic* challenges Pythagorean philosophy by giving dialectics epistemological priority over mathematics and music, and by giving the objects of dialectical reasoning ontological

priority over the objects of mathematics and music. In Plato's *Meno* Socrates suggests that perception presupposes mathematical knowledge: the slave boy can be taught the principles of geometry because these principles are already implicitly contained within his perceptions. Mathematical and musical knowledge presupposes dialectical knowledge according to the epistemology set out in Plato's *Republic* in the same way that perception presupposes knowledge of geometry in the *Meno*. Mathematical and musical knowledge is implicitly contained within dialectical knowledge and could, in principle, be derived from it. The dialectician is necessarily a mathematician and musician too, but the mathematician and musician is not necessarily an accomplished dialectician. This is because dialectics is a more comprehensive domain of knowledge than mathematics and music.

Living long after the publication of Gödel's theorem we cannot believe that any logical system could contain within it all mathematical truths. In agreement with Nietzsche (and Kant) we believe that dialectics (or any logic) is nothing more than a description of the connections between ideas or of the structure of conscious thinking, in other words, of the structure of system Y. But mathematics and music seem to us to be projections of the unconscious (or of system X) into conscious symbols rather than the products of conscious thinking. At least this is how Comfort (1984) understands mathematics and music: as symbols or expressions of the holomovement. Similarly, the homology between the soul and matter is so great that we wonder whether physicists are not projecting their unconscious into their bubble chambers, and whether logical thinking is truly the source of their mathematical formulas. In short, I am proposing that a Pythagorean philosophy (or a Pythagorean reading of Plato, which is certainly possible) would help us to understand quantum physics and psychology better than the more conventional, dialectical reading of Plato (which is the reading I will be generally following and criticizing in this work).

The only form of egocentrism that I will consider in this introduction is the

egocentrism of European phenomenology. My criticism of traditional phenomenology is that it--like virtually the entire history of Western European philosophy--has neglected the entire domain of experience to which I give the name "system X." The "ego" is situated at the center of system Y (see chapters II and III especially). Traditional phenomenology is "egocentric" insofar as its descriptions of experience remain limited to descriptions of system Y. What is needed--but what we do not have--is a phenomenology of system X.

I must emphasize, however, that although a criticism of traditional phenomenology could be developed on the basis of this work, I am not primarily concerned with criticizing any philosophical position but with setting out my own thesis on the nature of human existence. My criticism of European phenomenology is not original, either, but is essentially a repetition of the criticisms presented by a modern Japanese philosopher, Yuasa Yasuo (1987).

Western thought reflects the dualism of the subject-object or ego-object structure of experience by separating the empirical sciences from transcendental philosophy. In the East, on the other hand, what appear to be two opposing poles of experience--the subjective, mental pole and the objective, material pole--are recognized to be manifestations of a single primordial reality. The unity of subject and object is realized in a deep trance state known in Japan as *satori*. So, in contrast to the Western tradition,

Eastern philosophical speculation and empirical verification must essentially be one. ... Consequently, the Eastern philosophical theory of the body does not present any objection whatsoever to the attempt to clarify its meaning from the positivistic or empirical, scientific standpoint. (Yasuo, 1987: 29)

Following this methodological principle, Yasuo, as I myself do in this work, presents a philosophical-phenomenological account of experience with the help of the empirical sciences, and especially with the help of the neurosciences. Yasuo's basic thesis is identical to my own, although I have tried to develop this thesis much further than Yasuo has developed it.

My distinction between "system X" and "system Y" is the same as Yasuo's distinction between "dark consciousness" and "bright consciousness" or between the "surface" and "base" structures of consciousness (Yasuo, 1987: 186-187). Yasuo (1987: 182) locates the neuroanatomical correlate to system X or to the dark consciousness in the region below the cortex including the limbic and autonomic nervous systems. And he (Yasuo, 1987: 182) locates the neuroanatomical correlate to system Y or to the bright consciousness in the cerebral cortex. Bright consciousness includes external sensation, thinking and the motor sensations of the limbs (Yasuo, 1987: 183-184). In general the bright consciousness makes it possible for us to orient and act effectively within the external environment. Eastern meditative practices (and other trance induction procedures) temporarily darken the bright consciousness.

One must discard ordinary thinking which objectifies the world from the standpoint of self-consciousness. To effect this, one must 'throw away all the relationships with the world, putting everything at rest.' All relationships connecting the self to the world are discarded and all judgments based on self-consciousness are suspended in practice. Meditation is an inward-looking technique designed to discover and to enter, by means of the practical suspension of judgments (*epoche*), the dark base-layer concealed at the bottom of the stream of consciousness. (Yasuo, 1987: 154)

What we find in the dark base-layer concealed at the bottom of the stream of consciousness are emotions and visceral or "splanchnic" sensations of the internal organs (Yasuo, 1987: 184-185). I have slightly modified Yasuo's understanding of system X in this work by incorporating recent research on the connections between the limbic brain and motor system (see, for example, Mogenson, Jones and Yim, 1980). Some motor sensations do indeed belong to system Y and serve to relate the body to its external environment, but not all do: there are biologically fixed connections between emotions and kinaesthetic sensations. Neurophysiological research demonstrating the connections between the limbic and motor systems has appeared only very recently, and this may partly explain Yasuo's oversight (Yasuo's book appeared in Japan in 1977).

The modern (post-Cartesian) West has focused exclusively on the surface structure of consciousness while neglecting internal sensations belonging to system X. In contrast, in the Eastern traditions the base structure "has always been regarded as fundamental." (Yasuo, 1987: 187).

According to Yasuo the surface structure of consciousness includes the limbs, "the so-called sensory-motor circuit which makes the cerebral cortex its center, and the main parts of consciousness tied to that circuit--the thinking function as well as the external perceptions and motor sensations (the somatic nervous system's internal perceptions)." (Yasuo, 1987: 186). Philosophically, the surface structure of consciousness forms the surface of the human being as a being-in-the-world: "Bergson's, Merleau-Ponty's, and Husserl's views of the body are all conceived in terms of this surface structure." (Yasuo, 1987: 186). The base structure, on the other hand,

does not arise as a mode of ordinary experience's being-in-the-world, since the latter implies the human immersion in a caring relationship with things and a conviction that consciousness is free, that is, that the mind ordinarily controls the body in everyday experience. A being-in-the-world is regulated through the relationship between the self and the life-world by means of the bright, discriminating consciousness. (Yasuo, 1987: 186-187)

Heidegger's "care," Yasuo argues, is none other than the "layer of bright consciousness" (1987: 61). But so is the intertwining of the kinaesthetic body-image with external perception as described by Merleau-Ponty in his analysis of being-in-the-world. To use a concept which I will introduce in chapter III, motility as Merleau-Ponty describes it is an example of "teleokinesis," which requires a perceptual feedback relationship with the external environment, and which is an essential structure belonging to system Y, but not to system X. Husserl, at least, recognized the existence of a "passive synthetic function" below the level of the bright cogito. But, as Yasuo points out, his thinking on this matter "is twisted and very unclear." (1987: 168).

One of the reasons to believe that the West has neglected system X is that

whenever Western philosophers studied perception they limited themselves to *external* perception or to internal sensations (such as motor sensations of the limbs) which could be coordinated with or mapped onto external perceptions. Nowhere do we find an adequate theory of the emotions or of visceral sensations. In short, the West has disemboweled itself.

When modern epistemologists (Locke and Berkeley, for example) dealt with the problem of perception, they treated it only in terms of external perception. Bergson included internal perception to a certain extent: he took perceptual content to be an 'image,' recognizing that there is an image of one's body in front of the image of external perception, the former being 'known through an inner feeling.' Phenomenologically, he eliminated the difference between the body's external and internal perception by using the same expression, 'image,' for both. Although this notion generated considerable dispute at the time, Bergson's intention was to criticize both epistemological idealism and realism for dealing only with external perception, and for taking it to be the entire content of perception (Yasuo, 1987: 170)

Bergson included internal perception but at the cost of blurring the distinction between internal sensation and external perception and by recognizing internal sensations only in terms of their relation to external perceptions. Merleau-Ponty criticized Bergson for reducing internal perception to the "object-body" because internal perception is not phenomenologically identical to external perception. Still, Merleau-Ponty understood internal perception "as a continuum of the external perception. Just as Bergson eliminated the difference between internal and external perception by use of the concept of 'image,' Merleau-Ponty takes the body to be what is visible (le visible) to the self, as the perceiver (le voyant)." (Yasuo, 1987: 171). For example, kinaesthetic sensations concern Merleau-Ponty only insofar as they can be used by the perceiving subject to orient his body in relation to the objects of external perception, in other words, only insofar as they participate in the perceptual-motor feedback circuit. But it is precisely this circuit which no longer operates in trance states such as those cultivated in Japan. "Eastern meditation," Yasuo tells us, can be viewed as the pursuit of a "higher-level, emotional

ecstasy." (1987: 179). Whereas "the traditional Eastern mind-body theory has been concerned mainly with the function of emotion," the West has consistently neglected the emotions in favor of system Y experiential structures such as the perceptual-motor feedback circuit.

The first thing we notice in Bergson's and Merleau-Ponty's theories of the body is that their analyses focus on the interrelationship between the body and the external world, specifically the connection between perception and action or between sensation and movement. This is probably due to the fact that modern psychophysiology developed out of research into perception and learning behavior. In any case, in neither Bergson nor Husserl nor Merleau-Ponty do we find an adequate theory of the somatic function of the emotions or feelings. (Yasuo, 1987: 175)

This work attempts to restore the emotions to their rightful place at the center of human existence. A phenomenology of system X will lead us, Yasuo believes, to a "new sense of phenomenology, which should mean our passage into a new kind of metaphysics" (1987: 239). Whereas the traditional Aristotelian approach has been to start with system Y and then to work one's way back to system X, for example by starting with an investigation of *objects* and then building a theory of the "inner world" on top of that, our attempt will be to start with system X and then to work our way out to system Y.

As represented by Aristotle's philosophy, metaphysics assumes an objectivistic attitude in ascending gradually from physical to human being, while objectively observing outer nature. It further postulates a transcendent being beyond the human dimension. In contrast, Eastern philosophy can be called 'metapsychics' because it starts with a reflective attitude toward the human soul (psyche), the inner nature. It seeks a transcendent region beyond the inner psyche. ... this path is the reverse of that of modern science, and it advances through one's inner experience toward nature (Yasuo, 1987: 240)

Starting from an exploration of the deep layers of the soul we gradually incorporate the findings of the empirical, objective sciences, beginning with the findings of neuroscience. If we continue the investigation further we will, Yasuo believes, break through from the biological to the physical domain, obtaining knowledge of physics *after* we have obtained knowledge of the soul. If there is a method behind this work it is the method prescribed



by "metapsychics": the only acceptable epistemological ground is to be found in an immediate experience of the deep layers of the soul. Theoretical speculation appropriates the findings of the natural sciences for the purpose of explicating that experience. In this way, science, philosophy and religion may all come to be reconciled with one another.

## Chapter I

### Objects and Bodies

There is an Indian creation myth (Rig Veda, Book X, Hymn XC) according to which the world is formed out of the body of a primordial man. In this myth, and myths like it, one's own body serves as a model for the whole of existence. In this work I will carry this model of the world as far as it will take us. I will show how emotion, which is necessarily embodied in visceral and kinaesthetic sensation, possesses an integrity which allows it to function with a degree of autonomy from other domains of experience, and how it may even serve as a model for other domains of experience to imitate, especially in trance experience. One can understand this work as a cosmology of *bodies* in opposition to the metaphysics of *objects* which dominated modern philosophy in the West.

#### A. The Metaphysics of Objects

For both Newton and Descartes, body is always viewed from *outside*, never experienced from *within*. For Descartes, I *have* a body, but I am not body. I am thought. I am mind. Body is merely something I may *represent* to myself as an *object*; I cannot immediately *be* body. The representation resides within my mind, but the body as object that is represented does not. Descartes denies that there is an ontological distinction between internal and external sensation and treats internal sensations--particularly visceral and kinaesthetic sensations--as perceptions of objects too. Descartes' confusion may be due in part at least to the fact that over the course of normal cognitive development some internal sensations do become associated with external sensations. For example, kinaesthetic sensations become associated with visual images of moving limbs to such an extent that these internal sensations come to represent those visual objects. Descartes extrapolates from these examples to claim that all internal sensations

represent objects. But this is phenomenologically inaccurate. We must learn to distinguish the anatomical *picture* of the body from internal sensation.

To the extent that internal sensations are coordinated with external sensations, internal sensations function as a series of signifiers linked by means of a code to a series of external sensations which function as a *second* level of signifiers. However, the second level of signifiers function differently than the first. Each individual external sensation in the series, while sharing a common object with other external sensations in the series, provides only one aspect or perspective of the object which is perceived. External sensations function as a series of metaphors that resemble one another due to their common object without each being identical to the object they represent or to one another. An object is constituted by the sum total of all possible external sensations we may have of it, not by any one external sensation. Thus the series of possible external sensations stands between objects and the series of internal sensations and serves to mediate the transfer of meaning between them. This system of metaphors constitutes the "Symbolic Order" which emerges during normal cognitive development in early childhood and which makes possible our cognitive relations with both inanimate objects and other persons.

Only *through* external sensations do internal sensations "represent" objects. We should not assume, however, that *all* internal sensations are coordinated with external sensations. This is particularly true in the case of *emotional play* or "dance" conceived in its broadest sense. Not all internal sensations represent objects, even indirectly through external sensations, as Descartes believed. I do have an experience of my body which is not a representation of external objects, a body which is not a body "image," a body to which I have *immediate* access, because I *am* it. This body which I am is the "Self."

The "Self" is an autotelic wheel or "Great Round" of emotion, kinaesthetic and visceral sensation. The dynamics of this wheel--the song and dance of the soul--is the primary subject of this work. As we will see, particularly in chapter IV, the Great Round has the form of a spiral etched along the surface of a cone (as does the annual course of

the sun). At the other end of the spectrum apart from the schizoid Cartesian ego lies the introverted ego which has identified entirely with its Self. The introverted ego coordinates internal and external sensation not by mapping internal sensations onto the objective structure of the world, but by mapping external sensations onto internal sensations, shaping the world into a *cosmos*, an image of the Great Round which is its body. A cosmos is an external representation of an internal circle dance. Examples include the circle dance of the stars, the dance of initiates around the wellspring at Eleusis, and the circle dance performed by the tragic chorus. The introverted ego, in its act of shaping the world into a cosmos, is analogous to the Craftsman in Plato's *Timaeus*. Plato would not have Timaeus say, however, as I do, that the Craftsman's cosmogenic *logos* is a reflection of *physis* or immediate bodily experience, but that the cosmogenic *logos* which the Craftsman places in the world-soul or *Psyche* is a moving image of *Nous*, which is an unmoving circle whose center is the Good, or the One.

The introverted ego is not only the Craftsman of the cosmos but also its King and choragus. For this reason we will have cause to examine the myth of divine-kingship. That I leave, however, for Chapter IV.

Newton succinctly expresses the schizoid character of modern philosophy:

In bodies we see only their figure and colors, we hear only their outward surfaces, we smell and taste the savors, but their inward substances are not known by our senses or any reflex act of our minds.

We know bodies only as objects, only as they stand over and against our minds, not as they are in themselves. Bodies do not know. Bodies are known (as objects.) If we believe that at least our own bodies possess knowledge of themselves, then we ought to be reminded of Descartes' phantom limb, which appears to be body but is in reality only an idea in our minds. Again, there is no ontological distinction between internal and external sensation. Natural science, knowledge of *physis*, does not necessarily begin with knowledge of one's own body. The body is not necessarily the model and archetype of

the natural world. The structure of the natural world is not necessarily the internal structure of an animal, as it is according to Timaeus. The world, in sum, is not necessarily a cosmos.

Not only not necessarily, but necessarily not. There are no connections between the *insides* of bodies in Newton's billiard-ball universe. A body affects another body only by "touching" its surface or "skin." Even if we possessed knowledge of our own bodies, that would tell us nothing about the reality of *other* bodies, which we can know only by touching their outward surfaces. Even if Newton-Descartes were to grant that I possess knowledge of my own body from within, they would insist that no-one else possesses knowledge of what lies within my body. A physics based upon such knowledge would be hopelessly solipsistic.

Nietzsche discovers a psychophysiological condition behind every philosophy. Behind Cartesian-Newtonian physics, too, there lies a hidden psychophysiology. The psychological motivation behind the thesis that bodies affect one another only through their outward surfaces is to be found in the experience of others as only objects of external sensation. Such an experience of others characterizes "cold" relationships. In the case of emotionally "hot" relationships, I experience others, not merely visually, or auditorially, or through touch, but also *viscerally* and *kinaesthetically*, and there is no phenomenological reason to believe that these visceral-kinaesthetic sensations are necessarily associated with, let alone dependent upon, external sensations, though they often are. When and only when they are might I experience tension in my muscles, for example, as *your* anxiety. I can be connected up with others viscerally-kinaesthetically, and even somatically (all of these having a common basis in the limbic brain), without the experience of any "Other." Only later, after undergoing psychoanalysis, for example, might I come to associate visceral-kinaesthetic sensations, or somatic symptoms, with external sensations or images of Others.

Internal sensations without objects or Others lie at the other end of the spectrum

apart from objects without corresponding internal sensations. In between lie many instances such as the one, for example, in which I first experience muscle tension, and *then* realize that *you* are anxious. These experiences suggest to us that many more of our visceral-kinaesthetic sensations, and somatic symptoms, than we realize embody our connection with others. That connections with others can exist *solely* at the visceral-kinaesthetic-somatic level is one implication of the central thesis of this work.

### B. The Genealogy and Psychology of the Metaphysics of Objects

The truths of Cartesian-Newtonian physics may seem irresistibly obvious to us--even when we know that the "new" physics has displaced many of these truths--but the pioneers of early modern science must certainly have faced what appeared as overwhelming counter-evidence. Helping them to face this counter-evidence was, perhaps, a tacit psychological motivation.

According to object relations theorist Margaret Mahler (1972) the process of individuation in infancy and its anxieties reverberates throughout the life cycle. Bordo (1987) wonders, "May not such a process 'reverberate,' too, on the cultural level?" (58). Building on this insight she explains how the development of modern Western culture can be viewed as a "drama of parturition." In particular Bordo (1987) argues that Cartesian rationalism is a defensive response to the anxiety experienced by the isolated, spatio-temporally located modern ego upon separation from the relatively maternal cosmos of the Middle Ages and Renaissance. Indeed it *is* striking

that only God the Father can provide the reassurance that Descartes needs. In the absence of a sense of connectedness with the natural world--and that includes, for Descartes, a sense of connectedness with one's own body--only a guarantee 'from above' can alleviate epistemological anxiety. The change may also be described in terms of separation from the *maternal*--the immanent realms of earth, nature, the authority of the body--and a compensatory turning toward the *paternal* for legitimation through external

regulation, transcendent values, and the authority of law. On the basis of a psychoanalytic exploration of these themes, Karl Stern proposes that Cartesian absolutism was deeply psychologically motivated by Descartes' early maternal deprivation, indeed, was a reaction-formation to that deprivation. My own approach, in the final essay of this study, will be to examine such ideas on the level of *cultural* rather than individual psychology. (Bordo, 1987: 58)

Bordo's cultural analysis is correct but does not extend far enough; we must include the entire period of patriarchal civilization, of which the modern West is only an exaggerated form.

In chapter III section C we will see how the psychological development of individual humans gives us reason to believe that a distinction must be made between two psychological systems, "system X" and "system Y." The distinction between system X and system Y is suggested by the fact that during the pre-symbolic period of development extending from birth to about one year after birth (see Piaget and Inhelder, 1969) only system X is operative. System Y does not operate until the beginning of the symbolic period of development at about one year after birth. Thus it is possible for system X to operate in the absence of system Y. Because system X operates in isolation from system Y during the pre-symbolic period of development it is possible to learn much about the basic structure of system X through a study of the pre-symbolic period of development. But it is important not to equate system X with this period, because system X is a neuropsychological system which continues to exist and even develop after the first period of development has ended. Although system X and system Y achieve a high degree of integration and coordination in adult life, it is a mistake to believe that a hierarchical relationship does or should exist between system X and system Y in which system X is a mere instrument or supplement to system Y. Indeed, in this work I am proposing that the reverse is true. System Y is an instrument utilized by system X. System X on the other hand is autotelic (it is its own purpose).

Now these structures of the soul and of psychological development reverberate on

a socio-historical level. According to Erich Neumann's *The Origin and History of Consciousness* (and more recently Edward Whitmont's *The Return of the Goddess* which continues Neumann's work), the development of the individual is reflected in the development of human culture. The most outstanding conceptual distinction utilized by Neumann is the distinction between the "matriarchal" and the "patriarchal." The first stage of development is matriarchal, and is dominated by the image of the Great Round. All later periods are patriarchal, and are characterized by the ascendancy of the personal, historical ego. Now Neumann's matriarchal stage of development corresponds to Piaget's pre-symbolic sensori-motor period of development. During the matriarchal stage of individual psychological development the visual field has not yet been differentiated into objects. There is no distinction between self and other, nor any distinction between "inside" and "outside" or between mind and matter. The sensori-motor infant, like the fetus, exists in a self-enclosed universe, within the "Great Round." It is unable to represent absent or external objects, and so there is no distinction between consciousness and existence. When an adult enters the Great Round through trance experience he or she has an overwhelming sense of Ultimate Reality, because within the Great Round whatever appears *is*, and whatever *is* appears.

The sensori-motor infant's world is primarily *visceral-kinaesthetic*. Its world consists of *emotion, movement*, and their biologically determined synaesthetic associations in the various sense modalities. Its visual field has not yet been differentiated into *objects* which might be *represented*. Originally nothing is experienced outside of one's own body. But with the coming of patriarchy and the rupture of the Great Round an ego develops which recognizes objects external to itself. The first of these objects is Mother herself, and as the ego distances itself from Mother it develops new structures of experience which did not exist during the individual's matriarchal period. Of greatest importance among these structures are (1) internal representations or images of differentiated external objects, and at a somewhat later time (2) language. These



structures are object-relational, that is, they are structures adapted to the world of external objects. They are "intentional" in the sense in which phenomenologists use this word.

Intentional psychic acts are the distinguishing mark of the new patriarchal world. An ego which wished to distinguish itself most sharply from the "dance of physis" would identify itself *exclusively* with intentional psychic acts. Such is the philosophy of Jean-Paul Sartre (1956), for example, according to which the ego is something like an *eye*, or a *lens*, *through* which one gains access to external objects, but which is itself *invisible*, and, ontologically speaking, *nothing*. Although Merleau-Ponty gives the ego a more positive existence by identifying it with the body, still, according to Merleau-Ponty, my body is *in itself* nothing. My body *is* only in relation to external objects. Thus, the most radical denial of patriarchy entails an equally radical denial of an experience which stops at the limits of my own body.

Was there a psychological (in addition to sociological and political) reason that the pioneers of modern science were men? Visceral-kinaesthetic experience tends to be classified as feminine in part at least because it is women who take care of us during the intensely visceral-kinaesthetic experience of infancy, and also because mothers need to be sensitive to the visceral-kinaesthetic level of experience when caring for infants. As Sagan (1985), who is writing about the history of the soul in terms of object relations theory, and Berman (1981), who is writing about the history of the soul from a "New Age" perspective, point out, breast feeding continues till around the fourth year in primitive *kinship* societies, whereas it is discontinued much earlier than that in societies in which a state apparatus (until capitalism, a *kinship*) has developed. Other practices in non-primitive societies signal to the infant that it must separate itself from Mother, that it must develop a relatively strong, independent ego. Left behind is not only Mother, however, but also a predominantly visceral-kinaesthetic world.

The "state" may be defined as a political organization in which some members possess political power which extends beyond those with whom they engage in face-to-

face communication. In the case of literate states the breakdown in face-to-face communication is even more severe. Face-to-face communication, however, is necessarily emotional, because the face is emotionally expressive, and so also visceral-kinaesthetic.

A Platonic analogy or equal proportion between the psyche and the state is present here. Visceral-kinaesthetic face-to-face oral kinship society (is to) : kingship, especially literate kingship (as) :: visceral-kinaesthetic infancy (is to) : the individuated ego. Sagan (1985) believes that the development of a more individuated ego in states prepares the psychological ground for the break from the analogically maternal kinship structure. Capitalism entails the most radical departure from the kinship organization of society and in that sense is the most "patriarchal" political system of all. In kingships the kinship structure is not abolished but rather overlaid with the male-dominated kingship superstructure. Generally two classes develop, the aristocracy, who operate the kingship system, and the peasantry, who operate the kinship system. Early kingships demonstrate their break from the traditional kinship system and the peasantry by engaging in incest, adultery, homosexuality, prostitution, etc. Capitalism pushes us further in the direction of the patriarchal state by replacing the peasantry with the proletariat, which lacks a traditional kinship system.

However, the typical personality in modern society is by no means a divine-king, but rather one of his subjects: a low-level bureaucrat or a "slave," someone who has been trained to obey, but never to command, not even himself. Whereas the divine king makes the mistake of identifying his newly borne ego with the Self, in the modern world only the mad do so. Cut off from the Self, the modern ego is like a small bark on a rolling ocean, a situation that instills fear, doubt and humility, not grandiosity. Only God the Father can provide Descartes with the reassurance he needs; he can't do it himself. The modern ego is individuated in the sense that it is no longer bound to others through emotional attunement. But it is bound to others through its use of a coded symbolic language. As

Nietzsche explains, ego-consciousness works in tandem with language so that the ego may coordinate its actions with the collective will of the group or “herd,” which the herd calls “God,” the Divine King. Thus the modern ego is not truly an individual but a “herd animal.” I will discuss this further in Chapter III Section C.

Although today most women are also members--though not necessarily high ranking members--of the patriarchal state, in Newton's day many more women than men remained within the matriarchal domain, both politically and psychologically. Witchcraft, which is a form of shamanism, offers an extreme example of how women of the medieval and early capitalist periods remained close to primitive kinship society. Women were the custodians of what remained of primitive kinship society and culture. The men joined the state apparatus, and possessed egos developed for that purpose. Literate-capitalist male egos, such as those possessed by Descartes and Newton, were ideally suited to the mechanical world view, which emptied bodies of their insides. Marie-Louise Von Franz (who was a personal disciple of Carl Jung and senior colleague of Arnold Mindell) describes Descartes in the following way:

In a letter he admits to having had in his youth a passing fancy for a girl with a slight squint. The same remarkably cold feeling--or perhaps fear of accepting his feeling--is shown in the expression he uses when speaking of the almost simultaneous death of his sister and father, namely that he experienced a considerable 'desplaisir.'

In his portraits Descartes appears to us extremely skeptical, with altogether lusterless, mistrustful, and inward-looking eyes. He was small, delicately built, dressed mostly in black, and painfully neat. He wore his hair falling over his forehead like a black curtain reaching almost to his eyes. (1968: 63-64)

Just as Descartes' philosophy depicts the human person as a disembodied mind cut off from emotions and internal bodily sensations, so was Descartes the man cut off from his emotions and internal bodily sensations.

Ideas (both concepts and images) do not represent objects which existed prior to their representation. Ideas, which circulate around the ego, and things, or objects, are

simultaneously constructed by something which is neither an idea nor an object and which can exist and function without either ideas or objects. That "something" is *physis* or Nature or the will to power or the "body" or "system X." That "something" is the emotional life of an individual or society. Ideas are, whatever else they may be or do, symptoms of either a well constituted or ill body, of that body's drives and affects.

Gradually it has become clear to me what every great philosophy so far has been: namely, the personal confession of its author and a kind of involuntary and unconscious memoir; also that the moral (or immoral) intentions in every philosophy constituted the real germ of life from which the whole plant had grown. . . . [In the philosopher] there is nothing whatever that is impersonal; and above all, his morality bears decided and decisive witness to *who he is*—that is, in what order of rank the innermost drives of his nature stand in relation to each other. (Nietzsche, 1966: #6)

moral evaluation is an *exegesis*, a way of interpreting. The exegesis itself is a symptom of certain physiological conditions, likewise of a particular spiritual level of prevalent judgments: Who interprets?—Our affects. (Nietzsche, 1967d: 254)

Nietzsche must be understood here not as a postmodern skeptic but as a student of Schopenhauer, minus the metaphysical language that Schopenhauer inherited from Kant. It's not that there is no reality or knowledge of it, because "moral intentions," "drives," "physiological conditions," and "affects" are all real. According to Schopenhauer, following Kant, ideas and the objects they represent both belong to the phenomenal realm. Only the "will" belongs to the noumenal realm; only the "will" may be immediately apprehended as it is in itself, rather than merely as we represent it to ourselves, because *we are* "will."

But "will" is the emotive force that moves us. "Will" is system X. Therefore every idea, whatever else it may be, is ultimately a symptom of the "will" that produced it. The question we are addressing here is: what kind of "will" produced the Newtonian-Cartesian worldview?

Von Franz attributes much of Descartes' personality structure to the absence of a

maternal figure in his early childhood. Cartesian philosophy is symptomatic, however, not only of the individual life of Rene Descartes but of patriarchal life in general, particularly that exaggerated form of patriarchal life found in literate, bourgeois society. Sagan (1985), following Margaret Mahler, understands the process of ego-development to occur in an oscillatory pattern. Instead of breaking out of symbiotic unity with Mother once and for all at a single point in development, each separation is followed by a partial regression to a previous state of unity, only to be followed again by an even more pronounced separation. Primitive, non-state, "matriarchal" societies are distinguished from "complex" and "archaic," "patriarchal," state-inclusive societies by the way mothers respond to the infant's anxiety upon discovery of its separation from Mother during one crucial stage in this oscillatory process.

During the rapprochement crisis, primitive society closes in on the whole separation-individuation process; it emphasizes separation anxiety, indulges a quasi-symbiotic relationship with mother by means of a long breast-feeding period and the extended sleeping arrangements of mother and child, represses individuation and individuality, and maintains the kinship system as the social form that certifies a nonindividuated political life. The refusal to proceed fully with the separation-individuation process eventually leads to an underdeveloped Oedipal phase, thus maintaining the pre-Oedipal nature of primitive society: its lack of fully developed anthropomorphic gods; its use of shame and the absence of guilt; its vague relationship to conscience; its failure to develop advanced political forms. (Sagan, 1985: 362)

Complex society is a transitional political form situated between primitive society and the secular bureaucratic-military state (for example, the archaic civilizations found in Mesopotamia, the Nile River Valley, the Indus River Valley, the Yellow River Valley, Mexico, and Peru.) Complex societies are divine-kingships and rely on theocratic authority rather than secular force (police). Complex societies are also, however, the only ones to practice human sacrifice on a large scale.

Complex society preserves a tremendous fear of re-engulfment, sending its children away from home as the only means it knows to avoid such swallowing up. In the ritual of human sacrifice, it kills in order to prevent

regression. It creates a tyrannical father in the king, who preserves the temper-tantrum behavior of the rapprochement phase, and who is strong enough to kill the mother should *she* seek re-engulfment. In my view, the child trapped in the rapprochement crisis projects onto the mother its own desires to regress to symbiosis. *She* then becomes the one who wants it; *she* then becomes the *cause* of regression; and killing her, in the child's unconscious, is one way of solving the unbearable tensions of ambivalence. True, only psychotic people, once they have grown, carry out the fantasy, but there was once a stage of human society, not psychotic, but threatened by re-engulfment by the kinship system, and it ritually slaughtered its own people by the thousands. (Sagan, 1985: 363)

Lastly, relatively secularized states (such as the six archaic civilizations) replaced unstable theocratic "complex" societies by instituting written law, legally defined political offices and state police (thereby maintaining a monopoly on legitimate violence.) With respect to administrative functions, a written text replaces the king's tongue and the masks which he wore in theocratic society. The great battle against Mother is over and human sacrifice is discontinued.

The father-king was no longer required to be the terror of the world. The softening of kingship and an adequate resolution of the whole separation-individuation process left the psyche free to move on to Oedipal concerns and the formation of the superego, which terminates the Oedipal crisis. Archaic civilization was the first stage of human society that can unquestionably be characterized as moving beyond the pre-Oedipal. With concepts of justice, law, and the beneficent ruler as their ideals, archaic civilizations became the first societies in which a great discrepancy developed between ideal and actual behavior. (Sagan, 1985: 364)

We have entered the domain of morality, of Platonic ideals which may be only imperfectly imitated by Nature, and ultimately of Christian ideals which may be at odds with Nature.

The structure of the state repeats the structure of the Symbolic Order of individual human experience. All states (theocratic or secular) are semiotic institutions. Immediate appearances no longer suffice as a guide to human action. It is necessary for priests to read or decipher immediate appearances, which now serve to mediate our relation to a second level of meanings. Reading requires not only a text, however, but also a code. The difference between the text and the code is demonstrated in theocratic states by the

difference between the divine-king and his priests, who possess the code, and the peasants, who retain much of primitive kinship society and culture, but do not possess the code. Only the priests can read the stars.

If Von Franz (1968) is correct that Cartesian philosophy is an accurate expression of Descartes' personality, and that Descartes' personality is the result of the absence of a maternal figure during his infancy and early childhood years, and if psychoanalysts such as Sagan (1985), Perry (1976, 1974, 1966, 1953), Neumann (1955, 1954), and Whitmont (1982), are correct in describing primitive society as psychologically matriarchal, and later political systems as patriarchal, and, finally, if Sagan (1985), Whitmont (1982) and Berman (1981) are correct in attributing the psychologically matriarchal character of primitive society to the relatively abundant presence of Mother during the primitive's infancy and early childhood years, then we can understand Cartesian philosophy as diametrically opposed to primitive life and culture, and, indeed, as an extreme form of patriarchy. This essential equivalence between Cartesian philosophy, patriarchal culture, and patriarchal psychology, means that we can use any of these three to shed light on any of the others. The most distinctive feature of Cartesian philosophy is the separation it imposes between ego and body. This suggests that patriarchal psychology is the psychology of the disembodied, immaterial, Cartesian ego, whereas matriarchal psychology is the psychology of the body which I (Self) *am*. Patriarchal psychology entails a repression of the Self (=Great Round or mandala), the Earth (materiality in general), and the body as experienced from within itself (internal sensation). As Von Franz (1968) explains, these three forms of repression can be found both within Descartes' personality and within Cartesian philosophy.

A transverse section of a melon "yields the design of a mandala, which certainly also explains the Manichaeic meaning of the melon as a 'golden treasure' of God: it is a symbol of the Self." (Von Franz, 1968: 109). The melon appears in Descartes' so-called "great dream" as an unconscious compensation to his patriarchal conscious orientation.

According to the *I Ching* the melon is symbolic of the dark, feminine Yin principle.

The melon thus connects here with the image of a dark heteristic anima, who still displays a piece of unadulterated and unassimilable nature, which is dangerous for the conventional human order. This connection of the symbol of the melon with the image of the anima is due to the fact that it is a very watery fruit, and water is a widespread symbol for the living essence of the psyche. The old alchemists never tired of devising new and expressive synonyms for this water. They called it *aqua nostra*, *mercurius vivus*, *argentum vivum*, *vinum ardens*, *aqua vitae*, *succus lunariae*, and so on, by which they meant a living being not devoid of substance, as opposed to the rigid immateriality of mind in the abstract. The expression *succus lunariae* ("sap of the moon plant") points exactly enough to the nocturnal origin of water, and *aqua nostra*, like *mercurius vivus*, to its earthliness. (Von Franz, 1968: 101-102)

The mandala does in fact figure in Descartes' account of material, objective processes. For example, the quaternary structure of the Cartesian coordinate grid which maps the material plenum forms a mandala. And movement of the four primary elements occurs in circuitous vortices. But Descartes denies the peculiarly material nature of these processes by giving a strictly arithmetical account of their nature. For the Greeks space still retained something of the irrational, of that which cannot be *thought*, because mathematical thinking was limited to rational numbers and space was recognized as a continuum, including what we now call irrational numbers but which were for the Greeks not numbers at all. This was why a separate science, the science of geometry, was needed for the study of space, apart from arithmetic, the science of numbers. Arithmetic, it was believed, could be grasped by thought alone. Geometry, on the other hand, required some perception of space (which had not yet been distinguished from matter.) Descartes' analytic geometry, however, arithmetized geometry, making geometry a science of pure thought also and separating space from its irrational, unthinkable partner, matter. The goal of Descartes' *mathematique universelle* is to show how everything can be constructed by arithmetical thinking, i.e. counting, and counting alone. There is a profound insight here, but also a profound mistake. It is not that everything can be



constructed out of counting, but that counting (or rather, a particular kind of counting) is an ideational representation of that out of which everything can be constructed. Counting is an ideational projection and interpretation of the rhythm of emotional internal body movements. Descartes' (and Spinoza's) failure to recognize this is due to his patriarchal theology which situates God closer to mind than to body, and which asserts that God is known through the mind not through the body.

We can understand Descartes' dedication to the project of a *mathematique universelle* if we realize that it is based in an archetypal insight.

mnemotechnical mandalas, which were also meant to serve for the ordering and concentration of the soul, flourished during the Renaissance (Marsilio Ficino and Pico della Mirandola) and were thought to have a magical regenerating power on the Universe (Giordano Bruno). They were supposed to represent an image of a mysterious all-comprehending order of the Cosmos in the soul of man. As Paolo Rossi has most convincingly demonstrated, these traditions exerted a profound influence on the young Descartes. With this idea--that by constructing a mandala one can find a common structural model of the universe *and* of the human mind--was connected the hope that it would be possible to discover a kind of 'ideas computer'--a generally valid logical system by which all essential knowledge could be collected. (Von Franz, 1968: 73)

But, Von Franz adds,

*he only partially succeeded in doing justice to the contents of the unconscious* because he tried to grasp them with his thinking only (his superior function) and possibly with his intuition, and he did not consider the feeling and sensation side of his experience. (1968: 125-126)

The act of reflection--in its literal sense, the thought which bends back on itself--is for him the ultimate basis of reality of human existence and leads to the discovery of our consciousness of God, which is set above man's existence and encompasses it. *But what the source of the illusions is, Descartes never investigated more closely*; no doubt in his opinion it is the *passiones animae* ("emotions") and the sense perceptions which mislead people into wrong conclusions, but who or what engenders them he does not inquire. (1968: 126-127)

Descartes tried to assimilate the Self, which is a Great Round or mandala, by thought alone, and so necessarily had to fail because the Self is an internal bodily

process. His attempt was certainly not without precedent, however, but is found already within Plato for whom the mandalic circle dance of the stars is imitated first and foremost by human *logos*, the reasoning part of the soul, just as the stars themselves imitate in visible form the invisible *logos* of the world-soul, itself an imitation of an unmoving form set far above the Earth. The purpose of this work is to invert this tradition. The Earth is our god(dess) and we imitate her first and foremost through internal bodily processes, through acts of "affective athleticism."

### C. The Cosmology of Bodies

As noted above, the state can be defined as a political institution in which some members possess political power which extends beyond those with whom they engage in face-to-face communication. In non-literate states this is accomplished by means of a chain of command. The king engages in face-to-face communication with his immediate inferiors, who engage in face-to-face communication with their immediate inferiors, and so on down the hierarchical tree. Literate states devise substitutes for face-to-face communication which more radically disembodify communication. In non-literate states an inferior's face functions as a mask or *persona* (a legal representative) for the superior's face. In some West African kingdoms, the king literally wore a mask representing the face of the ancestor-god who gave the king his authority. In literate states written or coded messages cannot be taken at "face value," but must be deciphered. The encoded message, like the king's face, does not lie on the surface but *behind* what appears (which is merely a wooden mask). The difference between the mask or "outward surface," and what lies behind it, is made apparent by the possibility of dissimulation. A dissimulative mask creates discord between itself and the face behind it. The noble lie told by the philosopher-king of Plato's *Republic* to the masses is an example of a dissimulative mask separating the king from his subjects.

In terms of psychological development the possibility of a dissimulative facial expression occurs at the time that object relations develop, at the dawn of the patriarchal-Oedipal-symbolic period. At this time I not only become aware of objects but of objects which are Others who perceive me as I perceive them. Through the recognition of Others I become aware of myself as an object, as an outward surface or mask. When I dissimulate there is a discordance between my face from inside out and my face from outside in, a discordance between subject and object, face and mask.

To say as do the modern philosopher-scientists that communication between bodies always occurs between their outward surfaces is to rely on light--not sight which is a complex psychological process--as a model of communication. Surely light does not penetrate below the surface of bodies. When what I see is an emotionally expressive body, however, I respond viscerally-kinaesthetically and may feel "tuned in" to what is occurring *inside* the other's body, *even if* I am not explicitly aware of the specific visual image(s) which evoked this response. The analogy to be used here is not of light impinging upon a surface but of two resonating tuning forks.

When two bodies resonate like this, there is no dissimulation between them. Because their outward surfaces openly manifest their inward movements, there is no difference between looking out from one's face and looking into one's face from outside: each reveals the same movements. Such resonance occurs between mother and child before the development of object relations, and even after that time to the extent that dissimulation is not present. Indeed, in these cases there is no "outside" or mask at all, because the outward surface is a completely transparent expression of movements which we should only cautiously describe as "inside" bodies since there is no "outside" for them to be inside *of*.

It is through the introduction of the mask that we make the transition from the "Dionysian" world of movement and emotion, the matriarchal order of Nature, to the "Apollonian" world of visual images, of "inside" and "outside," and of separate individuals.

What distinguishes a "mask" from a "face" is that a mask is not an immediate, transparent expression of what lies behind it. A mask is a code, it must be read or deciphered, and for that we need a key, which we may or may not possess. A mask is a potentially impenetrable and/or dissimulative outward surface. It is a barrier, a surface that resists penetration.

According to the cosmology of bodies what is real are "inner" movements. External images (masks) are nothing more than *covered up* movements, movements that are hidden and disguised. So far are we from saying that the "inner" is derived from or constructed out of what is "outside" that we proclaim exactly the reverse: what is "outside" is an *image* constructed out of the negation of *internal sensations*.

When we speak of internal sensations, however, we are using the word "internal" denotatively, not connotatively, to name a certain category of sensations, not to describe them. Only the ego can be described as "inside" and objects as "outside." Internal sensation, which is neither ideational nor objective, is neglected by both the rationalist-idealist and empiricist-materialist sides of Western philosophy. Whereas the rationalist-idealist side tries to construct what is outside from thought, which is inside, and the empirical-materialist side tries to construct what is inside from what is outside, our attempt is to construct both the inside and the outside, both ego and object, from "internal" sensation. We are not interested in all internal sensations, however, but only *emotions*, which are necessarily embodied in visceral and kinaesthetic sensations.

Ideational and objective meaning is dependent upon emotional meaning, which, on the other hand, requires neither ideas nor objective images. According to Cassirer's reading of the history of modern philosophy, this is a reversal of both the traditional rationalist and empiricist theories of emotion. As such modern philosophy stands diametrically opposed to the cosmology of bodies. However, there was precedent for the modern cognitive theory of emotion in the ancient Stoics who believed that emotions are

the product of cognitive judgments. Indeed, Descartes's epistemology is based upon the Stoic theory of emotion that reduces emotion to cognitive judgments.

Affections, it was generally assumed, were to be defined in terms of 'ideas.' ... According to the theories of Descartes and Spinoza human affections have their origin in obscure and inadequate ideas. Even the psychology of the English empiricists did not change this general intellectualistic view. For even here the 'ideas,' understood as copies of sense-impressions, not as logical ideas, were still the center of psychological interest. In Germany Herbart and his school gave a mechanistic theory of the emotions according to which they were reduced to certain relations between perceptions, representations and ideas.

Thus matters remained until Th. Ribot developed a new theory which in contradistinction to the old *intellectualistic* thesis he described as the *physiological* thesis. In the preface to his work on the psychology of the emotions Ribot declared that, when compared to other parts of psychological research, the psychology of states of feeling was still confused and backward. The preference had always been given to other studies, such as those of perception, of memory, of images. According to Ribot the dominant prejudice which assimilates emotional states to intellectual states, considering them as analogues or even treating the former as dependent on the latter, can only lead to error. States of feeling are not merely secondary and derived; they are not merely the qualities, modes, or functions of cognitive states. They are, on the contrary, primitive, autonomous, not reducible to intelligence, and able to exist outside and without it. This doctrine was based on general biological considerations. Ribot tried to connect all states of feelings with biological conditions and to regard them as the direct and immediate expression of the vegetative life. (Cassirer, 1946: 25-26)

Consciousness consists of ideational and objective codifications of emotions. Emotions are not signs, they do not *receive* meaning from anything else, but can only *give* meaning. In addition, the spectrum of possible emotions is culturally invariant, providing a relatively timeless "fund" from which all historically and culturally contingent signifiers draw meaning-value.

Emotions do not signify perceptions, for example, but rather, perceptions signify emotions. The meaning of a perception is the emotion which has been assigned to it. Let us reserve the term "affect" for an emotion which has been assigned to an (external) perception. It is this "affective" meaning system which has been investigated by

psychologists such as Osgood, et al. (1975) and Zajonc (1980). According to Zajonc (1980), the affective meaning system is a distinct coding mechanism, possessing no necessary relation to representational images or to linguistic signifiers, which may also code or be assigned to perceptions, or in the most limited case merely to "stimuli." And according to Osgood, et al. (1975) the basic structure of the affective meaning system is biologically fixed. Further evidence for this claim is provided by Clynes (1977), Clynes and Nettheim (1982) in the neuropsychology of music, and Ekman (1980) with cross-cultural studies of facial expression, as well as numerous neurological and neurophysiological studies, particularly of the "limbic" brain.

Once an emotion has been codified by, say, a perceptual gestalt, the emotion does then come to signify that perception insofar as a bi-directional association has developed between the two. My claim, however, is that the perceptual meaning system is dependent upon the emotional meaning system in a way that the emotional meaning system is *not* dependent upon either perception or linguistic signifiers. Although an emotion *may* acquire a perceptual meaning, it does not necessarily do so, whereas perceptual meaning *does* necessarily possess emotional meaning, so even the perceptual meaning added to an emotion functions as a feedback mechanism for the emotional meaning system, merely projecting and reflecting back what remains essentially emotional.

Both the "inner world" of ideas and the "outer world" of external sensations and objects are, Nietzsche says, *projections and interpretations* of a "text" which precedes both (1967d: # 479). I prefer the word "codification" to "interpretation," however, because the meaning given to this "text" is not found within the text itself but is added to it, in the way, for example, that dots and dashes are given a verbal meaning by the Morse code. The text which Nietzsche is speaking of here does not contain any ideational or objective meaning in itself; these meanings are added to it as this or that life context requires.

Nietzsche provides a good example which clarifies my own thesis. He says, "Our entire dream life is the interpretation of complex feelings with a view to possible causes—

" (1967d: # 479). The text which ideational and objective meanings codify is a process within our nervous systems, which are themselves plugged into the environment. But Nietzsche is not a mechanist. Although these processes do not enter "consciousness" until they are given ideational and objective meaning, they may still be experienced as *feelings*, without such meaning—although Nietzsche believes that it is extremely difficult and rare not to codify feelings. I prefer the word "emotion" to "feeling" because of the association between emotion and movement. Emotions always have a kinaesthetic-motor component. Dreams, then, are visual codifications of emotions and movements. These movements, however, can be experienced and have a reality apart from any code-meaning added to them.

Now, dance may be defined as movement performed for the sake of movement itself, without reference to anything beyond itself. Dance is autotelic, "playful." Dreams codify movements, but these movements, apart from the meanings added to them, are dances. Indeed, all ideational and objective contents within consciousness are codified dances.

It is well known that powerful emotions evoke rhythmic forms of behavior. A rhythm, however, is a recurring pattern of change. The importance of the Clynes (1977) and Clynes and Nettheim (1982) material is that it demonstrates a neuropsychological connection between particular emotions and particular patterns of change, which Clynes calls "sentic forms." An emotion, then, is a musical-rhythmic structure, an ordered pattern of change. The neurophysiological argument which attempts to establish this connection between emotion and ordered patterns of change depends in part on what we know about the "amygdala," located at the heart of the limbic or "emotive" brain. The amygdala is a central sensory information processor which is sensitive to changes in the temporal pattern of incoming sensations, and which, along with the hypothalamus to which it is connected, is closely coordinated with emotional experience.

In the trance state the orienting response, also controlled in part by the amygdala,

is inhibited. The attention of the entranced individual tends to remain fixed on a single perpetually repeating pattern of changes, with their corresponding emotions. The world has become a wheel or "Great Round," a music box which plays forever. Conscious reflection upon this wheel produces recursive, nested patterns, such as the logarithmic spiral of the musical scale in which the same notes repeat within each octave. The structure of this wheel, like the more fragmented, less powerful, and sequentially organized emotions of profane, ordinary experience, is culturally invariant and belongs to Nature. The Great Round is the body of the entranced individual, the "Self." We know that the trance state is determined by certain biologically fixed neurophysiological processes, and we know that the trance state is the center of much, if not all, religious culture, which in turn, especially in traditional cultures, is inseparable from the social and political life of a society. The thesis of the present work implies that the body of the entranced individual is a historically and culturally invariant source *from which* any particular historical culture must draw meaning. In itself this source, the "sacred," is *wild*. In many mythological-ritual systems it is described as *Chaos*, or as a primordial dragon, and is celebrated with carnivals, because to enter this domain is to transgress beyond the historically constructed bounds of the society, beyond all "codes," and beyond morality, beyond "good" and "evil."

We must not forget, of course, when employing neurobiological arguments, that the sacred body is not the highly mediated object of scientific inquiry. Let me emphasize: *bodies are not objects*. The limbic brain, for example, is not identical to immediate emotional experience, but is a relatively useful ideational and objective codification of such experience. Ultimately, the usefulness of the limbic brain concept and the object it represents can be determined only in accord with the power these codes have to invoke the sacred body.

The sacred body is the center of the world, the choragus of the cosmos, and the principal concern of this work. It is a Great Round or wheel of rhythmically ordered



emotion, visceral and kinaesthetic sensation. The emotional domain of experience cannot be reduced to or explained by other domains of experience, which merely code the emotional domains of experience. But, whereas the profane world signifies the emotional domain of experience, the sacred world *imitates* it through *re-enactment*. In a deep trance the sacred body of emotion serves as a model for the world--transforming the world into a *sacred* world or *cosmos*--and is metaphorically transposed into other domains of experience, which imitate the sacred body by performing analogous *dances*. The shared quality which allows for these metaphorical transpositions of the sacred body is *rhythmic movement*.

## Chapter II

### Nietzschean-Matriarchal Philosophy and Platonic-Patriarchal Philosophy

In this chapter I contrast two opposing philosophical theories, one of which I call "Nietzschean-matriarchal" philosophy, and the other, "Platonic-patriarchal" philosophy. I have constructed Nietzschean-matriarchal philosophy out of Nietzsche's writings, Jungian psychology, neuropsychology, political anthropology and comparative religion. The history of Western European philosophy provides us with abundant resources for the construction of a Platonic-patriarchal philosophy, but in this chapter as elsewhere I cast Platonic-patriarchal philosophy in words and images taken primarily from Plato's writings. I do not claim to accurately represent any of the texts out of which I have constructed Nietzschean-matriarchal philosophy or Platonic-patriarchal philosophy. Indeed I put these texts to work in ways their authors may never have imagined. The metaphor to be thought of here is that of *building*. I function not as a historian who is concerned about accurately representing the past, but as a scavenger, building something new out of stones taken from old ruins, just as Plato constructed his philosophy out scraps retrieved from the older mystical traditions of the ancient Near East. On the other hand it would not surprise me if what I am writing is historically accurate. I merely insist that that must be a secondary concern.

Whereas according to Nietzschean-matriarchal philosophy system Y cannot operate without system X, which can however operate without system Y, and whereas according to Nietzschean-matriarchal philosophy system Y is constructed upon and transformed by system X (as we will see in chapter IV), Platonic-patriarchal philosophy tends to deny the existence of system X or to say nothing whatever about it, or attempts to reduce system X to system Y, or attempts to show that system X is epiphenomenal to system Y, or, lastly, locates the origin of system X in system Y, which it imagines to be self-originating. From the point of view of Nietzschean-matriarchal philosophy, Platonic-

patriarchal philosophy turns the world upside down by making Nous the origin of Physis when, according to Nietzschean-matriarchal philosophy, Physis is a genetic process which bears forth Nous among many other things and events.

This is how we ought to understand Nietzsche's pronouncement of the death of God. "God" is none other than Nous understood as the origin of Physis. The death of God means nothing more than that we can no longer trace the genealogy of Physis back to Nous. On the contrary, we trace the genealogy of Nous back to Physis. The death of "God" does not mean that theology is no longer possible, but that we are witnessing a changing of the gods, a replacement of the old patriarchal God with a matriarchal Goddess who is accompanied by a male god named "Dionysus."

#### A. Nietzsche at Eleusis

In aphorism 802 of *The Will to Power* Nietzsche declares art--Dionysian art, the best art--to be first an expression of, and second a stimulus to, our animal nature, our animal instincts. Art is described as the product of an explosion of physicality into the world of form. Nietzsche's description of art relies upon the distinction between art and physicality, between art and *physis*, or Nature. This distinction already plays a crucial role in Nietzsche's early work, *The Birth of Tragedy*. In the preface to *The Gay Science* Nietzsche tells us that the Greeks were superficial, that they were lovers of aesthetic forms, of images and tones, *out of*, however, a *profound* knowledge of Nature. The Greeks stopped at the Apollonian surface precisely because they had *also* penetrated beyond into the Dionysian domain of *physis*. The Apollonian spectacle on the tragic stage, *The Birth of Tragedy* explains, is a cure, a remedy for too much knowledge, for too much knowledge of Nature, just as luminous spots provide a kind of cure for our eyes after gazing too long into bright lights, after seeing *too* much.

Truth is knowledge of Nature. It cannot be judged by the moral or aesthetic

standards of consciousness because, as an instrument for the control and domination of herd animals, consciousness (meaning reflective self-consciousness, i.e., *ego-consciousness*) is a product of *domestication*, and does not belong to Nature, which is wild. According to Nietzsche, consciousness, and language, developed only under the pressure of the need for communication, particularly between those who commanded and those who obeyed, for purposes of group cohesion and coordination: “a solitary human being who lived like a beast of prey would not have needed it.” (Nietzsche, 1974: #354) Consciousness develops as a reaction and defense against the instinctive and spontaneous forces of Nature. Consciousness is not a positive or creative act but a negation and a dissimulation. It is not Nature which loves to hide, as Heraclitus proposed, but we who hide from Nature, because from the perspective of consciousness Truth is terrible.

The Socratic art of Euripides, which marks the death of tragedy, is a product of consciousness, or in Greek terms, of *Nous*. It is, for Nietzsche, a sign of extreme pathology, because it means that the animal instincts which constitute our physical nature are no longer creative. Tragic art, on the other hand, is an explosion of physicality, of animal instincts, into the world of form and consciousness, which *in turn* may function as a stimulant or *tonic* for our animal nature. Consciousness, it is true, is a reactive and defensive measure. It does not belong to nature but supplements nature as medicine supplements a natural diet. But consciousness does not become *poisonous* until the natural functional hierarchy between nature and art, instinct and consciousness, *physis* and *nous*, is reversed, in such a way that consciousness becomes original and creative, and animal instinct becomes a supplement or mere instrument. Socrates is the dramatic personification of this poison. Nietzsche's fundamental project is to invert this Socratic hierarchy between consciousness and animal instincts. It is also Artaud's project, and the meaning of his theater of cruelty, which is to make theater purely spontaneous, a product of animal instinct and drive energy, an expression, not of *logos*, but of *physis*.

We are so used to reading and hearing works based on the interpretation of texts that I find it necessary to point out that philosophical work may also be based on direct personal experience. Nietzsche says explicitly in the preface to *The Gay Science* that those who have not had certain experiences will find it impossible to understand his book. The eternal return is, I think, the best example of one of Nietzsche's concepts which cannot be understood on a strictly textual or conceptual basis, but which *can* be understood as a label or as a marker for an experience. Those who have not had this experience cannot know what the eternal return means, because Nietzsche's conceptual articulation of it is nothing but paradox and riddle--as is so much of Nietzsche's work.

Laughter is another experience that informs Nietzsche's philosophy. Often when we laugh, we laugh *about* something. Laughter has an intentional structure. We may laugh, for example, about a word pun, or more generally about any turn or trope of language. Nietzsche's text contains many tropes and other humorous devices, and certainly we can say that anyone who has not laughed while reading Nietzsche has not read Nietzsche at all. Now consider experiences in which laughter detaches itself from its intentional point of origin, or perhaps even experiences in which laughter never had an intentional point of origin to begin with, or again, experiences in which laughter *arbitrarily* focuses on any convenient object so as to give itself some *semblance* of reasonable action. In these cases we find ourselves laughing for the sake of laughter itself. These non-intentional forms of laughter are examples of what Artaud means by "affective athleticism" or of what I have called "emotional play." They are emotional experiences detached from consciousness, detached, that is to say, from both concepts and images, from both Socrates and Apollo. These are experiences of *physis* without *nous*. They are *Dionysian*. When we laugh for nothing but the joy of laughter, laughter becomes very much like a song and a dance, it becomes a movement we perform for the joy of movement itself, with no other purpose or goal in mind. It is, as Nietzsche would say, "innocent" and "beyond good and evil," because it serves no purpose other than itself.

In order to read Nietzsche's text correctly it is necessary to take his text as most essentially a point of origin for acts of affective athleticism, a point of origin, however, from which we must detach ourselves. Nietzsche was a musician and a composer. He had a long friendship with Richard Wagner and music profoundly shaped his philosophy and writing style (Liébert, 2004). Indeed, Nietzsche's text is like a song. It is not the semantic (or ideational) content or objective referent of the lyrics which is of primary importance, but the sounds and emotions to which these lyrics are attached. Nietzsche's text is, to borrow a concept from Deleuze and Guattari, a "desiring-machine." We do not interpret it so much as we plug into it. The effect of Nietzsche's text is to allow us to experience various configurations of the will, that is to say, possible emotional states. The effect of Nietzsche's text is not, as is the case for other works in the history of philosophy, to produce in us various configurations of *consciousness*. Nietzsche is a choreographer, he is writing, not about consciousness, but about dance, about playful, innocent, non-intentional movements.

Dance is, for Nietzsche, a mediating term, situated exactly between art and nature, consciousness and instinct, just as the chorus encircles the tragic Greek stage, separating the cultural, aesthetic, Apollonian domain on the stage from the world of Nature outside, at once *protecting* the world of culture from the world of Nature while at the same time *imitating* or *reenacting* Nature in the aesthetic figures of song and dance. Dance, Nietzsche says in *The Birth of Tragedy*, is an aesthetic imitation or reenactment (in ancient Greek the term was "mimesis") of Dionysian ecstasy, in which the human being transgresses beyond city limits, into the domain of Nature, and becomes a wild animal. In fact, ancient Greek tragedy developed out of the mystery religions devoted to the god Dionysus in which the maenads or worshippers of Dionysus entered an ecstatic trance through dance or intoxication and ran through the woods like wild animals. The events on the tragic stage, however, do not imitate Nature. On the contrary, they dissimulate Nature, they create beautiful illusions which protect us from Nature. They exist at a

second remove from Nature, as distorted projections of the choral dance into the world of images and concepts. We find the same thesis clearly expressed in Nietzsche's essay *On Truth and Lie in an Extra-Moral Sense*, where Nietzsche says that concepts are worn out metaphors, which are themselves masks or images which dissimulate Nature. Nature unmasked is the will to power, a play of force, energy and movement.

The tragic theater is, for Nietzsche, a microcosm. If we understand the tragic theater we will understand the world according to Nietzsche. The stage is a circular platform, around which the chorus performs a circle dance. On stage we find the tragic hero, Oedipus.

The structure of the tragic theater reflects the structure of consciousness. Dramatic events on stage imitate processes within ego-consciousness, the domain of experience which defines us as individuals, with particular personal and cultural histories. The chorus, on the other hand, which performs a circle dance around the stage, imitates processes within what Jung has called the collective unconscious. The collective unconscious consists of instincts and biological drives related to basic processes within the body which all human beings share. Just as Nietzsche believed that the dramatic scene which appeared on the tragic stage was a projection of the choral dance into visual images, so too does Jung understand archetypal myths and images, such as Oedipus, as archetypal instincts which have become expressed in images taken from personal experience. It makes no difference, from the point of view of the instincts, whether the divine-king is portrayed as Oedipus, or, to take an example from contemporary American schizophrenic experience, Captain Kirk of the space-ship Enterprise--although a special episode of the *Star Trek* television series may need to be produced for this purpose.

Euripides disrupts this structure by introducing onto the tragic Greek stage the character of Socrates. Whereas Oedipus is a representation in personal images of archetypal energetic processes, Socrates represents the distinctively personal nature of the individual. Euripides, Nietzsche says, brings the spectator on stage, which is to say,

everyday life and everyday concerns, the "profane world" as Mircea Eliade would call it. Euripides marks, not only the death of tragedy, but more generally the death of myth.

Whereas Oedipus is an expression of physicality, of *physis*, of natural biological processes, into consciousness, Socrates represents consciousness detached from *physis*, indeed a consciousness which seeks to master and dominate *physis*, Nature and instinct. The vertical top-down power structure of Plato's *Republic* makes this clear. Human beings are superior to other animals because they stand upright, high above the Earth. In the good human, the head rules the heart which rules the gut. In the good state, farmers and craftsmen, who work with material things, lie at the bottom of the hierarchy. In the good cosmos, the demiurge or "Craftsman" creates in the world-soul a moving image of eternal form. This moving image of eternity, the divine *Logos*, is then the cause of the cosmic circle dance performed by the stars and planets. Good humans, in turn, ought to imitate the celestial dance by thinking in dialectical circles.

Plato's fundamental error, the error of Western civilization, was to believe that Socrates, or consciousness, or *logos* could provide *physis*, which in itself he conceived to be chaotic, with order, when in fact the very structure of Platonic *logos*--movement in a circle--is an imitation of *physiological* processes. The Greeks simply could not comprehend a world which was not a circle dance. But, in a period of, perhaps, weakness, they wondered, who is the leader of this choral dance, who is the choragus? And they answered, mistakenly, Socrates the *logistikon*, Socrates the leader of the dialectical circle dance of Plato's *Republic*, Socrates who, like the divine-king, was ritually murdered by the Athenian court.

In order to understand why the circle dance was such an indelible image in the Greek soul we must travel to Eleusis, as did thousands upon thousands of eastern Mediterranean people over a two thousand year period beginning around 1500 B.C. (Kerenyi, 1967: 21) and ending in the 4th century (Wasson, et al., 1978: 76) when Christianity--itself another mask for Socrates--silenced her temples forever. At the center



of the temple at Eleusis we find a wellspring from which waters with no doubt magical powers rise from the Earth--not from consciousness, not from above, but from below, from a dark hole. Around this wellspring is a circular slab of marble, cut into four quarters, and so forming the figure of a mandala.

Although we do not know much about the Eleusinian mysteries, we do know that ceremonies at the temple included circle dances around the well (Kerenyi, 1967: 70-72) in which some participants probably entered a trance. We also know that the Eleusinian mysteries were devoted to Demeter, the goddess of grain, and that after drinking a specially prepared beverage the initiates, sometimes in groups numbering as many as three thousand, were subject to visionary hallucinations (Wasson, et al., 1978: 80). R. Gordon Wasson, et al. have argued, in *The Road to Eleusis*, that the beverage drunk by initiates into the Eleusinian mysteries probably contained a fungus which commonly grew on grain in the area, a fungus which contains ergot alkaloids similar in chemical structure to LSD that possess hallucinogenic properties.

So we have at Eleusis two shamanistic techniques for entering trance: dance and the ingestion of hallucinogenic substances. In recent years we have also acquired a significant understanding of the neural mechanisms involved in trance experience. We know that the primary causal mechanism responsible for the trance state is the production of slow, rhythmic electrical wave patterns in the amygdala and/or hippocampal-septal regions of the limbic or "emotive" brain (see, for example, Winkelman [1986], who is a psycho-anthropologist engaged in cross-cultural studies of trance ritual). These electrical wave forms then project up to the prefrontal cortex, where emotional and cognitive information is usually coordinated. But because the primary causal mechanism lies within the emotive brain, it will be emotion, in trance experience, which coordinates and orders images and concepts, not images and concepts which structure emotion.

The amygdala and hippocampus have been shown to be involved in the orienting response to novel stimuli. When an animal orients to a novel stimulus, it first turns in the

direction of the novel stimulus, and then motor activity, and electrical activity in the amygdala, temporarily cease, until they are restored again by the habituation response. Slow, rhythmic waves in the amygdala and/or hippocampus block both the orienting response and subsequent habituation in entranced subjects.

However, novelty is defined not simply by the presence or absence of stimuli but by the *rate* at which stimuli impinge upon the subject. It is much easier to habituate to repetitions of temporally patterned stimuli than to random noise. The entranced subject fails to respond to novelty and random noise in the environment, while also failing to *habituate* to rhythmic, repetitive stimuli, including kinaesthetic sensation. The result is a capacity to chant or dance, for example, in a monotonous manner indefinitely. Novelty or disorderly change is not experienced, and yet old and repeating patterns of change are experienced *as if* they were novel. There is an experience of eternal presence, or eternal new-ness. There is a radical alteration in the sense of time. Indeed, neuropsychologist Robert Ornstein (1969), writing half a century ago, believed that the amygdala was the best candidate for the brain's time-keeper.

The attention of the entranced individual becomes fixed on a particular pattern of change. In terms of brain events these patterns of change are processed by the amygdala, which also regulates autonomic visceral and kinaesthetic processes. The activity of the amygdala has been found to correlate with emotional experience. So for each pattern of change we find a particular emotion and a particular autonomic visceral-kinaesthetic response. Precisely the same reasoning explains the experience of emotion in music. After noting that the amygdala of the limbic systems and related frontal cortex are critically involved in processing redundancy and novelty, neuroscientist Karl Pribram writes,

The thesis to be pursued here is that while the aesthetics of music is a function of the recognition of variations, musical meaning results from the generation of feelings produced by these same variations on patterns of repetition. Clynes has a considerable body of research on this issue: He

has demonstrated which patterns (essentic forms) evoke which feelings in a variety of different peoples and cultures. (Pribram, 1982: 27)

In this work I will present many arguments, including ones which draw upon the neurosciences, to support Nietzsche's thesis that music is akin to Dionysian ecstasy.

In a deep trance, experience is dominated by a rhythmically ordered, repeating series of emotions. Alongside each of these emotions the entranced individual will, not primarily or essentially, but as a consequence, experience those visual images and verbal thoughts which he or she associates with each respective emotion. The result is a moving montage of emotions, images and thoughts in the shape of a wheel. The world becomes a mandala. Time is spatialized, space is temporalized, and together both become a circle. We feel ourselves transported to another metaphysical plane, where an eternal wheel is forever turning, turning because it is a temporal, rhythmic series, and yet not turning, because it is a circular, spatial structure.

The myth of trance experience, that is, the meaning of the images and concepts produced within trance experience, is the myth of divine-kingship. An important part of the myth is that the divine-king must establish a cosmic state by performing a circle dance which describes a mandala divided into four quarters. It is not necessary to actually perform a circle dance, but a circle dance is a very natural expression of the necessarily rhythmic structure of a deep trance. This, I believe, is the ultimate source of the image of the cosmic dance in classical and Christian antiquity. It is an expression, not of the divine *logos*, not of consciousness, but of very deep biological, emotional, visceral, and kinaesthetic sensations, an expression, that is to say, of *physis*. I will not elaborate any further on this here, because it is the subject of chapter IV, but only point out that these thoughts are inspired largely by John Weir Perry's study of the myth of divine-kingship in theocratic states, in schizophrenic psychosis, in mysticism, and in LSD induced psychotic episodes, and add that Socrates, particularly in Plato's *Republic*, embodies this myth.

## B. The Death of God and the Spiral Dance

The grand opposition in Nietzsche's philosophy is between God and Nature (*Physis*). Nietzsche seeks to invert the traditional hierarchy between God and Nature by showing that God is nothing more than a false interpretation or codification of Nature, an illusory sheen painted over the surface of Nature which negates and degenerates her inner depths. Nietzsche uses his philosophical hammer to destroy idols which, when tapped, sound hollow. Sound--especially music--penetrates to the inside of things. But God has no interior, he is all surface, mere appearance, and so shatters when struck by Nietzsche's hammer.

What remains after God has died is not a pretty sight. Nature is a painful creative flux without end. Nature is the process of being born, a child moving through the birth canal. It is impossible to face the trauma of this event, as it is impossible to gaze directly into the Medusa's head, without being struck by sheer terror. And yet to completely isolate ourselves from this event would be to cease being born, and to cease living. The Greeks solved this dilemma by viewing Nature through a transfiguring and beautifying mirror, which, though still a surface, remained inextricably bound to a Dionysian interior. Behind the tragic mask stands the figure of Dionysus. The tragic mask is not an *eidolon*, it is not *merely* an image, but is an *eidos*, an image which represents a more primordial reality (Nietzsche, 1967a: 73). The destruction of the epic hero on the tragic stage is accepted by the audience only because it is an imitation of the destruction of Dionysus. The suffering of Dionysus is accepted because, as the suffering of birth, it promises *more life*, not a release from life, and because the beautiful tragic scene mediates and buffers our experience of the suffering of Dionysus. The Christian God, on the other hand, promises a final release from the suffering of birth and becoming. The Christian God is a mask without a living face behind it, because he is the very antithesis of life (as Nietzsche understands it), which is to say, of birth and becoming.

Only on the basis of the analogy between musical dissonance and the suffering of the tragic hero, Nietzsche says, can we understand our joy in the hero's destruction (Nietzsche, 1967a: 141). The tragic scene or surface can be understood only as a projection in visual images and masks of the song and dance of the tragic chorus (Nietzsche, 1967a: 49, 54, 65, 104, 107 and 129). The tragic chorus is in turn an imitation or re-enactment of Nature (Nietzsche, 1967a: 59, 64 and 65) and of Dionysian ecstasy (Nietzsche, 1967a: 62). Tragedy, according to Nietzsche, is a vertical inversion of Platonic cosmology. Whereas according to Platonic cosmology the epic hero (God) is the first cause and model for all that exists below him (*physis* being furthest below), within the tragic world view *physis* is the first cause and model for all that exists above her. Nature--or *physis*--is Demeter, eternally rejoicing "when told that she may *once more* give birth to Dionysus" (Nietzsche, 1967a: 74). Tragedy is a choral and dramatic re-enactment of the birth trauma. Life itself, as Nietzsche understands it, life as the will to power, is an immediate or symbolic re-enactment of the birth trauma.

Stanislav Grof (1976, 1980, 1985), a psychoanalyst and key figure in the transpersonal psychology movement, who supervised thousands of LSD sessions over a 25 year period in Czechoslovakia and the United States, discovered that the birth trauma is an essential part of LSD experience. Many LSD subjects even exhibit the objective physiological symptoms of birth. Wasson, et. al. (1978) have argued that initiation into the Eleusinian mysteries included ingestion of ergot alkaloids similar in chemical structure and psychological properties to LSD. It is probable that other mystery cults, including the Dionysian cult, used hallucinogenic substances to induce trance states (see Littleton [1986], for example, on the possible use of hallucinogenic vapors at Delphi and Dodona.) To be initiated into many ancient Greek mysteries was to be in effect born again.

The labyrinth is an especially important image because it illustrates the connection between the birth trauma and dancing in circles or closed circuits. According to Greek myth, the monster Minotaur devours those who become lost in the labyrinth and are

unable to escape. Only the hero Theseus defeats the Minotaur and escapes from the labyrinth. To dance in a labyrinth is to dance in a closed circuit with no apparent exit and by analogy to reenact the first stage of the birth process when the uterine is contracting and there appears to be no way out. To escape from the labyrinth as Theseus did is to reenact the second stage of the birth process when the fetus is fighting to escape through the birth canal. According to Stanislav Grof (1976, 1980, 1985), an important type of ecstatic or “transpersonal” experience that he observed in his extensive LSD research is analogous to the life of the fetus before and after birth. He called experiences of this type “perinatal” experiences and divided them into four subtypes corresponding to the four stages in the life of the fetus before and after birth. The birth trauma occurs in the second and third stages in the life of the fetus, which are the first and second stages of the clinical birth process. According to this theory, the myth of the labyrinth is a mythic representation of an ecstatic experience that is analogous to the birth trauma. If it is correct to draw these connections between labyrinthine dancing, ecstatic experience, and the birth trauma, then we will be able to understand why the circle dance performed by the tragic chorus is an imitation of Dionysian ecstasy and of Nature, as Nietzsche claims it to be.

The second stage of perinatal experience is associated with the first stage of the clinical birth process, when the uterus begins to contract but the birth canal has not yet opened. The fetus is trapped in a closed, crushing space without any exit. According to Stanislav Grof’s research all of the following experiences reported by LSD subjects belong to the second stage of perinatal experience.

Cosmic engulfment; immense physical and psychological suffering; unbearable and inescapable situation that will never end; various images of hell; feelings of entrapment and encagement (no exit); agonizing guilt and inferiority feelings; apocalyptic view of the world (horrors of wars and concentration camps, terror of the Inquisition; dangerous epidemics; diseases; decrepitude and death, etc.); meaninglessness and absurdity of human existence; 'cardboard world' or the atmosphere of artificiality and gadgets; ominous dark colors and unpleasant physical symptoms (feelings of oppression and compression, cardiac distress, hot flashes and chills,

sweating, difficult breathing) (Grof, 1985: 104-105)

A labyrinth is a network of dead-end paths and passageways which return the trapped individual to where he began. It is not hard to imagine an individual trapped in a labyrinth searching ever more frantically for an escape from his predicament, only to spin ever more rapidly around the closed circuits of the labyrinth.

The third stage of perinatal experience is associated with the second stage of the clinical birth process when the cervix opens, propelling the fetus through the birth canal. The fetus is no longer merely a passive victim but, together with the mother, is involved in a titanic struggle to escape from its condition. Enormous explosive, destructive, and sadomasochistic energies are released at this point. Entranced individuals may express these energies through frenzied, epileptic-like dances. According to Stanislav Grof's research all of the following experiences reported by LSD subjects belong to the third stage of perinatal experience.

Intensification of suffering to cosmic proportions; borderline between pain and pleasure; 'volcanic' type of ecstasy; brilliant colors; explosions and fireworks; sadomasochistic orgies; murders and bloody sacrifice, active engagement in fierce battles; atmosphere of wild adventure and dangerous explorations; intense sexual orgiastic feelings and scenes of harems and carnivals; experiences of dying and being reborn; religions involving bloody sacrifice (Aztecs, Christ's suffering and death on the cross, Dionysus, etc.); intense physical manifestations (pressures and pains, suffocation, muscular tension and discharge in tremors and chills, sweating, cardiac distress, problems of sphincter control, ringing in the ears) (Grof, 1985: 104-105)

Eventually, an exit from the labyrinth is found, and the individual emerges reborn (Grof's fourth perinatal stage of LSD experience).

There is a limitation to Grof's data which is very important to my thesis concerning the choreography of the soul. To understand this limitation we need to understand the concept of a "channel" of emotional expression. Arnold Mindell (1985a,b), a training analyst and teacher at the Jung Institute in Zurich who worked for many years with Marie-Louise Von Franz, has taken the concept of a "channel" from communications theory and incorporated it into psychotherapeutic theory and practice. In addition to his training in

psychology Mindell holds an M.S. degree in physics and has incorporated many concepts from particle physics into his theory of the soul. By combining physics and psychology Mindell continues the work of Von Franz (and Jung) who tried to find the meeting ground between the soul and matter in an archetypal psychology of number. According to Mindell (1985a,b) emotional energy--the "dreambody"--may be expressed through a variety of channels.

By channels I mean various modes of perception. For example, the dreambody appeared visually as the firecracker in his dream. It was felt by him proprioceptively as his pain, pressing him to explode. It appeared afterwards as his shouting, in a verbal or auditory channel. The dreambody, then, is a multi-channel information sender (Mindell, 1985a: 8)

A second important concept which Mindell introduced is the concept of "channel switching."

Processes can switch suddenly from hearing to feeling, from feeling to visualization, or from seeing to moving, like lightning. (Mindell, 1985a: 37)

[Sometimes when] situations become too extreme or painful in one perception channel, when they reach their limit or edge, the experience switches suddenly and automatically from one channel to another. (Mindell, 1985a: 37)

The limitation of Grof's data with respect to my own thesis is that he works primarily in the visual channel. Although Grof did utilize some body-oriented therapeutic techniques, during the most powerful period of a "trip" Grof's clients wear eyeshades and lay reclined on a couch (in an old-fashioned psychoanalytic way)--a procedure which clearly encourages experience in the visual channel. Thus, Grof's data consists primarily of visual imagery. To the present day, psychologists employ the same protocol in all of their psychedelic research and achieve similar results. But trance experience need not be like watching a movie. Shamans, for example, work not only in the visual channel but also in the movement channel, when dancing. Possession trance cults are at the other extreme, working primarily in the movement channel. I propose that the dance of the labyrinth is a second and third stage perinatal experience *in the movement channel*.



Kerenyi has devoted several studies to the labyrinth and discusses it in his book on Dionysus. The image of the labyrinth appears, as do so many other themes from the mysteries, in Plato's dialogues.

Sokrates, in the dialogue that Plato brought out under the title *Euthydemus*, speaks (at 291 B) of the labyrinth and describes it as a figure whose most easily recognized feature is an endlessly repeated meander or spiral line: 'Then it seemed like falling into a labyrinth; we thought we were at the finish, but our way bent round and we found ourselves as it were back at the beginning, and just as far from that which we were seeking at first.' (Kerenyi, 1976: 92)

In Plato's *Phaedo*, Sokrates alludes to an image of the underworld that was characterized by many twists and turns but also by intersections. It was 'labyrinthine' in the present acceptance of the word, a meaning which began to predominate even in antiquity. The 'circuits' in Plato's texts were later even changed to 'threefold paths.' In an account probably originating with Plutarch, the circuits became 'arduous wanderings,' but at the same time a way of initiation. The experiences of those initiated into the Mysteries of Eleusis were merged in literature with a labyrinthine journey to the underworld. (Kerenyi, 1976: 93)

The question being posed here in this work is this: Which comes first, the *noetic* activity of Platonic dialectics (which does indeed resemble a labyrinth), or the *physical* spiral dance of mystical experience? Whereas for Nietzsche *physis* is the primordial pattern copied by all other dances, the philosophical tradition from Plato to Proclus places *Nous* before *Psyche*, and certainly before *Physis*. The death of tragedy occurred, Nietzsche says, when *Nous* became original and *Physis* secondary and derivative. The death of God reverses this hierarchy once again, restoring *physis* to its original and archetypal role.

Euripides marks the death of tragedy. With Euripides tragedy becomes reasonable and understandable. The actors no longer represent immediate *pathos* but calculated and calculable *actions*. The plot becomes increasingly important. Aesthetic Socratism is adopted: to be beautiful is to be understood. "Euripides as poet is essentially an echo of his own conscious knowledge." (Nietzsche, 1967a: 85). Consciousness has

become creative and original. The daimonion (δαίμόνιον) of Socrates functions only in a negative, critical role.

In this utterly abnormal nature, instinctive wisdom appears only in order to *hinder* conscious knowledge occasionally. While in all productive men it is instinct that is the creative-affirmative force, and consciousness acts critically and dissuasively, in Socrates it is instinct that becomes critic, and consciousness that becomes the creator--truly a monstrosity *per defectum!* Specifically, we observe here a monstrous *defectus* of any mystical disposition, so Socrates might be called the typical *non-mystic*, in whom, through a hypertrophy, the logical nature is developed as excessively as instinctive wisdom is in the mystic. (Nietzsche, 1967a: 88)

With Euripides the tragic scene became no longer an image (*eidos*) of the Dionysian chorus, but an image of Socratic understanding, of Nous. Indeed, tragedy degenerates to the point where the chorus itself begins to imitate the images and dialogue on stage. Eventually, the chorus will be removed entirely. But before that, Alexandrian-Socratic "cheerfulness" will consign the chorus to be a "slave to phenomena."

This takes place in the development of the *New Attic Dithyramb*, the music of which no longer expressed the inner essence, the will itself, but only rendered the phenomenon inadequately, in an imitation by means of concepts. (Nietzsche, 1967a: 106)

In this New Dithyramb, music is outrageously manipulated so as to be the imitative counterfeit of a phenomenon, for instance, of a battle or a storm at sea; and thus, of course, it has been utterly robbed of its mythopoeic power. ... we are reduced to a frame of mind which makes impossible any reception of the mythical; for the myth wants to be experienced vividly as a unique example of a universality and truth that gaze into the infinite. The truly Dionysian music presents itself as such a general mirror of the universal will (Nietzsche, 1967a: 107)

Nietzsche's conception of Dionysian music is taken directly from Schopenhauer, who states:

*Music* is the true universal language which is understood everywhere, so that it is ceaselessly spoken in all countries and throughout all the centuries with great zeal and earnestness, and a significant melody which says a great deal soon makes its way round the entire earth, while one poor in meaning which says nothing straightaway fades and dies: which proves that the content of a melody is very well understandable. Yet music speaks not

of things but of pure weal and woe, which are the only realities for the *will*: that is why it speaks so much to the heart, while it has nothing to say *directly* to the head and it is a misuse of it to demand that it should do so, as happens in all *pictorial* music, which is consequently once and for all objectionable, even though Haydn and Beethoven strayed into composing it: Mozart and Rossini, so far as I know, never did. For expression of the passions is one thing, depiction of things another. (Schopenhauer, 1970: 162)

Nietzsche's and Schopenhauer's philosophy of music may be placed in a broader context provided by the nineteenth century German theory of absolute music, according to which musical sound is meaningful in itself without reference to concepts or things, thereby making lyrics or a program not only irrelevant but distracting (Dahlhaus, 1989; Bonds, 2014).

In ancient Greek there were two words for "life": *bios*, which referred to the finite, bounded, biographical life of an individual, who is born and dies only once, and *zoë*, which is indestructible life, because death is for it the womb from which it is born. *Zoë* is the "*universal will*" exceeding the limits of the individual ego, which Nietzsche will later call the "*will to power*." Dionysus is the mythical personification of *zoë* (see Kerényi, 1976). And it is he who performs the spiral dance of the labyrinth. *Zoë* is necessarily a rhythmic process and for this reason may be represented by a choral dance.

The universal will is the body of the labyrinthine dancer. However, Nietzsche speaks not only of choral dance and rhythm as a necessary and unique representation of the universal will but also of choral song and melody as inseparable from the universal will. And he is right to do so, as we will realize in Chapter IV after incorporating the work of Manfred Clynes (1977, 1982), which suggests an innate unity between emotion and variation in tone, into our theory. The Great Round traversed in the labyrinth is an intensely emotional journey, and may be uniquely represented by certain melodies.

But the chorus is not a *semiotic* representation of the universal will. Intrinsic to any semiotic code is the separation of a level of signifiers from a second level of signifiers or signifieds. This separation of planes makes possible the *substitution* or *exchange* of one

system or particular chain of signifiers for another without disturbing the structure of the plane above it or the message being communicated. For example, a word can be encoded in speech or writing or even in Morse code. The chorus, however, is not related to the universal will as signifier to signified. It is a *unique* representation of the universal will. No other "code system" can replace it, and for this reason it is not a "code" at all.

The tragic scene, Nietzsche says, is an Apollonian representation of choral events and forces in visual images (1967a: 49, 54, 65 and 73). Unlike the chorus which *uniquely* imitates Nature, the tragic *scene* offers us only one specific *example* of *many* possible visual images.

The inchoate, intangible reflection of the primordial pain in music, with its redemption in mere appearance, now produces a second mirroring as a *specific* symbol or *example*. (1967a: 49, emphasis added)

*Melody is therefore primary and universal*, and so may admit of several objectifications in several texts. (1967a: 53)

Dionysus appears in a *variety* of forms, in the mask of a fighting hero, and entangled, as it were, in the net of the individual will. (1967a: 73, emphasis added)

The chorus belongs to the universal will, whereas other forms of expression are superficially and arbitrarily added to it. Its role in tragedy, which seeks to represent the universal will (Dionysus, zoë, physis, Nature), is therefore indispensable. Unlike codes which merely "counterfeit" the universal will, the chorus does not participate in any exchange economy, and cannot be replaced.

Here we must go beyond Mindell's (1985a,b) understanding of a channel of emotional expression by adding that a channel functions as a *code* because it is possible to "switch" to other channels, but that the kinaesthetic (and visceral) domain of experience is *not* a channel, because it is *universally* present in and behind *all* channels of emotional expression. It is possible, for example, to "switch" between dreams and waking gestures, but although one does not actually *move* while dreaming, kinaesthetic-motor experience

is an essential part of dreaming *too* (see Lerner, 1967).

To invert the original hierarchy between the chorus and codes such as visual images and language is to misunderstand the role of the chorus in tragedy and its necessary and unique relation to Dionysian ecstasy, to Nature, to primordial being, to the universal will, etc. Only the chorus possesses a necessary and unique relation to the universal will. Images and words stand in arbitrary relation to Nature. As determinations of finite *bios*-life they may always be replaced, exchanged, or substituted by other words and images. They do not belong to the universal will but are mere secondary expressions of it, dependent, in fact, upon music. Music on the other hand does not need images and concepts but endures them as its accompaniments (Nietzsche, 1967a: 55).

Language can never adequately render the cosmic symbolism of music, because music stands in symbolic relation to the primordial contradiction and pain in the heart of the primal unity, and therefore symbolizes a sphere which is beyond and prior to all phenomena. Rather, all phenomena, compared with it, are merely symbols: hence *language*, as the organ and symbol of phenomena, can never by any means disclose the innermost heart of music (Nietzsche, 1967a: 55)

Once again Nietzsche invokes Schopenhauer's conception of absolute music.

Euripides killed tragedy by basing it not on the chorus but on codes, on consciousness, on language, on morality, on the herd, the plebs--all of which are merely different aspects of the same thing, of *God*, of *Nous*.

In *Ecce Homo* Nietzsche asks,

Who besides me knows what Ariadne is!--For all such riddles nobody so far had any solution; I doubt that anybody even saw any riddles here. (Nietzsche, 1967c: 308)

But in asking this question Nietzsche has given us a clue to its answer, for Ariadne is the mistress of the labyrinth (Kerenyi, 1976: 105), or as Nietzsche put it, of "riddles." The labyrinth can be traced back, as can other Dionysian elements of Greek culture, to the Minoan theocratic kingdom on the island of Crete. The "mistress of the labyrinth was the

true divine queen of Crete" (Kerenyi, 1976: 102). At Knossos a roofless dancing ground was spoken of as a "labyrinth" (Kerenyi, 1976: 94). The choreography of dances performed in honor of Ariadne consisted of "endless spirals or meanders" which led dancers to and away from the center of the labyrinth (Kerenyi, 1976: 96), just as the sun performs a spiral dance (according to ancient Minoan astronomy), decreasing the radius and number of steps in its circular orbit-dance as it approaches the north star, the "One," in winter, and increasing its radius in the multiplicity and fertility of summer.

Ariadne is also a mother, and gives birth to various Dionysian children (Kerenyi, 1976: 108), as does Demeter, who is virtually interchangeable with Ariadne. Her son is conceived through the death of her husband-phallus (loss of erection following orgasm), and is destined to take his father's role as Ariadne's lover. Time is thereby wrapped around into an incestuous, self-devouring circle which Erich Neumann (a student of Jung's) calls the "Great Round."

Conception and birth through death, particularly the conception of a son through his father's death, is a common mythological theme, and is readily understood once it is recognized as belonging to the phenomenology of the third stage of perinatal experience as described by Grof (1976, 1980, 1985) in his psychedelic research. The experience of being born is very much like dying.

A birth in death is something that must be termed 'mystic' in the ancient sense, since the Mysteries of Eleusis revolved around such a birth. How much more 'mystical' it was if Ariadne was impregnated by Dionysos, as Koronis was by Apollo, and if, like Semele, she gave birth to Dionysos! (Kerenyi, 1976: 108)

By virtue of this mystic birth Dionysus lives forever, or rather, is forever dying and being reborn. Death occurs at the center of the labyrinth, where one is devoured by the Minotaur. But Ariadne also resides at the center, giving birth to Dionysus once again. The center of the labyrinth is womb, tomb and vagina, the point at which libidinal pleasure reaches toward infinity, but also the point of darkest death, and finally, the point from

which new life emerges. The spiral dance to and from the center of the labyrinth is a snake coiled back on itself and biting its own tail, a snake which both devours and begets itself. It is the Great Round. It is zoë, indestructible life. Zagreus (alias Dionysus)

visits his hidden daughter in a cave, and she bears him to himself as his own son. The 'mystic' feature which we have presupposed in the relationship between Dionysos and Ariadne here appears in an archaic myth in which generation and birth never go beyond the same couple. Taking his mother or daughter to wife, the son or husband begets a mystic child who in turn will court only his mother. To such involvements the snake figure is more appropriate than any other. It is the most naked form of zoë absolutely reduced to itself. (Kerenyi, 1976: 114)

The religious symbolism of ancient Crete points back to Paleolithic shamanism and forward to the institution of kingship. Starhawk (1979)--who leads a coven of witches in San Francisco--has emphasized the importance of the symbolism of two crescent moons, one waxing and one waning, in Medieval and contemporary witchcraft, and noted that it is found already among Paleolithic hunter-gatherers. Sometimes the two crescent moons appear as the horns of an animal. Dionysus was a horned god too, and in this respect is clearly related to Paleolithic shamanism.

The image of two crescent moons is another variant of the archetype of the Great Round. The waning moon indicates death and the waxing moon indicates rebirth. In Egypt the waning moon will be personified by Osiris, and the waxing moon by Horus. Sometimes Dionysus is paired with Apollo, Dionysus taking the role of the dark twin, and Apollo the role of the waxing moon. But in the myths cited here Dionysus retains his dual aspect as father *and* son.

Kerenyi (1976: 104) does not doubt the lunar character of Ariadne. Coins from Knossos juxtapose the image of Ariadne with the twin image of waxing and waning crescent moons. But added beside the crescent moon on some of these coins is found a quaternary structure, forming the image of a mandala. On the reverse side of these coins is found either a goddess crowned with a wreath of grain--representing either

Persephone, or Demeter, or Ariadne--or the Minotaur. Ariadne and the Minotaur reside at the center of the labyrinth, so it is not surprising that the quaternary structure on these coins is a labyrinth design.

Coins from Knossos dating from the fifth century B.C. on show a strange labyrinth design: it consists of four meander patterns joined like the wings of a windmill or the four arms of a cross. (Kerenyi, 1976: 104)

The connection between Ariadne on one face of the coin and the labyrinth sign on the other is made still clearer when the meander quaternion embraces a sickle moon. (Kerenyi, 1976: 105)

In agricultural societies based on the cultivation of grain the crescent moon becomes a sickle. Dionysus is a stalk of grain which gives life to the community by being cut down at harvest time. In early Neolithic kingdoms the king is associated with Dionysus and is sacrificed in dire times in the expectation that his death will regenerate the life of the community. In the kingdoms of the ancient Near East the king will enact, during an annual New Year ritual, a mock death, followed by a period of Saturnalian chaos, preceding the king's rebirth, coronation, and the re-establishment of order in the state. Perry (1953, 1966, 1974, 1976) believes that these rituals possess archetypal themes which are also expressed in schizophrenic psychosis, LSD induced psychosis, and Christian mystical experience. Following the king's coronation, Perry says, order is re-established in the cosmos by dividing it into four quarters, forming a mandala. The center is the place of the king's death but also his throne and the source of all order and power in the cosmos. Through the center runs the *axis mundi* which connects the profane world with the sacred domains above and below. The king, like the shaman and the epic hero in Greek tragedy, takes on the burden of ritual death and rebirth, providing a conduit which connects the sacred with the profane and infuses the profane with life, power and order.

The division of the world into four quarters occurs, Perry says, in the later stages of the psychotic process, after the psyche has been restructured and a new, stronger ego has been established. The king's labyrinthine dance to the center of the cosmos is



successful only if he makes the "*decisive turn* in the center, where one was obliged to continue the circuit" (Kerenyi, 1976: 96), completing his dance in quaternary form as he proceeds out from the center. The presence of a *star*, representing the first Cretan *king*, at the center of the labyrinth on the coins from Knossos dating from the fifth century B.C. on clearly suggests that the quaternary structure of the labyrinth found on these coins represented the king's power and the order of his state. The story told by the coins from Knossos

became still more complete when astronomical signs were added beside the four meander patterns: one or two sickle moons--one waxing and one waning--and in the middle, inside the labyrinth, a star. 'Minotauros,' 'the bull of Minos,' was not a true name. For the inhabitant of the labyrinth the names 'Asterios' and 'Asterion' have come down to us, both synonymous with *aster*, 'star.' They also became names of the first Cretan King. (Kerenyi, 1976: 105)

The star found at the center of these coins is the North Star. The addition of the North Star to the original matriarchal, lunar representation of *zoë* and of kingship is significant and can be attributed to the rise of a patriarchal culture and psychology. The distinguishing characteristic of the North Star is that it, unlike all other celestial bodies, does not "dance." The North Star does not follow an orbit, and so its light is never extinguished as is the light of all other celestial bodies when they pass below the horizon. The North Star shines forever, never moving from its fixed position in the sky.

In the matriarchal version of the myth Dionysus is indestructible not because his life is never extinguished, like the light of the North Star, but because he is always reborn after dying, like the light of the moon. And it is Demeter--the Great Mother--who eternally gives birth to him. In the patriarchal version of the myth Dionysus (or his equivalent) is eternally reborn, not from the Great Mother, but from an eternally potent phallus, as represented, for example, by the North Star. This is why, in the psychologically patriarchal culture of ancient Egypt, Horus, the rising sun, is born without a phallus, or rather, with a wooden cult phallus. The real phallus, the phallus of his sacrificed father Osiris, remains

in the underworld, there to eternally bestow life upon Horus.

It is now abundantly clear that the Horus King no longer acts the part of a temporary fertility king under the dominance of the Earth Mother; he has become the ever-fruitful patriarch who continually fertilizes the earth and reigns over its progeny. (Neumann, 1954: 248)

In the matriarchate, death and resurrection occurred on the same earthly plane; death meant the cessation of fertility, and resurrection meant the reappearance of living vegetation. But both poles remained bound to the rhythm of nature.

With Osiris, however, resurrection means realizing his eternal and lasting essence, becoming a perfected soul, escaping from the flux of natural occurrence. ... he is conjoined to the father, the everlasting and unchanging spiritual father who rules over the spirits. Like him, he lasts forever ... his power is grounded in the higher father and no longer in the lower mother.

We can now understand why it is the *dead* Osiris who begets Horus. This is a primitive, symbolical way of expressing spiritual generation. It is not an earthly generation: the father is the mummy with the long member or, as another image puts it, the scarab with the phallus, eternally potent. (Neumann, 1954: 249)

It is *this* understanding of *zoë* (the sacred phallus)--as that which never dies rather than that which is eternally reborn--which Plato relies upon in the *Phaedo* to prove the immortality of the soul through the possibility of equating *psyche* with *zoë*.

The Greek word *physis* resonates with "growth," "birth," "becoming," and "matter." The North Star is not physical, and does not belong to Nature, because it is not born. The North Star does not sink below the horizon and is not reborn from the Earth (that most material of all bodies) as even the sun must be each morning. The North Star enjoys eternal life without death.

The North Star is God. When Nietzsche says that he can only believe in a god who would give birth to a dancing star, he is referring to Ariadne, mother of the labyrinth, who gives birth to her son and consort Dionysus. Nietzsche cannot accept the divinity of the North Star, because it does not dance. For Nietzsche, "God" is dead.

The North Star is Nous. Nous is eternal consciousness. But for Nietzsche there is no eternal light, no eternal consciousness. Consciousness is not creative and original,

but is born from darkness, from the womb of Nature.

Tragedy belongs to the world of the matriarch. It tells us that consciousness, represented by the epic hero on the lighted stage, is not original. The epic hero, Nietzsche says, is a second order reflection of the suffering of Dionysus. The dramatic actions of the epic hero are born out of the spirit of the chorus and can never be understood by themselves. The tragic chorus, in turn, is an imitation (re-enactment) of Nature, of Physis, of Demeter eternally giving birth to Dionysus.

Consciousness, which is represented by the dramatic scene on the tragic stage, is not, I am asserting, an autonomous, self-originating domain of experience. The ideal of reason, which seeks to isolate a domain of thought from anything outside itself, is impossible, and unnatural. The distinction between *reasons* for believing (sound arguments) and psychological motivations is correct insofar as it is better to hold beliefs because you have sound arguments for them than just because they feel right. But the distinction is false if it is understood to be an ontological distinction between two kinds of things, such as the distinction between *Nous* and *Psyche*. A "reason" to believe something is the same sort of thing as any other psychological motivation, albeit a better motive to believe something than ignorance or personal prejudice. Logical reasoning does not take place out of time or nature, but is merely a particular kind of psychological process, embedded in other psychological processes such as emotion. The insistence by the founders of modern academic philosophy that logic be separated from psychology (any use of psychology in philosophy risked the fallacy of "psychologism") was an error. Consciousness, on the theory proposed here, must be understood as the product of an embodied process, not as the reflection of an unmoving point (or circle) detached from Nature. Nothing exists beyond the dance.

Plato belongs to the world of the patriarch. The dance of physis became, in his hands, an imitation of an unmoving circle of intelligence, of *Nous*. Socrates, wearing the mask of Euripides, killed tragedy by trying to make consciousness its creative source.

## Euripides

must often have felt as if he had to bring to life for drama the beginning of the essay of Anaxagoras: 'In the beginning all things were mixed together; then came the understanding and created order.' Anaxagoras with his '*nous*' is said to have appeared among philosophers as the first sober person amid a crowd of drunken ones. Euripides may have conceived his relation to the other tragic poets in terms of a similar image. (Nietzsche, 1967a: 85)

Plato did for cosmology what Euripides did for tragedy. Each turned the world upside down by grounding it on *nous* instead of *physis*.

The fundamental mistake is simply that, instead of understanding consciousness as a tool and a particular aspect of the total life, we posit it as the standard and the condition of life that is of supreme value: it is the erroneous perspective of *a parte ad totum*--which is why all philosophers are instinctively trying to imagine a total consciousness, a consciousness involved in all life and will, in all that occurs, a 'spirit,' a 'God.' But one has to tell them that precisely this turns life into a monstrosity (Nietzsche, 1967d: # 707)

Consciousness, Nietzsche (1954a) says, consists entirely of tropes, of "monsters." The death of God means that we must undo these tropes to discover *physis* as the birthplace of *nous*. We have metonymically substituted the effect for the cause, we have taken consciousness, which is an effect of life, as the cause of life (Nietzsche, 1954b: 492-501).

In ancient Egypt Ptah was the god of the North Star. Meyerowitz (1960), who lived for many years among the Akan, argues that the Akan kingdom of West Africa--like many other kingdoms of Africa--can be traced back historically to ancient Egypt, and she draws numerous analogies between the two cultures. In particular the god Odomankoma Bore-Bore is the Akan name for the Egyptian god Ptah. "Ptah, who was unmistakably the god of an originally patriarchal people" (Meyerowitz, 1960: 70), was also the divinity of the North Star (Meyerowitz, 1960: 65). Odomankoma, too, has his seat or throne at "the Pole star with which he was identified." (Meyerowitz, 1960: 59).

In the matriarchal view the king obtains new life by uniting with the moon-mother-goddess. Like the moon itself, the king is reborn by dying. The light of the moon is the

energy of life. In Egypt this energy was called "ka." Among the Akan it was known as "kra." By uniting with the moon the king's supply of ka or kra was restored. In the patriarchal view, on the other hand, the king obtains new life from a source of light which never wanes, such as the North Star, or, as in Egypt after it was discovered that the sun is not extinguished every evening, the sun.

Odomankoma's title *Nnammere-son* refers on the one hand to seven circumpolar stars associated with the Pole star, and on the other hand to the seven planets (Meyerowitz, 1960: 59). Among the Akan the introduction of the god Odomankoma meant that the king would continue to receive his *kra* from the moon-mother-goddess but that he would receive another type of energy, the *sunsum*, from the seven circumpolar stars and the seven planets. Meyerowitz (1960: 60) suggests that the *kra* now represented "the unconscious psyche, the *id* of psychoanalysts, as opposed to the *sunsum*, the ego." There is great significance to this distinction because it means that a separate creative source apart from the unconscious (*physis*) was recognized with the introduction of Odomankoma among the Akan and of Ptah in ancient Egypt. Odomankoma (and the same is true for Ptah)

has no part in the *kra*, or life-giving power, of the Universal Genetrix, the supreme Mother-goddess Nyame; nor does he personify her manifestations, but is considered as an independent god in his own right. He is also a creator; but whereas Nyame brought life into being by giving birth, he used his mind and his hands and was envisaged as a divine craftsman or artificer. He created the world by carving or hollowing it out (*bore-bore*) from an inert substance devoid of *kra*. (Meyerowitz, 1960: 59)

In Egypt Ptah was associated with the fire-drill (Meyerowitz, 1960: 64). The Greeks identified Ptah with the fire needed by the metal smiths (Meyerowitz, 1960: 64). The fire-drill is the phallus boring into the vagina, producing sexual heat and fertilizing the womb. By spinning the fire-drill with his hands and boring into a block of wood a man (fire making was always a masculine activity) could create a fire. Thus the North Star held stiff and erect at the center of the spinning cosmos would produce the sun, which is a

large fire (Meyerowitz, 1960: 65). Ptah, like Osiris, was the transcendent phallic source of life. By 2800 B.C., however, it was discovered in Egypt that the North Star was not absolutely motionless but moved slightly over the course of the year (Meyerowitz, 1960: 67). This was taken as evidence that Ptah had died, "although the old concept of him as creator or 'father' of the visible sun never became quite obsolete." (Meyerowitz, 1960: 67). The "discovery" at the same historical date as Ptah's death that the sun "was eternal and not created anew each morning" (Meyerowitz, 1960: 67) allowed the Sun-god to take Ptah's place as the transcendent phallic source of life.

Now all this is extremely relevant to a study of Plato, because Ptah-Odomankoma is Plato's Craftsman. The Platonic One is the North Star. *Nous* is the seven never-setting circumpolar stars circled around it. Plato, like the psychologically patriarchal Egyptians, believed that the source of consciousness was a phallus which transcended the Great Round of Nature.

Nowhere is the replacement of physis by nous as the creative source of life more clearly and revealingly expressed than in the writings of the philosophers who reflected on Plato's *Timaeus* in the 900 year period after it was written. Plotinus and Proclus, especially, make the North Star, or its philosophical equivalent, the generative center of the cosmos. In doing so they execute a monstrous inversion upon the wisdom of the mysteries.

*Physis* is birth, generation, growth, decay and death. *Physis* is all those material processes which occur without the aid of consciousness, reaching consciousness only at the last stage and as the final product of their activity. There is, Nietzsche says, no causality of consciousness (see, for example, 1967d: # 524). Consciousness does not produce itself. A previous state of consciousness does not cause a future one. Between our conscious thoughts there are innumerable events of which we are not conscious. Consciousness is a series of end-points in a network of inter-related processes which penetrate down into the body beyond the reach of consciousness. According to

Nietzsche consciousness is a tool invented by the body so that it can communicate with the external world. Consciousness, then, does not create anything, including itself. The belief that consciousness is creative is the belief in God, in *nous*. Nietzsche denies the existence of God because he denies that there is a consciousness behind all events, or that consciousness has created all things.

The womb and the generative process which occurs within it is a very suitable symbol and example of *physis* because this process occurs beyond the reach of any visual gaze and without the aid or guidance of any conscious intention, and yet is productive. The eye-hand system, in contrast, is a very suitable symbol and example of *nous*. It too is productive, but generally operates in conjunction with consciousness. In fact, the eye-hand system, as employed in gesture, tool use, and tool manufacture, seems bound up with the sort of active, focal, analytic, sequential consciousness which neuroscientists believe is related to the left-hemisphere of the brain. The eye-hand system probably developed over the course of many hundreds of thousands of years during which time men used gesture to co-ordinate group hunting activities, used finely articulated hand movements to manufacture arrowheads and other tools, and developed eye-hand co-ordination in the use of projectile weapons. Whereas only females possess a womb, hunting, particularly of large game animals, was an exclusively male activity.

At first glance there seem to be many similarities between matriarchal cosmology on the one hand, and Plato and his commentators on the other. For both the world is a labyrinthine dance of endlessly repeating loops and spirals. But, whereas Plato and his commentators locate the origin of the dance in *nous*, making the North Star the center and *choragus* (leader) of the choral dance of the cosmos, within the matriarchal world the cosmic dance is a uterine process, symbolized by the moon's monthly cycle.

For Plato and his commentators the *choragus* of the cosmos is a masculine figure who does not dance, and who was never born and will never die. The cosmic dance of the stars is, according to Plato and his commentators, a *pantomime* performed with hand

gestures by "God," or by the *nous* of the Craftsman, which sets the world-soul in orderly movement, which in turn sets the stars in motion. The rhythm of hand gestures is exactly the rhythm of speech. In fact hand gestures can carry the same message as speech, only in a different medium. The form of the signifiers is the same, only their content differs (detailed support for these claims is presented in chapter III). But the noetic pantomime is not merely a gesture, because the hand is also a tool maker and tool user. Plato's cosmic dance is the product of the Craftsman's *techne*.

I have emphasized the words "logos," "pantomimic," "gestures," "will" and "design" in the following passage from Plotinus to suggest that Plotinus understands the cosmic dance of the stars in terms of speech and the eye-hand system, both of which belong to "system Y."

Since the celestial revolution is sustained not by chance but by reason, by the *logos* that bears the stars along in their courses and operates throughout the Living Being, a harmony must therefore exist between what acts and what is acted upon, and a certain orderly design must link each thing to every other thing in such a way that when the heavenly bodies alter their configuration the parts of the cosmos lying beneath the celestial revolution have to adjust themselves from one arrangement to another. They are like the performers in an intricately woven choral-dance, the many who create a single *pantomimic* dance-play. ... The *will* of the dancer, however, looks to an end other than changing from pose to pose. His body, not his *will*, is what suffers these changes ... Consequently anyone with expert knowledge of *pantomimic* dancing may explain why in a particular pose one limb of the body is raised high, another bent, one hidden from sight, another lowered. The *pantomimic* dancer does not choose to perform the dance in any other way, but in the dancing of his whole body, holds this pose because it is necessitated by the *design*, and performs it in that part of his body which furthers the dance-play towards its conclusion. ... The parts forming the poses are not the causal agents creating the *gestures*, but simply things acted upon, limbs put into place; the active cause is the being who *wills* the poses into existence. He acts upon corporeal parts which are to a certain extent distinguishable from himself; yet these are parts of his own body and so cannot be different from him. The Living Being is everything that comes into existence. Up there, among the stars, are its poses; down here, round about the cosmos, are the necessary consequences of these poses. (Plotinus, *Ennead* 4.4.33, translated by Miller, 1986: 140-141, emphasis added)



The dance of material things "down here" follows the commands of the divine *logos*. Because the stars, according to Plotinus, conform to the *logos* within the world-soul, they can be *read* as a written or visuo-spatially coded transcription of the *logos*, which is itself a temporally coded transcription of a timeless model or design apprehended by the Craftsman's *nous*. "Anyone with expert knowledge of pantomimic dancing," Plotinus says, "may explain why in a particular pose one limb of the body is raised high, another bent, one hidden from sight, another lowered," because these poses are "necessitated by the design" and further "the dance-play to its conclusion." Only the experts, the *priests*, possess the code which enables them to decipher the dance of the stars. The priests (philosopher-kings) ought to stand in the same relation to the ignorant many, as the will of a dancer does to his many poses. The world has been split into two hierarchically related planes of signifiers connected by a code. *Physis*, the material womb of the cosmos, has become the material of a writing pad, Plato's "receptacle." The cosmos has become a *text*, written by the hand, and guided by the will, of the divine-king of the cosmos, the *nous* of the Craftsman, and requiring interpretation (decipherment) by his priests on earth.

The dance of the labyrinth now circulates around a transcendent center, the Craftsman's *nous*, and its object, the eternal model of the cosmos, the *ideai* or "forms," which are themselves encircled around the One. Mediating between the transcendent *Nous* and the dance of *physis* "down here" is the *logos* of the world-soul, functioning as a system of *metaphors*, carrying noetic meaning down into the domain of material signifiers. The world has become a *Symbolic Order*. Just as internal sensations in the human body function as a system of signifiers linked by means of a code to external sensations which constitute a *second* level of signifiers functioning as a system of *metaphors* and mediating the transfer of meaning between internal sensations and objects, between internal sensations and transcendent Others, so too does the dance of *physis* now function as a system of signifiers linked by means of a code and a class of

philosopher-priest-kings (the state) to the divine *logos* which constitutes a *second* level of signifiers (more precisely, signifieds, because they possess only a temporal but not a spatial structure) functioning as a system of *metaphors* and mediating the transfer of meaning between *Physis* and the One, the north star, the sacred phallus in the sky.

But we, says Nietzsche, no longer believe that there is a conscious will behind all bodily processes, or behind the movements of the stars.

We can analyze our body spatially, and then we gain precisely the same image of it as we have of the stellar system, and the distinction between the organic and inorganic is no longer noticeable. Formerly, one explained the motions of the stars as effects produced by entities conscious of a purpose. One no longer needs this explanation, and in regard to bodily motions and changes, too, one has long since abandoned the belief in an explanation by means of a consciousness that determines purposes. (Nietzsche, 1967d: # 676)

We no longer believe that the world is a Symbolic Order. Consciousness--*any* consciousness--is merely a symptom of the body, of a degenerate, ill, domesticated herd-animal body. Consciousness is a second order effect of Nature. Formerly, one believed the world was a Symbolic Order because one was rounded up with others and caged in a patriarchal military organization known as the *state*. The cosmic dance was a cosmic march.

Plato replaced the phallus of Dionysus with the One. The One ejaculates the *ideai* which cause the generation and growth of *logos* in the human and cosmic (world) soul. *Physis* possesses both a spatial and temporal dimension. But *psyche* possesses only a temporal dimension. *Logos* is the *rhythmic* structure of *psyche*. The *logos* (rhythm) in the world soul is the principle and cause of movement in the heavens, just as the *logos* in the human soul is the principle and cause of movement in rational human speech and gesture. Rational human speech is an imitation of the movement of celestial bodies *in a different meter*. *Meter* is measured in the spatial dimension. Because the *rhythm* of rational human discourse is identical to the *rhythm* of the movement of celestial bodies

both imitate the same *ideai*. These *ideai* are apprehended by the Craftsman's *nous* and implanted in the world soul. In the *Timaeus* Plato informs us that the Craftsman "molded into spherical shape the plowland, as it were, that was to contain the divine seed; and this part of the marrow he named 'brain.'" (73c-73d).

Imitation is an act of love (*eros*). Psyche (soul) is female. The One ejaculates the *ideai* as the cosmos, and human beings (who are microcosms), revolve and gyrate around him. Philosophy is the love of the Good, the True and the Beautiful (the *One*). The cosmos is necessarily philosophical. But among humans only the philosopher-kings (and those who follow the philosopher-kings) circle around the One.

"There is a late tradition that Plato, 'the dramatist of the life of reason,' had written dramas in his youth, but when he discovered philosophy he burned them all." (Simon, 1978: 157). Plato may have burned his tragedies but his philosophy retains the essential structure of Dionysian ritual and tragic drama. Based on its Sumerian origin John Allegro (1970: 85) concludes that the word "dithyramb" meant "chant for erection of the penis." The satyr chorus circulates around the Dionysian phallus stimulating it to erection and ejaculation of those fluids without which the dance of life could not continue, just as Plato's cosmos circulates around the One spitting out ideai. At the beginning of the fifth century B.C. a satyric play followed the performance of three tragedies and

was performed by choruses of fifty singers in a circle, dressed as satyrs, part human, part bestial, and bearing before them huge replicas of the erect penis, as they sang dithyrambs. The Greek word *tragoidia*, 'tragedy,' has been connected with *tragos*, 'goat' ... In fact, the 'goat' reference of the word is secondary; its prime significance as the Sumerian original now shows, was a 'lament raised to stimulate fertility.' (Allegro, 1970: 85-86)

But Plato retained the structure of Dionysian ritual and tragic drama as a mirror retains the structure of a written text reflected upon it: by reversing it. Dionysus must live and die in accordance with the rhythm of birth and death in *physis*. Dionysus may never be symbolized by the North Star which is never born and never dies. As the sun, Dionysus

is reborn each morning, and each year following the winter solstice, from the womb of the Earth. As the moon, Dionysus is periodically born and dies in accordance with the menstrual cycle of the uterus. The chorus raises and destroys his power. He does not cause the chorus to move.

Plato's philosophy was yet another variation on the patriarchal mythology of the first civilization, the Sumerian. Small sedentary communities appeared in the Near East as early as 9,000 B.C. These people were "horticulturalists" (their economy was based primarily on the cultivation of small gardens) and were politically and religiously matriarchal. Around 3,500 B.C., however, state controlled irrigation, transportation and centralized redistribution systems in Sumer made large scale "agriculture" possible. The society which existed in Sumer between 3,500 and 3,000 B.C. bears all the markings of what Sagan (1985) has called a "complex" society and what Service (1975) called a "theocratic state." Such societies seem to be transitional by their very nature and to inevitably give way to a more stable political system characterized by the presence of writing, codified law, police, and political offices (recognized as distinct from the political figures who occupy those offices).

States depend on the successful management, planning and control of people, land and animals by literate, male bureaucrats. Success is measured by the fertility of people, land and animals. It follows that in state controlled economies fertility is dependent upon male figures, and so we can understand why fertility is represented in these cultures by the phallus.

By 1970 philological studies had already demonstrated, according to Allegro, that the ancient Sumerian language provides a bridge between the Indo-European languages and the Semitic language groups, making it possible to trace the names of gods, mythological characters, and plants in the Indo-European and Semitic language groups back to their common origin in the ancient language of Sumer. Therefore,

we should not look for a multiplicity of gods in the ancient world, but rather many aspects of the one (phallic) deity of fertility ... The god was the seed, his name and functions finding verbal expression in the one Sumerian phoneme U ... The god expressed his seed from heaven as a mighty penis ejaculating sperm at orgasm. It entered the womb of mother earth through the labia, the furrows of the land, and formed a great reservoir of potency in the heart of the world. There ... was thought to be the source of all knowledge, since the creative semen of the god was also the Word, acquisition of which by man gave him part of divine omniscience. (Allegro, 1970: 28)

"The creative semen of the god was also the Word" because the fertility of people, land and animals depended on the command of the divine-king and his bureaucratic communications network. Plato's philosophy is perfectly consistent with Sumerian mythology. Plato's transcendent One is the patriarchal phallus which is never born and which never dies but upon which all birth and death depends. From him (the phallus of Osiris, the north star which burns forever in the night sky) is born a son (Horus, the sun), the cosmic logos, who as divine-king and choragus of the cosmos performs a spiral dance into and out of the One, and whose dance is imitated by the divine-king of the human state. The patriarchal phallus is a tongue, its semen is spittle and breath.

Rain and wind is the heavenly father's ejaculate, spittle, word and breath. In general plants derive their existence from many elements, but mushrooms seem to derive their existence entirely from rain water. The *Amanita muscaria* or Fly-Agaric is an hallucinogenic mushroom which

has always been a thing of mystery. The ancients were puzzled by its manner of growth without seed, the speed with which it made its appearance after rain, and its rapid disappearance. Born from a volva or 'egg' it appears like a small penis, raising itself like the human organ sexually aroused, and when it spread wide its canopy the old botanists saw it as a phallus bearing the 'burden' of a woman's groin. Every aspect of the mushroom's existence was fraught with sexual allusions, and in its phallic form the ancients saw a replica of the fertility god himself. It was the 'son of God,' its drug was a purer form of the god's own spermatozoa than that discoverable in any other form of living matter. (Allegro, 1970: xv)

All etymological roads lead to Sumer, but in particular all chief god-names lead to the

mushroom cult of Sumer (also documented by R. Gordon Wasson, 1968).

Thus the principal gods of the Greeks and Hebrews, Zeus and Yahweh (Jehovah), have names derived from Sumerian meaning 'juice of fecundity,' spermatozoa, 'seed of life.' The phrase is composed of two syllables, IA (ya, dialectically za), 'juice,' literally 'strong water,' and U ... So, far from evincing a multiplicity of gods and conflicting theological notions, our earliest records lead us back to a single idea, even a single letter, 'U.' (Allegro, 1970: 20)

And to a single plant, the *Amanita muscaria*. To ingest the mushroom was to become fertilized by God's seed just as the Platonic world-soul is fertilized by the *ideai* ejaculated by the One, giving birth to the sun who leads the spiral dance of the cosmos. To ingest the mushroom was to provide the rhythm of the spiral dance with a metered matrix in which the rhythm could be enacted as a dance (as *movement*). To ingest the seed of God was to perform the spiral dance of the divine-king.

In the world of the matriarch the *source* of fertility is *not* a phallus. On the contrary, the phallus is itself a *product* of the fertility of the Great Mother. Quite opposite Plato, who believed that the son's "essence" was derived entirely from his father's seed, Paleolithic hunter-gatherers did not believe that seminal fluid contributed anything to the fertility of the womb. We gain some understanding of the significance of this opposition when we recall that the uterus undergoes a periodic death and rebirth in co-ordination with the cycles of the moon. The phallus undergoes death during orgasm but this occurs when the phallus is "dancing" in the vagina-uterus. By itself it seems to enjoy eternal life, and to exist outside the dance. In the world of the matriarch there is no transcendent phallus. Nothing exists outside the dance. There is no north star, no "God," no eternal consciousness, no "nous," no Other, no substantial ego, and no unmoving center of the cosmos. Matriarchal ego-consciousness is a series of disconnected points--aphorisms--which are born from and return to the womb of *physis*. The matriarchal *psyche* is the Dionysian phallus dancing within the Great Round. Its rhythm is not the rhythm of speech and hand gestures (not logos) but the rhythm of emotional, visceral and kinaesthetic

processes which are related to the limbic brain. Secondly, there is no rhythm distinct from meter and movement. Time and space, psyche and physis, within the Great Round, cannot be distinguished. Hence there is a choreography of the *soul* which is not only a choreography of the body. In a deep trance the rhythm of logos is so overwhelmed by the rhythm of physis that it becomes impossible to distinguish space from time. This dance, not logos, is the son of the God(dess): Dionysus, not the Crucified.

The basic myth of the Paleolithic hunter-gatherers was the myth of the Moon-Mother-Goddess, at once vagina, womb and tomb.

The Moon-Mother-Goddess was the goddess of love, but not of marriage. No male god ruled her. She became the mother of a son-lover, who she aggressively controlled. While he may be destined to die in ritual sacrifice, he, like the moon-cycles, will return as her son, though when he becomes her lover, he must die. Yet ... it is important to recognize that the *sacrifice* in ancient rituals functioned to renew or insure the power of the deity because that power depended on service given by humans to the deity. It is important to remember ... that it was the goddess herself who gave men their essential virility. (McCully, 1986: 14)

Plato on the other hand abhors incest. Patriarchy adds to the Goddess and her son-lover a third figure: Father. Father transcends the cycle of birth and death in the Great Round, which becomes a mere self-conscious reflection of His essence. Through identification with (or love for) Father we too can transcend the wheel of birth and death, attaining immortality.

The *ideai* ejaculated by the One during its intercourse with *psyche* generate a series of *metaphors* for these ideai within the logos of the souls they impregnate. Love bears meaning over (*meta pherein*) from the One to *psyche*. Love is the metaphorical dimension of the Symbolic Order, carrying messages across from the Other to the *logos*-encircled ego or *nous* (see Plato's *Symposium*, 202c-203c).

In Levi-Strauss' structuralist anthropology a kinship clan is taken to be a syntagmatic chain of signifiers. The incest taboo requires that intercourse or metonymical displacement within syntagmatic chains be based on a mutual exchange between two or

more clans such that the value or meaning gained by each clan in the exchange is identical. Now, *communication* occurs when two or more speakers share the same meaning or "value." Communication is the balanced (just) commutation (metonymical displacement) of syntagmatic chains. The table of values which allow us to equate the meaning-value gained by two or more syntagmatic chains through mutual metonymical displacements (dialogue) is the circle of *ideai*. The only legitimate form of intercourse is communication. Communication occurs when metonymical displacements within two or more syntagmatic chains may be read as *metaphors* of the *same idea*. Whereas intercourse *as such* is merely *metonymical* displacement within the lowest "horizontal" plane (a connecting and disconnecting of signifiers or chains of signifiers), in the case of *legitimate* intercourse the horizontal plane in which metonymical displacements occur is crossed by a vertical axis (the metaphorical dimension of the Symbolic Order) connecting the horizontal plane with meaning-values or *ideas* which do not themselves participate in metonymical displacements but rather regulate these displacements from above.

The sunflower is a heliotrope, facing the sun and turning with it from dawn to dusk. As the sun performs its annual spiral dance around the North Star, so do the *ideai* circle the One. And as the sun fertilizes the Earth, causing sunflowers to grow which follow the sun as their choragus, so do the *ideai* fertilize *psyche*, causing metaphors to grow within her which follow the *ideai* as their choragus. A paradigmatic chain is a series of equal valued syntagmatic chains held together by a common paradigm, archetype, or *idea*. Paradigms function as rules for comparing and equating the meaning-values of different syntagmatic chains and for regulating exchanges (corresponding changes) between them. For Plato the *ideai*, apprehended directly by *nous* and indirectly through metaphors by *psyche*, constitute a system of paradigms, regulating both the logos within souls and corresponding movements at the level of material signifiers (physis). These *ideai* share the common feature of providing a unifying center to a circular movement. *Their* paradigm is the One which provides a unifying center to the *ideai*.



Legitimate intercourse metonymically displaces signifiers for the sake of producing metaphors which are symbolic of the One. Legitimate intercourse does not desire metonymical displacement for its own sake. Legitimate intercourse is motivated by love for the One. Illegitimate intercourse on the other hand does not produce metaphors but is a senseless shifting about and exchange of signs. Illegitimate intercourse is idolatry, the love of *eidola*, of images without symbolic meaning. Illegitimate intercourse is the metonymical displacement and exchange of material signifiers, the connecting and disconnecting of material signifiers, without regulation by any paradigm. Sophistry, rhetoric and poetry are examples of idolatry. Philosophy on the other hand is the love of images which possess symbolic meaning. Plato believes the true *eide* are metaphors of the *ideai*. Nietzsche believes that the *ideai* belong to the domain of *eidola* (idols) and that the true *eidos* is the tragic mask which imitates Dionysus.

Philosophical love produces or generates a series of metaphors which imitate and "remember" the same paradigm, and in doing so maintain an identity through time despite metonymical displacements and exchanges. The cosmos is immortal because its soul is philosophical and remembers the One, whose identity is unperturbable. Love is the love of generation for the sake of attaining immortality.

'love, Socrates, is not, as you imagine, the love of the beautiful only.' 'What then?' 'The love of generation and of birth in beauty.' 'Yes,' I said. 'Yes, indeed,' she replied. 'But why of generation?' 'Because to the mortal creature generation is a sort of eternity and immortality,' she replied: 'and if, as has been already admitted, love is of the everlasting possession of the good, all men will necessarily desire immortality together with good--wherefore love is of immortality.' (*Symposium*, 206d-207d)

Love is the love of generation for the sake of maintaining the identity of the ego. Generation substitutes new signs for the old ones which have perished, maintaining identity through time when the new signs possess the same meaning-value as the old.

generation always leaves behind a new existence in the place of the old. Nay, even in the life of the same individual there is succession and not

absolute unity (Plato, *Symposium*, 207d)

For what is implied in the word 'recollection' but the departure of knowledge which is ever being forgotten and is renewed and preserved by recollection, and appears to be the same although in reality new, according to that law of succession by which all mortal things are preserved, not absolutely the same, but by substitution, the old, worn-out mortality leaving another new and similar existence behind (*Symposium*, 207d-208d)

Immortality is attained not by repeating past images, however (which would be a form of idolatry), but through the generation of images which imitate and "remember" the same archetype, through the generation of metaphors or *symbols*.

The division of signs into syntagmatic chains may be arranged hierarchically. Only at the highest level where the fewest divisions are made do we obtain syntagmatic chains which function symbolically as metaphors of *ideai*. Syntagmatic chains at lower levels do not imitate the *ideai* directly but imitate syntagmatic chains at a higher level.

A series of equal-valued metaphors circulate around an identical paradigm insofar as they each bear the same meaning. Depending on how the field of material signifiers is divided up into syntagmatic chains one will obtain a different series of metaphors. Not any division will do, however, because the series of metaphors obtained must circulate around an identical point. Each metaphor in the series must imitate the same paradigm if the generation of metaphors is to maintain the identity and immortality of the ego.

But now a paradigmatic series of syntagmatic chains may be taken as a single syntagmatic chain belonging to another paradigmatic series at a higher level than the first. To take an example from Copernican astronomy, the moon may circulate around the earth, but the earth in turn circulates around the sun. Returning to pre-Copernican astronomy, the sun performs a spiral dance on the surface of a cone whose apex is the North Star.

The solar cone is a hierarchy of paradigms. Each plane described by the sun's daily revolution is a paradigmatic level. As the sun approaches the winter solstice it climbs

the paradigmatic hierarchy, speaking in progressively more general terms. But before merging with the North Star, the sun reverses its course and heads south. The metaphors spoken on the day of the winter solstice directly imitate the ideai which circle around the One just as the sun circles around the North Star on the day of the winter solstice. The identity of the One is the final guarantor and model of the ego's identity and the immortality of its soul.

To be a man one must rise in a direction perpendicular to metonymical displacements through the Symbolic Order, mimicking the cosmos in its rise toward the north star in a spiral dance led by the sun (see *Symposium*, 210e-212a). To be a man one must take sense-perceptions (especially vocal sounds) to be symbols of something which is not a sense-perception.

to be a man one must understand the content of a general term, leaving the field of manifold sense-perceptions, and entering that in which the object of knowledge is unique and grasped only by reasoning. This process is a remembering (*Phaedrus*, 249)

Memory rises vertically along a paradigmatic series replacing old metaphors with new metaphors. And now we learn that to "remember" is to reason. Only *logos* survives the entire length of the journey to the winter solstice where the *ideai* are contemplated. Legitimate intercourse is not only communication or dialogue but *dialectics*.

"To derive a clear memory of those real truths from these earthly perceptions is not easy for every soul," particularly those who have formed "evil connections and turned to unrighteousness" (*Phaedrus*, 250)--particularly those who have engaged in illegitimate intercourse, performing metonymical exchanges not regulated by any *idea*. But "are we able to imagine another sort of discourse, a legitimate brother of our bastard?" (*Phaedrus*, 276). Yes we are, Plato says.

far more noble and splendid is the serious pursuit of the dialectician, who finds a congenial soul and then proceeds with true knowledge to plant and sow in it words which are able to help themselves and help him who planted them; words which will not be unproductive, for they can transmit their seed

to other natures and cause the growth of fresh words in them (*Phaedrus*, 276-277)

A word is itself only a biological (*bios*) shell. Unless it bears within it the seed of indestructible life (*zoë*) it will die without causing any further growth. Only metaphors contain within them the seed of indestructible life. Only metaphors bear within them the *ideai*, the ejaculate of the One. Only metaphors contain within them the power to generate new metaphors which substitute for old metaphors and thereby insure the immortality of the soul.

A metaphor is a debtor's note. Like a coin or note issued by a bank, we accept it in payment for other valuables only because we know we can go to the bank at a later time and exchange it for gold, the real good. This connection between metaphor and debt became extremely important in Nietzsche's philosophy, beginning with *On Truth and Lie in an Extra-Moral Sense*, and climaxing perhaps in *On the Genealogy of Morals* where God becomes a holy banker. Nietzsche was surely inspired by the following passage from Plato's *Republic*.

-- I will tell you, though only if you wish it, what I picture to myself as the offspring of the Good and the thing most nearly resembling it.  
 -- Well, tell us about the offspring, and you shall remain in our debt for an account of the father.  
 -- I only wish it were in my power to offer, and within yours to receive, a settlement of the whole account. But you must be content with the interest (=tokos = 'interest' = 'offspring') only; and you must see to it that, in describing this offspring of the Good, I do not inadvertently cheat you with false coin. (506e-507a)

Metaphors are debtor's notes. That unlimited semiosis of metaphors generated, ultimately, by the phallic One, and insuring the immortality of the soul, is now revealed as the means by which a debt is never forgotten. According to Plato metaphors which do not bear *ideai* within them are counterfeit coins. According to Nietzsche, all metaphors are counterfeit because the *ideai* are nothing more than metaphors worn from long use, effaced coins which *look* like natural pieces of metal possessing real and immediate value, as opposed to conventional and semiotic value, but which are even less valuable

than they were in their original condition because they have lost their exchange value.

At the heart of every metaphor, Nietzsche says, is an image. An image is a mask which hides and dissimulates Nature. But nature is Demeter eternally giving birth to Dionysus. Nature is a continuous flux. Apollo transforms the birth of Dionysus into a spectacle and in doing so creates the illusion of a spectator who transcends the wheel of birth and death. It is Apollo who creates the illusion of a phallic identity or substantial self-conscious ego subtending and causing the flux of existence. God--who is the ego of the cosmos--is the product of an illusory sheen painted over the surface of Nature. Thus we see how Nietzsche inverts the traditional patriarchal hierarchy between God and Nature by showing that God is nothing more than a false interpretation or codification--a counterfeit--of Nature.

Nietzsche has nothing against masks *per se*. Indeed most references to masks in Nietzsche's writing are positive. Nietzsche applauds those who wear masks in good conscience. The Apollonian comedy is a suitable companion to the Dionysian tragedy. Nietzsche's objection is toward Socrates who wears a mask only in bad conscience, for whom metaphors are debtor's notes marking one's guilt and deficiency in relation to a transcendent male god.

The belief in "God" is the belief that there is a consciousness (Nous) behind all events and that all events are *motivated*. The distinction between an event and its underlying motivation (consciousness) transforms every event into an *action* performed by a morally responsible ego. God, Nietzsche believes, is simply a projection of ego-consciousness into the cosmos (1954b: 494-495). Thus, his critique of ego-consciousness is the flip side of his announcement of the death of God. The difference between motivation and event appears when the will is frustrated and denied *immediate* expression. Then the will invents a *second* world, a thinned out and distorted reflection (a trope) of the first world (physis). This artificial world is the domain of ego-consciousness. It is based, Nietzsche says, upon *ressentiment*, upon a frustrated will to

revenge which is denied immediate expression but which hopes to express itself in action at some future time. Ego-consciousness is based upon the delayed expression of the will. Deferment is possible only because consciousness has developed a *memory* which allows it to retain its own past states. The difference between motivation and action is therefore a temporal difference. It is on the basis of this difference that the concept of causality is invented. Causality is the separation of cause and effect, doer and deed, ego and action (1967b: 58).

The concept of substance is derivative of the concept of the ego. The ego remains identical across a temporal duration because it has invented a memory to retain its frustrated will. Life, for Nietzsche, is a continuous (not discrete) flux (1974: # 112). Nothing remains the same. Identity is the mendacious invention of consciousness. On the basis of this concept of identity consciousness creates a system of exchange between equivalents. Reason is a process of exchanging equivalents, at bottom nothing but a barter system (1967b: 70). Man, however, is a sadomasochistic animal, his will seeks to inflict pain. Inflicting pain is worth much in the barter system consciousness has created. But consciousness requires a motivation for all actions. Moral culpability is the motivation for inflicting pain, which now takes the name "punishment," and, when self-inflicted (for ultimately it is better to inflict pain on oneself than on no-one at all) is called "guilt."

The sun is not, however, the offspring of the Good. And his dance is not performed in remembrance of his father, to whom he owes nothing. The sun does not proceed out of and return to the North Star, which does not exist. Rather the sun in its spiral dance moves in and out of the womb-tomb of the Earth-Goddess through the portals of her vagina. As the year approaches the winter solstice and as the sun approaches the North Star, the period of time spent out of the womb and away from the Goddess shortens. The rhythm of the sun's dance becomes progressively more simple and there is the fear of total darkness and annihilation. But the dance never stops. Either the sun reverses its course before reaching the utter simple unity and stillness of the North Star or the apex

of the solar cone functions as a turning point and therefore yet another step in the dance to and from the North Star. There is no "One."

The wellspring at Eleusis may have been a shamanic entrance into the underworld.

a shaman typically has a special hole or entrance into the lowerworld. This entrance exists in ordinary reality as well as in nonordinary reality. The entrance among California Indian shamans, for example, frequently was a spring, especially a hot spring. (Harner, 1980: 31)

Entrances down into the underworld commonly lead down into a cone shaped tunnel (Harner, 1980: 32) similar to what I have called the "solar cone." Compare the spiral dance of the sun, alternating between the light of day and the dark of night, to the following shamanic experience described by Harner.

Concentric rings of light and dark opened up around me and seemed to carry me along them. ... The alternating patterns of dark and light were faintly reminiscent of a glow caught between the ridges of a corrugated pipe. (Harner, 1980: 42)

Plotinus peers down a sacred wellspring too. But at the end of this tunnel is found the transcendent phallus. "We are always before the One," Plotinus writes at *Enneads* 6.9.8, but we do not always look toward Him. When we do, we sing in tune and in a state of divine possession "dance around Him an ecstatic choral dance."

In this choral dance one beholds the Wellspring of Life, the Source of Intellect, the first principle of Being, the Cause of Good, the Root of Soul. These do not lessen Him as they pour forth from Him, for He is not a corporeal mass. If He were such, His offspring would be perishable. But they are eternal because their Origin remains the same. He ... provides for us like a choragus ... [Near Him the soul] gains understanding ... Life in the world beyond is an activity of the intellect. And this activity, in the tranquil touching of the intellect and its source, engenders gods, engenders beauty, engenders justice, engenders moral excellence. For the soul is pregnant with all these when it has been filled with God, and this state is its beginning and its end. This is its beginning because it originated in God; and this is its end because the Good lies here (Plotinus, *Enneads* 6.9.9, translated by Miller, 1986: 221-222)

But Plotinus' vision of the sun's ecstatic spiral dance is a monstrous inversion of

trance experience. Proclus was correct that

all existing things stretch out towards the One with an inextinguishable longing, for it is the universal object of desire, unknowable and impossible to grasp. Thus incapable either of knowing or of seizing what they desire, all things dance around it in an agony like the pangs of childbirth. (*Platonic Theology* I.22, I 102, translated by Miller, 1986: 447)

But the One is the unity or lack of object relations such as we might experience in a womb. And the many proceed from and return to the One through a birth canal, not a penis. The "pangs of childbirth" belong to the third basic perinatal matrix (Grof, 1976, 1980, 1985). Speaking in terms of myth, the "pangs of childbirth" belong to Demeter giving birth to Dionysus. Speaking in terms of object relations theory, the spiral dance is an expression of our conflicts concerning individuation. Movement away from the apex of the cone expresses our desire for individuation and separation from Mother. Movement toward the apex of the cone expresses our desire for unity and identification with Mother. This spiral dance is re-enacted in countless ways--including discursive processes--throughout the course of our lives. But its primary model remains an emotional, visceral and kinaesthetic process. It is the Great Round of possible emotions, not *ideas* (this will be explained at length in chapter IV). Life in the world beyond is not an activity of the intellect (primarily) but an act of *affective athleticism* (emotional play). Speaking in terms of neuroscience, pantomime may be related to the left cortex, but trance dancing is based in the limbic brain.

All movements in the cosmos follow Chronos as their choragus. And Chronos has the shape of a spiral winding in and out from a central point (Miller, 1986: 449). But according to Proclus the god of time was named Chronos by those who "wished to speak of a certain 'choronoos' or 'choreuon nous,' which means 'dancing intellect.'" (Proclus, *In Timaeum* III 28, translated by Miller, 1986: 414). Chronos is a *metaphorical* condensation of dance and intelligence. Chronos mediates between Nous and Physis, imposing the structure of the unmoving Nous onto the dynamic structure of Psyche, which in turn is the



principle of movement in the material cosmos. Once again *physis* is situated at the bottom of a hierarchy with God (the One, the Good, etc.) and *Nous* located on top. Once again *physis* has become a writing pad, containing *coded* information about the structure of planes of existence above it. No longer an innocent dance, *physis* possesses symbolic meaning and participates in an exchange economy regulated from above.

To sum up: this chapter has developed the contrast between a Nietzschean-matriarchal philosophy and a Platonic-patriarchal philosophy on the basis of the opposition between God and Nature or between *Nous* and *Physis*. For both philosophies the cosmos is a spiral dance. They differ according to their accounts of the origin of the dance. Nietzschean-matriarchal philosophy locates the origin of the dance in *physis*, which is feminine. Platonic-patriarchal philosophy locates the origin of the dance in God--a transcendent phallus--and his *nous*. The death of God entails a re-evaluation of the origin of the dance, and the return of the Goddess along with her consort Dionysus.

### Chapter III

#### System X and System Y

This chapter is divided into three sections, each sharing the common purpose of describing and distinguishing between systems X and Y. Whereas the first section of this chapter, however, remains within Nietzsche's philosophical discourse, the second and third sections extend out into the scientific discourse of modern neuroscience. I contend that Nietzsche's philosophy is not only consistent with modern neuroscience, but that it provides a needed conceptual framework which integrates and makes sense out of more limited empirical investigations, and might even serve to guide them.

Although scientific investigations are generally confined to small, isolated parts of the world, just as the number and domain of variables in an experiment are limited and controlled by the scientific laboratory, in fact it is only within the scope of grand visions that any laboratory can or ever has been built. Contemporary neuroscience has its great visionaries too. The most important of these for the purposes of this work is Paul Yakovlev. However, Paul MacLean's "triune" theory of the brain, which bears comparison to Yakovlev's tripartite division of the body, of the nervous system, and of motility, also attains a breadth of scope approaching that found within the best philosophical writings and provides support for the thesis being developed here. Admittedly, even Yakovlev's neuroscientific theories do not achieve the aesthetic excellence of great philosophical works such as Nietzsche's. But neuroscientific theories such as Yakovlev's add a valuable empirical dimension to Nietzsche's philosophy without disrupting the conceptual beauty of Nietzsche's vision.

MacLean and Yakovlev similarly divide the nervous system into three sub-systems. The second and third of these sub-systems correspond to what I am calling, respectively, system X and system Y. In MacLean's theory (see, for example, Isaacson, 1982), system X is the "paleomammalian," "limbic," or "visceral" brain and system Y is

the neomammalian brain or the neocortex. In Yakovlev's (1970) theory, system X is the "intermediate neuropil" of the nervous system. In mammals this is the extra-pyramidal nervous system centered in the limbic cortex, and it is responsible for "ectokinetic" or emotionally expressive movements. System Y is based in the "superficial neuropil." In mammals this is the pyramidal nervous system, and it is responsible for "teleokinetic" or instrumental movements.

The division between the first and second sub-systems identified by MacLean and Yakovlev is blurred by the dependence of "feeling" states produced by their second sub-system ("system X") upon visceral-autonomic processes regulated by their first sub-system. This is why, especially in chapter IV, I will include MacLean's and Yakovlev's first sub-system within "system X." Isaacson (1982: 240), in a review of MacLean's triune brain theory, writes that the paleomammalian or limbic brain is "nature's tentative first step toward providing self-awareness of the internal conditions of the body." Nature is an autonomic and somatovisceral process within the body. It is a process which necessarily alternates between positive and negative poles of energy expenditure (ergotropic movement) and energy conservation (trophotropic movement). This process is immediately imitated or re-enacted by emotional experience or "feeling states," just as the tragic chorus is an immediate imitation of *physis*. Both sub-systems are harmonic oscillators that move between polar opposites until they reach equilibrium or homeostasis.

MacLean (1955: 363) believed that "there may be a neuroanatomical substratum for the reciprocal innervation of 'feeling' states that compares to the reciprocal innervation of muscles." Similarly, Kestenberg (1965a: 33), a Freudian psychoanalyst who used Labanian dance notation to study the development of movement, thought that a "comparison of motor rhythms with rhythms of autonomic responses (heart rate, blood pressure, respiration, etc.) would be helpful in examining the possibility that there is a central regulation of rhythms specific to processes of discharge of particular component drives, as hinted by Freud and Breuer." Just as the body's muscular system is divided

into agonistic and antagonistic muscles working in reciprocal balance with one another, the visceral-autonomic system is divided into an ergotropic, sympathetic side and a trophotropic, parasympathetic side (Gellhorn and Loofbourrow, 1963). The parallel between somatovisceral adjustments controlled by the reticular system within the "reptilian" brain (MacLean's first sub-system) and feeling states controlled by the limbic cortex (MacLean's second sub-system) should "lend insight into the puzzling vacillation and ambivalence of 'feeling' states that are met with in psychiatry" (MacLean, 1955: 364), because somatovisceral adjustments, such as muscle innervations, follow repeating rhythmic patterns. It is this parallel between internal bodily processes and system X which places system X on the side of nature or *physis* rather than on the side of culture, history, morality, and custom. And this is why Nietzsche (1967a: 59, 64) tells us that the satyric chorus (system X) belongs to nature, but not to the state, to "society," or to history.

System Y may imitate system X in the way that system X imitates MacLean's and Yakovlev's first sub-system, particularly in trance states, but it is system Y that is imitating system X, not the reverse. For the most part Plato's philosophy describes system Y as distinct from system X, but in trying to show that system X is an imitation or "shadow" of system Y (rather than that system Y is an imitation of system X), he reverses the true order of imitation and attributes certain structures of system X to system Y. The Platonic proportion  $a:b::c:d$  ("a is to b as c is to d," or mathematically,  $a/b=c/d$ ), for example, is in fact modelled on the reciprocal balance of muscles around the fulcrum provided by a joint, but Plato locates it in the noetic (intellectual) realm of the forms. Similarly, trance states, which in fact are produced by system X, often serve in Plato's dialogues as mere metaphorical devices or "shadows" of the type of noetic reasoning he proposes we engage in and that he believes is primary or original.

But, in general, system Y--which Nietzsche calls "consciousness"—bears no resemblance to system X. System X *imitates* and *re-enacts* nature. System Y, on the other hand, appears to stand in *symbolic* relation to God (the ultimate paradigm). The

difference between system X and system Y therefore corresponds to the difference between God and nature. But system Y does not belong to God in the way that system X belongs to nature. A symbolic relation is not an imitation or re-enactment, but a *codification*. System X re-enacts nature by performing a dance analogous to the dance performed by nature (internal bodily processes). System Y also dances, and to some extent it can--particularly in trance states--imitate system X, becoming a second order imitation of nature. But because God does not dance there is no basis for analogy between God and system Y. System Y does not re-enact God, and in general it stands, on the one hand, in symbolic relation to Others, and on the other hand, in symbolic relation to Nature (the hidden Referent of all code systems).

System Y is a process of inscription, or of writing. Writing produces *symbols* through the manipulation of external objects. In contrast to system X which turns the body on itself, system Y is *intentional* both in the sense that it is directed toward representations of external objects and in the sense of being a volitional, instrumental act directed toward some future goal.

System Y produces a text or code which, unlike system X, possesses no immediate face value. System Y must be deciphered and, like a mask, removed from the reality it hides. Removing the mask from God's face demonstrates that God--the transcendent Other or Object--does not exist independently of the text. God is a moral-optical illusion (Nietzsche, 1954b: 484) produced by, and projected out from, the text itself, like the characters we imagine behind a movie screen. System Y, therefore, is "not a dead mask that one could place on an unknown x or remove from it!" (Nietzsche, 1974: 116) because without the mask, there is no "x." System Y is a *pantomime* or dance of visual forms, and no unmoved Being exists outside this dancing dreamworld. The appearance of God, of the ego, or of any substantial object, is counterfeit, because you can never cash it in for the real thing. But, on the other hand, removing the mask from the face of *nature* reveals system Y as a *symptom* of the *body*, or, as I am calling it,

system X--not an unmoving point, but yet another dance.

As the outward surface of transcendent objects or Others, system Y belongs to a communal space, or as Nietzsche puts it, to "the herd." It is essentially a *social communication* system. And it provides the basis for *morality* by providing me, also, with an outward surface--a *mask*--by which I appear to Others. As a "moral" ego I act for the sake of how I "appear" to or affect Others.

Nietzsche provides a genealogy and physiology of consciousness (system Y) which reverses the Platonic-patriarchal derivation of *physis* (system X) from *nous*. In the second section of this chapter I will describe system X and system Y in neuroscientific terms which correspond perfectly with Nietzsche's description of nature and consciousness. And in the third section of this chapter I will present a neuropsychological account of the development of system Y which corresponds perfectly with Nietzsche's genealogy of consciousness.

This chapter accomplishes three things. First, it further develops Nietzschean-matriarchal philosophy through the development of the neuropsychological concepts of system X and system Y. Second, it further develops the contrast between Nietzschean-matriarchal philosophy and Platonic-patriarchal philosophy through the development of the contrast between the neuropsychological concepts of system X and system Y. Third, it is proposed in this chapter that although modern neuroscience may be historically related to Platonic-patriarchal philosophy, particularly with regard to some of its "methods" (if indeed science is "methodological" as Descartes supposed), the *results* of modern neuroscience argue in favor of Nietzschean-matriarchal philosophy and against Platonic-patriarchal philosophy which turns out to be a vain egocentric, logocentric delusion hiding our "paleomammalian" brain. Modern neuroscience is Nietzschean. It reminds us that we are animals and puts the last nail into God's coffin.

### A. Nietzsche's Genealogy and Physiology of Consciousness

The death of God means that consciousness too must be born from the Earth or from nature. Consciousness is a surface or mask behind which we find, not God, not an eternal mind possessing absolute unity--but the birth trauma. In the Nietzschean-matriarchal world everything comes to be through a birth canal.

In Platonic terms and at the macrocosmic level what Nietzsche calls "consciousness" and what I am calling "system Y" is the world soul and the accompanying gestural pantomime of the stars, all following the rhythm of the *logos*. Now, there are two alternate interpretations of consciousness. According to the Platonic-patriarchal interpretation, consciousness is the signature of the Craftsman's *nous*, which produces the cosmos in the way that a writer produces a text. The Craftsman's *nous* is equivalent to what Nietzsche calls "God." At the microcosmic level system Y is the rational human soul together with rational speech and a gestural pantomime. According to the Platonic-patriarchal interpretation of human consciousness, consciousness circulates around an unmoving center which we call the "ego." The ego is related to the individual human in the same way that God, or the Craftsman's *nous*, is related to the cosmos.

According to the Nietzschean-matriarchal interpretation, God at the macrocosmic level, and the ego at the microcosmic level, are fictions (admittedly, *necessary* fictions) produced together with conscious processes by nature and projected out from the internal body. It is wrong to interpret God or the ego as the meaning of conscious processes. The correct interpretation of consciousness is a *physiological* one, according to which consciousness stands in symbolic relation, not to some transcendent God or ego, but to *physis*--to system X. God is a misinterpretation of a physiological state (Nietzsche, 1954b: 498-499). We have incorrectly inferred from our possession of reason (= *logos*, language) that "we must once have been at home in a higher world (instead of a very much lower one, which would have been the truth)" (1954b: 483).

In the Platonic-patriarchal view, both the ego's nous at the microcosmic level, and the Craftsman's nous at the macrocosmic level, possess an intentional relation to the unchanging and unmoving *ideai*. To the extent that the ego's intentions, understood both cognitively and volitionally, are oriented towards the unchanging and unmoving *ideai*, understood both as forms or ideas and as moral principles, the ego remains the same beneath (or above) its various and varying psychological expressions.

Therefore, according to the Platonic-patriarchal interpretation of consciousness, every movement within system Y is a symbolic expression of an intention. At the macrocosmic level, the dance of the stars is interpreted as an expression of the intentional will of the Craftsman (God). Formerly, Nietzsche says, a conscious purpose or intention was interpreted behind all physical movements.

We can analyze our body spatially, and then we gain precisely the same image of it as we have of the stellar system, and the distinction between the organic and inorganic is no longer noticeable. Formerly, one explained the motions of the stars as effects produced by entities conscious of a purpose. One no longer needs this explanation, and in regard to bodily motions and changes, too, one has long since abandoned the belief in an explanation by means of a consciousness that determines purposes. (Nietzsche, 1967d: # 676)

Opposite the Platonic-patriarchal view which posits a conscious intention behind all physical movements, the Nietzschean-matriarchal view posits physical movements behind all conscious intentions. Though intentions seem to precede and transcend conscious actions, they are in fact produced together with those same actions.

Consciousness lies on the surface covering an animal's body. Intentions produced on the surface of an animal's body project objects out and away from the animal's body into an asymmetrical, causally organized space. Therefore, we have not successfully interpreted a conscious action by reading an intention behind it. Rather, intentions are produced together with conscious acts and so they *also* require interpretation. We immoralists, Nietzsche says, have the suspicion that everything about an action



that is intentional, everything that can be seen, known, 'conscious,' still belongs to its surface and skin--which, like every skin, betrays something but *conceals* even more. In short, we believe that the intention is merely a sign and symptom that still requires interpretation--moreover, a sign that means too much and therefore, taken by itself alone, almost nothing. We believe that morality in the traditional sense, the morality of intentions, was a prejudice, precipitate and perhaps provisional--something on the order of astrology and alchemy (Nietzsche, 1966: 44-45)

We must "understand moral judgements as symptoms and sign languages which betray the processes of physiological prosperity or failure." (Nietzsche, 1967d: #258). Moral judgements, which project intentions behind all actions, constitute a mode of interpretation of physiological processes "of the same worth as astrology" (Nietzsche, 1967d: #258).

Platonic-patriarchal cosmology is astrological (astro-logos-ical) because it interprets *nous* behind the physical movement of the stars. Similarly, Platonic-patriarchal psychology interprets a willful or intentional ego behind personal actions. In that respect Platonic-patriarchal psychology resembles astrology. But astrology is a false interpretation of phenomena. Therefore according to Nietzsche both Platonic-patriarchal cosmology and Platonic-patriarchal psychology are false interpretations of the phenomena.

"When we love a woman," we prefer not to think of all that lies under her skin "on account of all the repulsive natural functions to which every woman is subject." (Nietzsche, 1974: 122). Instead, we would rather believe that a human being is nothing but "*soul and form*." In the same way, those who worship God prefer not to penetrate below the surface of natural appearances in general, but would rather believe that nature is an expression of God's will. And also in the same way, those who worship the ego prefer not to penetrate below the surface of consciousness, which is also the skin of a woman, but would rather believe that every conscious act is an expression of the ego's unperturbable will. "The human being under the skin" is a "blasphemy against God" (1974: 122).

It is not that the ego and a space filled with external objects do not exist, but that they exist only as necessary fictions produced and projected out from the surface of our bodies. As phenomena, they exist, but they are not original. They are rather products, symptoms, and instruments (perhaps very useful instruments) of internal bodily processes which are initially expressed by emotional movements on the surface of the body and only secondly expressed through objects projected by intentions emanating from that same surface. The death of God means that we no longer believe that conscious acts are products and symbols of God, of the Craftsman's nous, of the ego, or of objects. Rather we believe that the ego, and God as a totalizing being behind all change in the cosmos, and objects, are, together with conscious acts and processes, symbols of nature and of system X. Thus, the order of interpretation is reversed. God, ego, and object are not the final meaning of our symbols but are themselves symbols requiring interpretation. To unravel and decipher their meaning is to penetrate below the surface of the body, rupturing Baubo's hymen by means of a process which is at once both sexual and violent (see Nietzsche, 1974: 38). Truth is nature and she is unveiled only in Dionysian ecstasy.

Passing through Baubo's hymen we discover that nature is an eternal mother (Nietzsche, 1967a: 104) and rejoice in the sexual omnipotence of nature (1967a: 61). The psychology of the mysteries and of the orgiastic gave Nietzsche the "key to the concept of *tragic* feeling" (Nietzsche, 1954b: 562), because it is in ecstasy that the pain of death and destruction is united with sexual pleasure and the joy of birth and creation. Below the surface or skin of consciousness we discover the birth trauma, a process in which we experience death and destruction, sexual intercourse, and birth. This is the secret of the mysteries, the ultimate though hidden meaning of all symbols:

*Eternal* life, the eternal return of life; the future promised and hallowed in the past; the triumphant Yes to life beyond all death and change; *true* life as the over-all continuation of life through procreation, through the mysteries of sexuality. For the Greeks the *sexual* symbol was therefore the venerable

symbol par excellence, the real profundity in the whole of ancient piety. Every single element in the act of procreation, of pregnancy, and of birth aroused the highest and most solemn feelings. In the doctrine of the mysteries, *pain* is pronounced holy: the pangs of the woman giving birth hallow all pain; all becoming and growing--all that guarantees a future--involves pain. (Nietzsche, 1954b: 561-562)

The rupture of the Apollonian surface generates both terror and blissful ecstasy (1967a: 36). The annihilation of the veil of maya demonstrates that "pain begets joy, that ecstasy may wring sounds of agony from us." (1967a: 40). We can understand this strange alliance of pain and joy only when we recognize this pain as belonging to the birth trauma, in which the pangs of birth promise the eternal return of life. Dionysian joy in destruction is explained by the doctrine of the eternal recurrence (1967d: # 417).

Apollo is the god of light, consciousness, and surfaces (1967a: 67). We find him floating in a frail bark amidst mountainous waves on the surface of the sea (1967a: 35-36). The death of God means that there is no north star by which to navigate, nor even any dry land along whose coast we might orient ourselves (1974: 180-181). The helmsman of our boat, being unable to navigate, certainly cannot be said to steer his boat, and so is really no "helmsman" at all. He is rather "a beautifying pretext, a self-deception of vanity."

Is the 'goal,' the 'purpose' not often enough a beautifying pretext, a self-deception of vanity after the event that does not want to acknowledge that the ship is *following* the current into which it has entered accidentally? that it 'wills' to go that way *because it--must?* that it has a direction, to be sure, but--no helmsman at all? (1974: 316)

The metaphor of the helmsman combines many aspects of system Y: orientation in external space, locomotion, manual control, visual guidance, and even verbal command if we remember that the helmsman is also captain of his ship. The philosopher-king is helmsman of the good society. The Craftsman is helmsman of the cosmos. Plato believed in the power of the helmsman, which is the power of *intention* (Latin intentio, a stretching out, exertion, purpose), or of the ego to orient itself toward external objects (to "stretch out" to them) and to exert its will against them.

According to Nietzschean-matriarchal philosophy, on the other hand, intentions do not explain actions, they are rather part of those actions and so still require interpretation and explanation. The course our boat takes is not determined by any fixed point in the sky (God) nor by any light-house beacon (the ego), but by the movement of the sea below us. That movement, however, has the form of a labyrinth: "How greedily this wave approaches, as if it were after something! How it crawls with terrifying haste into the inmost nooks of this labyrinthine cliff!" (Nietzsche, 1974: 247). Such is the nature of the sea. It does not solve our riddles in the sense of providing us with any stable orientation. The only solid material in sight is our "frail bark," and it is tossed and shaken about by the waves of the sea. Orienting is a function belonging to system Y (see the neuroscientific discussion in sections B and C of this chapter.) Trance--or "Dionysian ecstasy"--disorients us, shattering our frail bark and exposing us to the full force of the sea, or as I less colorfully call it, "system X." Unharnessed from system Y (which constructs external space and then orients the ego within it), system X spins the body around on itself until we no longer know where we are or where we are going, producing a state of confusion not unlike what we might experience at a crossroad.

Any note within the blues scale can be followed by any other note within the blues scale. Standing at any particular note we can turn toward any other note, just as we can turn in many possible directions at a crossroad. To learn to play the blues, according to traditional blues lore, you must go to a crossroad, preferably at midnight, and wait for Legba,

a Yoruba trickster god who 'opens the path' for other supernatural powers and is traditionally associated with crossroads. As the only wholly unpredictable deity in the Yoruba pantheon--the rituals that are virtually guaranteed to bring a desired response from all others do not always work in his case--Legba became identified with the Devil of Christianity early on. Slave lore often depicted the Devil as a trickster figure, more like Legba with his mordant sense of humor and his delight in chaos and confusion than like the more somber and threatening Devil portrayed in hellfire-and-brimstone sermons. (Palmer, 1981: 60)

The blues is one of the best examples of a form of music which expresses Dionysian ecstasy. Not only does it express the labyrinthine confusion and disorientation of the trance state but it combines joy and pain in that paradoxical unity which Nietzsche believes is characteristic of Dionysian ecstasy. It is only through the spirit of music, but more particularly the blues, "that we can understand the joy involved in the annihilation of the individual." (Nietzsche, 1967a: 104; see also 126 and 141).

The blues may be sad but it is not depressing. Behind the sadness there is always a rhythm producing a feeling of *physical* strength and energy. Western classical music, because it was created in a highly literate culture, cannot be separated from writing or from system Y. The blues on the other hand was created by an oral culture. Unlike the rhythms generally found in Western classical music, the rhythms found within the blues cannot be appreciated "aesthetically" as visual form translated into sound. This kind of visual-aural synaesthesia, so necessary for reading, is peculiar to literate cultures. The blues can be appreciated only kinaesthetically, with one's *muscles*--it being understood, however, that not all of the blues is dance music in the limited, conventional sense of "dance."

The suffering expressed in the blues is always combined with physical and often sexual vitality, giving us confidence that life will continue in spite of all death and destruction--indeed, even suggesting that life is not the opposite of death. Blind Lemon Jefferson (Yazoo 1069) may be "broke and hungry." He may be "motherless, fatherless, sister and brotherless too." He may moan with the pain of being separated from his woman and curse her for it. But of course in the same breath he sings of his desire for her: "I feel like jumpin' through the keyhole in your door."

John Lee Hooker (*Black Snake*, Fantasy F-24722) sings of fatigue and exhaustion in "Behind the Plow."

I plow all day long  
I plow from sun to sun

I plow the old gray mule  
 I plow all day long  
 I be in the field on sunrise  
 I stay there till the sun go down  
 Me and my old gray mule get so tired so tired  
 He wanna lay down  
 I say  
 No no no you can't you can't lay down

But throughout this work song there is a persistent, trance-like rhythm which seems to erase linear, cumulative time and the weariness, final death, and exhaustion such time brings. As a manipulation of external objects, work is a function of system Y. Work is made enjoyable, or at least bearable, however, by grafting the movement patterns of system Y--which conform to the causal organization of external space--onto the rhythms of tension and release found within system X. Kestenbergl (1965b: 549) explains:

Rhythms used in sequences and combinations of 'effort' elements make work enjoyable rather than a chore. Rhythms of tension flow mark the individuality of drive derivative work habits, such as 'oral' swaying to-and-fro or 'anal' straining and releasing. ... The choice of work rhythms and rhythms in art reflects individual preferences for tension flow expressive of drives, as well as for sequences of 'efforts' that represent ego attitudes.

Work is most enjoyable when egoic effort patterns are used to select and organize rhythmic drive patterns for effective action in external space. In other words, work is most enjoyable when the causal organization of space mimics or imitates the internal body space of system X.

Industrialization reverses this principle by forcing the body to conform to the causal organization of machines arranged in external space. System Y no longer imitates system X but is employed as if it could operate independently of internal body rhythms. Von Franz (1968) points out that the circular face of mechanical clocks is an atavism from pre-industrial culture where the Great Round of system X--the rhythmic structure of the internal body--was the primary image and measure of time (electronic watches and clocks finally dispose of this image.) When I asked an Italian professor who teaches Italian history in Perugia, Italy why the traditional peasant culture of the Italian countryside had

eroded so much since World War II she replied that it was due to the different conception of time that industrialization brings, and referred me to an article by the noted English historian E.P. Thompson. Thompson (1967) shows how with the rise of industry task-oriented time is replaced by objective clock-time. The crucial difference between the two is that in task-oriented time it is the human body engaged in a specific task which measures time, not a machine. Time and the intrinsic rhythms of the human body have not yet been separated. A beautiful illustration of this is to be found in an article by anthropologist Roderyk Lange.

I remember using music, for a second meeting with dancing villagers, that had been recorded during their dancing the previous evening. To my dismay, they could not dance to it, explaining: 'Your music is not following us!' This is because the musicians have to follow the intentions of the improvising dancers. (Lange, 1975: 104)

Speaking of the dance culture of Polish peasants, Lange (1977) explains,

There is close interaction between musicians and dancers and the musicians must follow the dancers (not vice versa), 'reading' from their bodies the required changes of rhythms and tempo. All this is lost in urban conditions, where we meet set dance forms, strict meter, instruction from outside, etc. (1977: 244)

Machines (including clocks) make bad music. Listen to the soundtrack from the film Eraserhead, for example--or open your window. System Y ought to follow system X (not vice versa.)

In rural dancing, emotional tensions are heightened to that degree that it would be difficult or even impossible to apply any of the criteria that one uses in urbanised conditions.

This is equally relevant with tribal and peasant peoples who are still not bound by the type of imposed and measured strictness as attained by 'civilization' (urbanization, Westernization). In the former conditions of life, there is not yet a striving for mechanical discipline. There is still the possibility of manifesting and acknowledging the primary potential of human movement as revealed directly through the body. In these conditions it is still possible to live in agreement with the biological background. (Lange, 1977: 248)

System X is the "biological background." It is because the rhythmic structure of Dionysian

music is isomorphic with the rhythmic structure of system X that such music is an immediate and unique imitation of system X, as Nietzsche believed it to be. But we can be more precise. The structure of system X is not only rhythmic but labyrinthine. The idea that time is a rhythmic, energetic process possessing the structure of a labyrinth is illustrated by the symbol of the Chinese fire clock, which was constructed by spreading a combustible powder over a labyrinth shaped in the form of a mandala (Von Franz, 1974: 259-260). After igniting the powder, time was measured by the progress of the fire through the labyrinth.

Nietzsche (1974: 247) believed that the sea, situated beneath Apollo's boat and the surface of consciousness, moved through the passageways of a labyrinth. But according to our discussion in chapter II, a labyrinth is a spiral which moves in and out from the center of a mandala. "This world," to which Nietzsche gives the name "the will to power," is "a monster of energy, without beginning, without end." It is

a sea of forces flowing and rushing together, eternally changing, eternally flooding back, with tremendous years of recurrence, with an ebb and a flood of its forms; out of the simplest forms striving toward the most complex, out of the stillest, most rigid, coldest forms toward the hottest, most turbulent, most self-contradictory, and then returning home to the simple out of this abundance, out of the play of contradictions back to the joy of concord, still affirming itself in this uniformity of its courses and its years, blessing itself as that which must return eternally as a becoming that knows no satiety, no disgust, no weariness: this, my *Dionysian* world of the eternally self-creating, the eternally self-destroying, this mystery world of the twofold voluptuous delight, my 'beyond good and evil,' without goal, unless the joy of the circle is itself a goal; without will, unless a ring feels good will toward itself-- (Nietzsche, 1967d: # 1067)

We need to read this important aphorism very carefully. It is a description of system X.

System X, we discover, is without morality, without intentional action, and without will or volition. All of these belong to system Y. And like the fire in the Chinese clock, Nietzsche's will to power is a destructive, energetic process. Also like the clock, Nietzsche's world has the overall form of a labyrinthine spiral moving eternally into and out from a



central point. The world as Nietzsche describes it in this aphorism moves between concord and discord, transforming itself from simple to complex rhythmic forms and then "returning home" again to simple forms, only to proceed out yet again into complex forms. This is the spiral dance of the sun which oscillates between a relatively long, rhythmically complex orbit and a relatively short, rhythmically simple orbit. Unlike the Platonic-patriarchal One, however, the center and "home" of Nietzsche's spiral dance does not transcend the dance but is merely another period or step in its cyclical course. And we recognize the "home" of this dance: it is Demeter's womb, the eternal mother who forever gives birth to Dionysus.

We are now in a position to understand Nietzsche's reference to Lessing's son in *On Truth and Lie in an Extra-Moral Sense* (1954a). Humans, Nietzsche says, "would have every reason to flee as quickly as Lessing's son" (1954a: 43) were it not for their mendacious and deceptive "intellect." What Nietzsche is calling the "intellect" here is system Y. System Y

unfolds its chief powers in simulation ... In man this art of simulation reaches its peak: ... being masked, the disguise of convention, acting a role before others and before oneself ... deeply immersed in illusions and dream images; their eye glides over the surface of things. (1954a: 43)

What does the mask created by system Y hide? What does its visual surface cover? The answer is system X, but more especially, the birth trauma which lurks there. Lessing's son died during infancy. He never wore a mask, and, unable to withstand the birth trauma, chose death. Although he possessed no intellect, he apparently understood the wisdom of Silenus: "What is best of all is utterly beyond your reach: not to be born, not to *be*, to be *nothing*. But the second best for you is--to die soon." (Nietzsche, 1967a: 42). He who, like Oedipus, kills his father and engages in maternal incest, he who jumps from Apollo's boat into the sea of system X, must be prepared for the terrible truth of the birth trauma, the wisdom of Silenus, that to be born is to die and therefore of no greater value than death.

All of nature, everything under the skin, is a "blasphemy against God," who is the crown and glory of system Y. Ultimately, however, it is nature herself who has confined humans to "a proud, deceptive consciousness, far from the coils of the intestines, the quick current of the blood stream, and the involved tremors of the fibers. She threw away the key; and woe to the calamitous curiosity which might peer just once through a crack in the chamber of consciousness" (1954a: 44). System Y is a symptom and child of the internal body, of "nature," or of "system X." He who, like Oedipus, cracks nature's code and correctly interprets the grand spectacle viewed by consciousness discovers the spiral dance of birth and death. Although Nietzsche (1966: 51, 55, 221 and 229; 1974: 38, 105 and 132) recognizes that even the most noble, most *natural* beings also need masks, not only to hide from the birth trauma but to hide from Others (from *the herd*), he believes that the death of God imposes the following task upon philosophers:

To translate man back into nature; to become master over the many vain and overly enthusiastic interpretations and connotations that have so far been scrawled and painted over that eternal basic text of *homo natura*; to see to it that man henceforth stands before man as even today, hardened in the discipline of science, he stands before the *rest* of nature, with intrepid Oedipus eyes and sealed Odysseus ears, deaf to the siren songs of old metaphysical bird catchers who have been piping at him all too long, 'you are more, you are higher, you are of a different origin!' (Nietzsche, 1966: 161)

Why is the intellect "vain"? *Vanity* appears in the symbolic stage of child development after the child has learned to view itself in a *mirror*, and to see itself as Others see it. Only after forming an image of itself from the "outside" can the child manipulate that image, for example by simulating an emotional state or by wearing a "mask," in order to control its relations with Others. The symbolic period begins when system Y comes "online." In humans, system Y includes the pyramidal nervous system which makes volitional, manipulative control of external objects possible.

System Y includes several inter-related structures but what is interesting is the centrality Nietzsche gives to vision in his genealogy of consciousness. It is interesting

because the development of vision in the infant does indeed perfectly match the development of system Y as described by psychologists and neuroscientists.

Nietzsche's genealogy of consciousness begins with organic processes and feeling-sensations within the body. Although visually represented objects and events *seem* to offer a causal explanation of internal body states and feelings, Nietzsche believes that this is an illusion, and for two reasons: first, causality is itself a distorted image of the actual process of life or of the will to power (1974: 172); and second, to the extent that we can still speak of causality at all, visual representations are *effects*--not *causes*--of internal body states and feelings.

In the essay *On Truth and Lie in an Extra-Moral Sense* (1954a), written about the same time as *The Birth of Tragedy* (1967a), Nietzsche proposes that the intellect produces a deceptive visual surface which shields us from the unbearable truth of nature, and specifically from the inner workings of the body. He compares this visual surface to a dream. Later in the essay he writes that "to infer from the nerve stimulus, a cause outside us, that is already the result of a false and unjustified application of the principle of reason . . ." (45). In a collection of aphorisms also written about the same time as *The Birth of Tragedy* Nietzsche writes that "the genuine mystery lies in that surface into which the nerve-activity projects forms as pleasure and pain" (*The Philosopher*, # 67).

Processes within our nervous systems which we can feel as pleasure and pain sensations (and which are related to emotions) get projected onto a mysterious surface as visual forms. These forms constitute the elements of our "knowledge" which is, in reality, nothing but a false interpretation and codification of nervous stimuli. If we examine this text we discover that it always offers us a causal and a moral explanation for these pleasure and pain sensations within our bodies. We always want to know, Nietzsche says, *why* we feel *this* way or *that* way (1954b: 496). But our explanations always commit the "error of imaginary causes," by taking what is a product and *effect* of how we feel as its *cause*.

While asleep, our moral drives are occupied fabricating imaginary causes and interpretations of nervous stimuli, "very free, very arbitrary interpretations of the motions of the blood and intestines, of the pressure of the arm and the bedclothes, of the sounds made by church bells . . ." (*Daybreak*, 1982: # 119). But when we are awake our moral drives "likewise do nothing but interpret nervous stimuli" and "posit their 'causes'" (1982: # 119). Nietzsche believes that moral judgements made while we are awake are "only images and fantasies based on a physiological process unknown to us, a kind of acquired language for designating certain nervous stimuli" and "that all our so-called consciousness is a more or less fantastic commentary on an unknown, perhaps unknowable, but felt text" (1982: # 119; see also 1967d: # 479). The basic error, in short, is to take egos and objects--moral agents and mechanical causes, respectively--as the source and ground of bodily feelings and processes when they are actually *effects* and distorted images of those same feelings and processes.

In a note from *The Will to Power* (# 479) Nietzsche adds that this fabrication of imaginary causes to explain "an excitement of the nerve centers ... is a groping on the basis of previous 'inner experiences,' i.e., of memory." Both moral and causal thinking presuppose that there are identical cases (1974: 265). This is already an error, Nietzsche believes, because no two events are identical (1967d: # 516; 1974: 169). But by identifying past with present experiences, our memory helps us to posit objective, substantial beings beneath the flux of appearances and responsible for recurring patterns of change.

Visual forms projected onto the surface of the body seem to represent objects which precede and cause our physiological state or condition when in fact these objects are illusions produced by the inner workings of our bodies. We mistake the effect for the cause when we dream, but Nietzsche (1954b: 496) says that

we do the same thing when awake. Most of our general feelings--every kind of inhibition, pressure, tension, and explosion in the play and counterplay of

our organs, and particularly the state of the nervus sympathicus--excite our causal instinct. (1954b: 496).

We become conscious of internal bodily processes only when we have clothed them in a causal explanation. And it is our memory that brings forth the faith "that such representations, such accompanying conscious processes, are the causes" of how we feel (1954b: 496).

Visual images on the surface of the body collect together in herd-like fashion around a center called the ego, just as sunflowers on the surface of the Earth follow the sun. This creates the illusion of temporal continuity and causal connectedness within the flux of visual images projected onto the surface of the body (that is, within conscious thinking.) Our concept of causality, Nietzsche (1967d: # 488 and # 627; 1974: 183) believes, is derived from our experience of the "will" (the ego and its intentions) as a coordinating and regulating center within conscious thinking. Some of the visual images found on the surface of consciousness refuse to collect around the ego. These rebellious images which resist our will are perceptions and behind them we project external objects. According to Nietzsche our concept of an external object (of being or substance in general) is derived by means of analogy from our concept of the ego (1954b: 495; 1967d: # 485, # 488, # 517 and # 518). The ego transcends the flux of images and retains its identity through time by recalling and recognizing past images with the aid of its memory (see 1967b: 39, 45, 58 and 84 for comments on the relation between memory, substance, causality and herd morality.) We cannot recognize a perceptual image as a repetition of a past image, however, until that image has been internalized by the ego and belongs to its memory. Thus, permanent external objects presuppose a permanent ego. Recurring perceptual images cannot be recognized as belonging to the same, permanent external object until internalized versions of those images are first recognized as belonging to the same permanent ego. In this way, object permanence is an analogical imitation of ego permanence.

Like the ego, external objects (for example, atoms) are permanent, substantial beings which transcend the flux of images they seem to control. The mechanistic conception of motion (the causality of external objects) is therefore derived from two sources: on the one hand, from vision, and on the other hand, from the apparent causal agency of the ego within conscious thinking (1966: 19-20; 1967d: # 488, # 625, # 627, # 634 and # 635; 1974: 172 and 183).

An ego is a "moral" ego when it assumes responsibility for at least some of the visual processes on the surface of its body, in other words, when it considers itself to be the causal agent behind those processes, and when it acknowledges the effect it has on the surface of Other bodies, in other words, when it acknowledges the Other's look. Consciousness is a physiologically unnecessary but morally and socially necessary mirror reflection of internal bodily processes (1974: 297). I become a moral ego only when I possess a mirror image of myself. The nature of this image is that I recognize it as my own and yet also recognize it as the image I impress upon the surface of Other bodies. To view this image is to view myself as Others see me.

Thus, consciousness, which is the visual surface of the body, is shared by many egos--by "the herd"--and serves to communicate their morally culpable intentions (1966: 217; 1967d: # 524 and # 526; 1974: 238 and 297-300). Although we know that this surface is a coded representation of internal body states and feelings, it seems to the herd to be a symbolic expression of their collective will, in other words, to be a symbolic expression of God. According to Nietzsche consciousness is a translation of physiological states into a moral *text* or system of *signs*. Conversely, every morality and every moral judgement is a semiotic code which, when properly deciphered, reveals information about physiological states (1954b: 492-501; 1954c: 581; 1967b: 55, 127, 129 and 141; 1967d: # 52, # 54, # 152, # 254, # 255, # 257, # 258, # 334, # 392, # 395).

Thus we have seen how, according to Nietzsche, the causality of external objects, object permanence, the morality of intentions, and communication are all bound up with

one another as parts of a single, integrated system. In section C of this chapter we will see how the causality of external objects, object permanence, morality (the mirror image and manipulative control of that image), intention, volition, and verbal language all appear at about the same time in child development, suggesting that they are inter-related structures belonging to the same system.

### B. The Neuropsychology of System X and System Y

Whereas chapter II and section A of this chapter develop the contrast between Nietzschean-matriarchal philosophy and Platonic-patriarchal philosophy primarily out of the writings of Nietzsche and Plato, an attempt is made in sections B and C of this chapter to construct Nietzschean-matriarchal philosophy out of neuroscientific literature. The distinction between "Nous" and "Physis" which we discovered in chapter II and in section A of this chapter translates in neuroscientific terms into the distinction between "system Y" and "system X." Physis is system X and (as will be explained in chapter IV) the cosmic projection or analogue of system X.

In chapter IV we will see how system Y is sustained and transformed by processes within system X, thereby completing the argument that system Y is born out of and depends upon system X, rather than the reverse (system X is not born out of system Y). In sections B and C of this chapter, however, an attempt is made to develop the neuroscientific concepts of system X and system Y and to show that, though normally related, they are nonetheless distinct systems. As I searched through the literature of modern neuroscience I discovered that two basically different strategies could be followed to show that system X and system Y are distinct systems. The first of these two strategies is followed in section C of this chapter.

The argument of section C can be schematized as follows. If system X can operate in the absence of system Y then system X is distinct from system Y. In an early period of

human brain development system X operates in the absence of system Y. Therefore, system X is distinct from system Y. Section C relies primarily on developmental studies of the brain and so presents a "developmental" argument for the distinction between system X and system Y.

Section B in contrast presents a non-developmental argument for the distinction between system X and system Y by utilizing neurological, neurophysiological and neuropsychological studies of fully developed neural systems. System X and system Y occupy anatomically distinct regions of the nervous system, are implicated in different types of behavior, and are related to different structures of experience. On the basis of these differences we conclude that they are distinct systems.

According to Nietzsche there is a visual surface covering the body which can be deciphered in two directions. First, it can be taken as a system of signifiers in symbolic relation to the ego, to objects, and to God. This is the reading offered by morality, metaphysics and patriarchal theology, respectively. Second, the visual surface of the body together with its "outwardly" focused reading can be taken as symbolic of internal bodily processes. Whereas the first reading, through an optical illusion, mistakes what are effects of the body for its cause, the second correctly reads the visual surface of the body as a symptom and *mediate* cause of a physiological condition. A sick body, for instance, projects sick images onto its surface. These images, in turn (as mediate causes or instruments of the body) make the body even sicker. In an early essay titled *The Philosopher* (# 67) Nietzsche writes that

the genuine mystery lies in that surface into which the nerve-activity projects forms as pleasure and pain: that which constitutes sensation projects at the same time *forms, which then* produce again new sensations. (Emphasis added)

God, ego and objects are completely epiphenomenal and possess no causal efficacy. The visual surface from which they are projected, on the other hand, does possess causal efficacy--it being understood, however, that this visual surface is initially produced by the



body. The priestly imagination, for example, is a symptom of a sick body, but priests are also incompetent physicians who prescribe poor medicine, making us and themselves even sicker (Nietzsche, 1967b: 32).

The visual surface of the body occurs at the intersection between system X and system Y. As a symbol of the ego and of external objects the visual surface of the body belongs to system Y. As an expression of the body, however, it belongs to system X.

Yakovlev (1948, 1968, 1970) divides human motility into three categories: (1) endokinetic movements, which are internal bodily processes such as metabolic processes; (2) ectokinetic movements, which exert force only on the body itself and which express internal bodily processes; and (3) teleokinetic movements which use the body as an instrument to exert force on external objects. Ectokinetic movements belong to system X whereas teleokinetic movements belong to system Y. Given the distinction between these two systems it is perhaps not surprising that visual information is channeled in two separate directions within the nervous system. Visual information

at some point follows two divergent pathways, with one taking a ventral course channeling visual information toward the inferior temporal neocortex. This system is involved in the identification of objects and in the retention of these objects in memory (Gloor, 1986: 167)

Moreover, this system is involved in the recognition and evaluation of the emotional significance of objects (Gloor, 1986: 166). The paradigm case is that of evaluating the emotional significance of facial expressions. This system is operative shortly after birth and long before the dawn of the symbolic period of development. It belongs to system X.

The second pathway takes a dorsal course carrying

information toward the parietal cortex. This system subserves the function of locating objects in extracorporeal space, a function that is vital for the 'instrumental' aspects of perception and memory. (Gloor, 1986: 167)

This system comes slowly online during the second six months of the first year of post-natal life, with its basic hardware completely developed at the beginning of the symbolic

period (at the beginning of the second year of post-natal life.) It belongs to system Y.

Goldberg (1984) distinguished between two neuroanatomically distinct memory systems which correspond well in function (though not neuroanatomically) with the two visual memory systems identified by Gloor (1986). Indeed both Goldberg (1984) and Gloor (1986) refer to the work of Mishkin (1982a, 1982b, 1982c) who makes a similar distinction between two memory systems. Goldberg (1984) identified two distinct neuroanatomical loops, the first of these providing the neuroanatomical basis for the system X visual memory system and the second providing the neuroanatomical basis for the system Y visual memory system. As we might expect given our distinction between system X and system Y, the system X visual memory system is relatively "hot" emotionally and in terms of somatovisceral sensation, whereas the system Y visual memory system is relatively "cold" emotionally and has more to do with orienting, locomotion, and the manipulation of external objects.

1. The mammillary system comprises the hypothalamus, which is bidirectionally interconnected with the mammillary bodies, which are bidirectionally interconnected with the anterior thalamic nucleus, which is bidirectionally interconnected with the cingulate cortex.

2. The hippocampal system comprises the amygdala, which is bidirectionally interconnected with hippocampi, which are bidirectionally interconnected with vast areas of neocortex, which is bidirectionally interconnected with the dorsomedial thalamic nucleus, which is bidirectionally interconnected with the amygdala. (Goldberg, 1984: 186)

The mammillary system includes the cingulate cortex which according to MacLean (1986) separates mammals from reptiles. When the neocortex is removed from mammals they still exhibit characteristically mammalian forms of behavior. But when, in addition to the neocortex, the cingulate cortex is removed, their behavior regresses to that of reptiles. Unlike lizards which are born into the world fully prepared to do everything they will do as adults except procreate, infant mammals require maternal care. Mammals from which the cingulate cortex has been removed fail to exhibit those forms of behavior which belong

primarily (but not only) to the mother-offspring relationship. These include (a) nursing, in conjunction with maternal care, (b) audiovocal communication for maintaining maternal-offspring contact (the separation or isolation call), and (c) play (MacLean, 1986: 6).

Although the emotion-producing mammillary system is neuroanatomically distinct from the hippocampal-amygdala system, the two systems are bidirectionally connected between the hippocampi and mammillary bodies (Goldberg, 1984: 189-190). Thus, activity in the amygdala and hippocampus normally has emotional overtones. As Pribram (1982) pointed out, the orienting reaction triggered by the amygdala produces an emotional and visceral-autonomic response. Vinogradova (1975) discovered that there are cells in the hippocampus which are sensitive to specific temporal parameters of input stimuli, such as the frequency of an auditory tone. It is likely that musical appreciation depends upon the sensitivity of the amygdala and hippocampus to novelty and redundancy in the environment, though musical appreciation probably also depends upon high level neocortical processes too (the limbic system projects heavily onto the prefrontal cortex), since other mammals do not appreciate music in the way humans do. Nonetheless, to the extent that musical appreciation in humans does depend on the hippocampal system, it is dependent for its emotional content on connections between the hippocampal and mammillary systems. It is interesting, then, that the mammillary system includes the cingulate cortex, because music does bear an affinity to two forms of behavior attributed to the cingulate cortex: play and audiovocal communication. Certainly the separation call is an example of what Yakovlev (1948: 316) called "ectokinesis," and music also seems ectokinetic, implicating the limbic cortex in its production and appreciation. MacLean (1986) speculated that

Through the higher reaches of the brain, represented by the prefrontal cortex and its union with the thalamocingulate division, we might imagine that a parental concern for the young eventually generalizes to other members of the species, a psychological development that amounts to a sense of responsibility that we call conscience. (MacLean, 1986: 24)

Might we not speculate that at least some forms of music are highly developed examples of the separation call, dependent for their production and appreciation on the cingulate cortex?

Consider the lyrics to Herman E. Johnson's rendition of "Motherless Children," a traditional blues song which gets to the heart of the blues.

Motherless children has a hard time when mother is dead  
 Motherless children has a hard time when mother is dead, oh lord  
 Father he do the best he can  
 So many things he don't understand  
 Motherless children has a hard time when mother is dead  
 Motherless children has a hard time when mother is dead, oh lord  
 Sometimes pleasures and sometime fun  
 Sometime food and sometime none  
 Motherless children has a hard time when mother is dead  
 Yes mother told child some day I'll meet you after we are dead  
 Mother told child some day I'll meet you after we are dead  
 Come and shake my hand good-bye  
 Some days you will laugh and some days you will . . .  
 I say motherless children has a hard time when mother is dead  
 (*Herman E. Johnson: Louisiana Country Blues, Arhoolie 1060*)

We cry for mother and yet our lives as individuated egos depend upon our separation from her. This is perhaps the central paradox of our existence. Only through death can we enter the womb we desire so much. At least this is the message of John Lee Hooker's "One of These Days."

I got to wear  
 my long white robe  
 One of these days  
 I'm gonna put on  
 those golden slippers  
 One of these days  
 I'm gonna meet all of my friends  
 I'm gonna walk  
 that holy road  
 One of these days  
 I'm gonna walk the narrow path  
 I'm gonna walk that holy road  
 One of these days

She been dead so many years  
 But I'm gonna live the life  
 my mother lived  
 Where I can meet her  
 and shake her hand  
 One of these days  
 One of these days  
 One of these days  
 (*Black Snake*, Fantasy F-24722)

The intersection between system X and system Y on the visual surface of the body is orthogonal. Music however mediates between system X and system Y and brings the two into alignment (we will have more to say about this in chapter IV). Singing, listening to music, and dancing, as forms of speaking, orienting and locomotion, belong to system Y, and yet as ectokinetic movements they duplicate the rhythms and patterns of change found within the body. The external world becomes a sacred cosmos or imitation of the body. We return to mother and "play."

The mammillary system also includes the hypothalamus which controls visceral and autonomic processes to achieve and maintain homeostatic balance within the body. It identifies and remembers objects in terms of their *immediate* significance to homeostasis and regulates immediately homeostatically significant processes--in other words, endokinesis and ectokinesis (emotional expression). The hippocampal system on the other hand controls behavior with respect to external objects (such as orienting and locomotion) which does not have immediate homeostatic significance but rather is *instrumental* toward the satisfaction of biological needs.

The distinction between system X and system Y is supported by certain observations made by Gloor (1986). In experiments performed on human subjects, Gloor (1986) discovered that direct electrical stimulation of the temporal lobe, and in particular of the amygdala, produces experiential phenomena from which certain aspects of perception and memory are curiously absent. We suggest that what is absent are those aspects contributed to the visual surface of the body by system Y.

absent is the experience of propositional speech, either receptive or expressive. Some patients hear someone talk, but they never relate the content of a conversation. Temporal lobe epileptic discharge or stimulation never elicits the experience of the re-enactment of a behavioral sequence moving forward in time. ... as Penfield and Perot so perceptively pointed out, epileptic discharge never evokes a memory of a self-directed effort or action. (Gloor, 1986: 166)

Behavior, Gloor (1986: 166) suggests, "depends on two different facets of perception and memory." The first, which Gloor calls "ethotropic," identifies the motivational or emotional significance of a behavioral context or situation. It is only this facet of perception and memory that can be activated by temporal lobe epileptic discharge or by direct electrical stimulation. The second facet of perception and memory functions as an instrument in the execution of behavior.

Carrying out a certain behavior requires, for instance, the accurate location of objects in space; objects have to be manipulated and locomotion must be induced and directed toward the pursuit of a goal, which in itself may not be fixed in space, thus requiring the continuous updating of spatial information. ... It also requires inner processing to devise behavioral strategy. In man a potent tool in this regard is propositional speech. These 'instrumental' aspects of perception and memory and of higher cortical function are never evoked by temporal lobe epileptic discharge or stimulation. (Gloor, 1986: 167)

Gloor's distinction between "ethotropic" and "instrumental" perception and memory corresponds perfectly with Yakovlev's distinction between ectokinesis and teleokinesis as well as with my own distinction between system X and system Y.

Since trance states also depend on seizure activity in the amygdala and/or hippocampus (Mandell, 1980), it is likely that hallucinations experienced in such states will also be "ethotropic." Indeed MacLean (1955) based his theory of the schizophysiology of the limbic and neocortical systems or the paleomammalian and neomammalian brains on the apparent separation of these two systems during hippocampal seizures in animals. Although the maintenance of posture, locomotion of a sort, and reflexes involving somatovisceral adjustments are not absent during hippocampal seizures, "the primary deficit appears to be the loss of the ability for directed

appropriate action." (MacLean, 1955: 359). MacLean (1955: 359) metaphorically describes the animal experiencing a hippocampal seizure as "an idling mechanism devoid of its driver." Later in the same article he employs a Platonic image. He suggests that the neocortex and limbic system function together "like a man on a horse" (1955: 364), and locates the "conceptual will" in the neocortex and the "feeling drive" in the limbic system.

The mammillary system is phylogenetically older than the hippocampal system. In addition, the mammillary system spans from diencephalon to mesocortical levels whereas the hippocampal system is more exclusively telencephalic and embraces neocortex (Goldberg, 1984: 188). This suggests an affinity between the mammillary system and the paleomammalian brain (limbic system) as described by MacLean, and between the hippocampal system and the neomammalian brain (neocortex).

The system X visual memory system interprets visual stimuli in terms of internal bodily processes and sensation. Thus, the system X visual memory system maps visual stimuli onto the body. Any discrimination of external sensations made by the system X visual memory system must correspond to some discrimination between internal bodily sensations. The system Y visual memory system, however, seems capable of discriminating between visual stimuli on their own terms, without first translating them into visceral or kinaesthetic sensations. Goldberg added that

motor and proprioceptive discriminations are closer to the domain of the mammillary system, whereas those related to distant exteroceptors are closer to the domain of the hippocampal system. Bernstein (1966) suggested that motor and related proprioceptive functions are phylogenetically older and more immediately 'pragmatic' than are the functions of distant exteroceptive integration. (1984: 189)

Although the visual surface of the body may be related to both the body (via the system X visual memory system) and to external objects (via the system Y visual memory system), Goldberg (1984) and Zajonc (1980) point out the many cases in which a visual

stimulus is recognized *only* affectively, in terms of internal bodily processes and sensations: "specific memories of a particular situation can be lost while the knowledge of its affective significance remains intact." (Goldberg, 1984: 191). It is possible to respond affectively to a situation without cognizance of the specific object or objects which evoked this response. In fact, in his Distinguished Scientific Contribution Award address given at the meeting of the American Psychological Association in New York on September 2, 1979, Zajonc (1980) argued in great detail that this type of non-conscious attunement to the world is the norm, not the exception, and that cognition, or the "intellect," is forever playing "catch up" with the "heart."

In summary, the skin of the body is a visual surface. Lying on the boundary between the inside and the outside, vision borders on both the internal body and external objects. On the one hand the system X visual system expresses and produces somato-visceral processes within the body. On the other hand, the system Y visual system places the visual surface in symbolic relation to external objects causally arranged in space.

Although shamans have used imagery for over 20,000 years, it has only been over the course of the last decade or two that physicians and psychologists have come to recognize the system X visual system and its potential role in healing and diagnostics. The history of modern medicine is yet another example of how the West has relied almost exclusively on system Y, while denying or even actively repressing system X. Merchant (1980), Starhawk (1979, 1982), Johnson (1983), Achterberg (1985), and others have documented the connection between the enormous violence (between 300,000 and 9,000,000 executions) inflicted upon the "witches" or wise women healers of Europe who, like shamans, used imagery for healing and diagnosing illnesses, and the rise of an elite, scientific, male-controlled medical profession.

If the "New Age" prophets are correct, we are now witnessing a turning point in this history. In ecology, politics, medicine and spirituality, the leaders of our culture are turning away from system Y and toward system X. In medicine, for example, we are learning



that the maintenance of health and the alleviation of illness is not always achieved through the manipulation of the body as an external object by system Y. As Nietzsche believed, the imagination is a symptom of the body, and can function as a medicine or as a poison to alter the state of its health.

Achterberg (1985) has offered a neuropsychological explanation for the relation between visual images and somato-visceral processes. The connecting link is the limbic cortex and in particular the hypothalamus which regulates the autonomic nervous system and secretes hormones which control internal bodily processes *including the immune system*. Thus, visual images are related to somato-visceral processes through the same mechanism (the limbic system) that has been found to be bound up with emotional experience. Jaffe and Bresler (1980) recommend the following experiment as a demonstration of the relation between visual images and autonomic physiological processes. If you simply command yourself to salivate, there will be little or no production of saliva. On the other hand, if you very carefully and vividly imagine eating a tart, sour lemon, substantial salivation will occur.

The relation between visual images and internal bodily processes is a two way affair. Images can be used as an aid to *diagnosis*. Mindell (1985a,b), for example, believes that dream images and somatic symptoms are two channels for the communication of the same message. So he uses dream images to diagnose physical ailments (as well as using physical ailments to diagnose psychological disturbances.) Achterberg (1985: 185-192) reviewed many studies which showed a correlation between a certain class of images and recovery from illnesses such as cancer, and between another class of images and the failure to recover. But images can also be used as an aid to *therapy*. Mindell (1985a,b), like Whitmont (1982) and other Jungian therapists, uses ritual drama, play acting, and active imagination to work through physical and psychological ailments. Jaffe and Bresler (1980) suggest that opening up a dialogue through guided imagery with an inner advisor (a shamanic spirit guide, in effect) who

stands for autonomic physiological processes can lead to recovery from physical maladies. Achterberg (1985: 152-153) lists a total of forty six authors (about half having written during the last ten years) who describe various therapeutic uses of the imagination.

One important implication of Achterberg's (1985) account of the neurophysiological basis of the therapeutic and diagnostic use of the imagination, which places the limbic system, and particularly the hypothalamus, between the image-producing right brain and internal bodily processes, is that with respect to healing and diagnosis images differ only in terms of their affective or emotional value, not in terms of their objective characteristics. The affective value of images may differ from culture to culture. But the relation between a particular emotion (stripped of its imagerial clothing) and a particular physiological state or condition remains invariant.

This is how the system X visual system discriminates between images: in terms of their affective, not objective, characteristics. Having reviewed material on the therapeutic and diagnostic use of images we can now appreciate the *immediate biological significance* of images recognized by the system X visual system. The system Y visual system discriminates between images on the basis of objective characteristics which are not necessarily emotionally or physiologically significant, at least not immediately so.

The wheel of possible emotions and internal body states (the Great Round) forms a matrix within which the system X visual memory system places images. A discrimination between images by system X is actually a discrimination between internal body states. This is the crux of Zajonc's (1980) distinction between affect and cognition. Affective judgements give us information about our bodies, not about external objects as *such*. In the case of facial recognition, as a particularly clear example, we often fail to notice or remember the objective characteristics of a face. We discriminate between faces on the basis of "preferanda" (how they make us feel) not on the basis of "discriminanda" (objective characteristics).

Recall in this respect that the scaling of faces for similarity yields pleasantness as the major factor, explaining about 50 % of the variance, whereas physical features play a relatively minor role. Clearly, the contribution of affect to face recognition has been underestimated. Early face discrimination is based primarily on affective reactions. Infants smile at an approaching face as early as 10 weeks of age, and at 12 weeks they smile differently at familiar and unfamiliar faces. (Zajonc, 1980: 166)

In arguing for the separation of affect and cognition Zajonc (1980) points out that we often remember how something feels to us before we remember how it looks to us or how it is described verbally, that we often decide to do what we "like" and choose what we find "attractive," and only afterwards, if at all, justify these decisions and choices on the basis of objective considerations, and that affective reactions precede any other kind both ontogenetically and phylogenetically.

In diametrical opposition to modern philosophy (see chapter I above) Zajonc (1980) argues that feeling accompanies *all* cognitions--indeed all "thoughts" of any kind--but that affects do not depend upon cognitions and can occur without them. If cognitions necessarily precede affective judgements, then how does one explain, Zajonc (1980: 158) asks, the dismal failure in achieving substantial attitude change through the communication of objective information? As Schwartz (1973) pointed out, advertisements contain very little objective information. An earlier study performed by Zajonc (1968) showed that preferences can be developed simply on the basis of repeated exposure. It is more likely that the mass media changes our preferences (not our *beliefs*, which count for nothing here) in this way than through the communication of objective information, whether accurate or not. If we buy the wrong products, vote for the wrong public officials, or make the wrong personal decisions, it is because our feelings have been twisted and our bodies poisoned, not because we adhere to false beliefs. The only effective strategy is to tune out the noise completely, never opening a newspaper or magazine, never turning the TV or radio on. "Critical" thinking is not effective because there is nothing to criticize. It is not that we are being fed inaccurate information about the world. Rather,

we are not being fed objective information of any kind. Our bodies are being moved. We need to learn to dance better.

Yakovlev's (1948, 1968, 1970) tripartite division of the nervous system into telencephalon 'impar,' limbic telencephalon 'semipar' and supralimbic telencephalon 'totopar,' and of motility into endokinesis, ectokinesis and teleokinesis, corresponds to MacLean's triune division of the brain into reptilian, paleomammalian and neomammalian parts, and to Zajonc's (1980) separation of cognition from feeling. Endokinesis is the motility of visceration or of internal bodily processes in general. These include cell metabolism, respiration, circulation, peristalsis, secretion and excretion (Yakovlev, 1948: 314). Ectokinesis is the "*motility of the outward expression of internal states, such as hunger, thirst, fear, rage, pleasure, grief, pain and the gamut of the so-called emotions*" (Yakovlev, 1948: 314). Within evolutionary history ectokinesis appears with the first terrestrial animals and is marked by the transition from pulmonic to branchial respiration, which allows for emotional expression through the laryngeal movements of phonation (Yakovlev, 1948: 316). The stability of temperature, pressure and oxygen levels in the marine environment does not require fish to maintain homeostatic control of their bodies through emotional expression. Among land animals, however, ectokinesis serves to maintain homeostasis (Yakovlev, 1948: 316). Teleokinesis is the motility of locomotion and effectuation. Whereas ectokinesis exerts force only on the body itself as a mechanically self-enclosed system, teleokinesis exerts force on external objects to move the body through space and to shape and handle matter (Yakovlev, 1948: 315, 317 and 318).

Telencephalon 'impar,' the innermost part of the nervous system and neuroanatomical basis for endokinesis, consists of non-myelinated cells extending through the hypothalamus and hence to the co-operatively antagonistic sympathetic and parasympathetic divisions of the autonomic peripheral outflow to smooth muscles, glands and viscera of the body (Yakovlev, 1948: 324). The prevalently anabolic parasympathetic

(cholinergic) and the prevalently catabolic sympathetic (adrenergic) divisions of this innermost system bear, Yakovlev (1948: 326) says, "an obvious relation to the energy-building and the energy-yielding phases of the motility of visceration." This is in agreement with Gellhorn's (1963, 1972) autonomic tuning theory according to which the parasympathetic nervous system is integral to the body's "trophotropic" or energy conserving system and the sympathetic nervous system is integral to the body's "ergotropic" or energy expending system.

According to Gellhorn and Kiely (1972) and Lex (1979) trance induction procedures disturb the otherwise reciprocally balanced relationship between the sympathetic and parasympathetic divisions of the autonomic nervous system. Given Yakovlev's (1948, 1968, 1970) theory of the relationship between the innermost and intermediate parts of the nervous system (in the 1970 paper he calls these the "deep neuropil" and "intermediate neuropil") we can expect that a disturbance of autonomic balance will produce ectokinesis to restore homeostasis--Teresa of Avila's tears, for instance, being an ectokinetic expression and response to parasympathetic dominance (with simultaneous high discharge in the sympathetic division of the autonomic nervous system.)

Limbic telencephalon 'semipar,' the intermediate system and neuroanatomical basis for ectokinesis, consists of well myelinated, extrapyramidal cells connected in series and extending mainly from the limbic cortex (1948: 326; 1970: 200). This system integrates the involuntary outward expression of internal (visceral) states or emotions (1948: 327). As the expression of internal states, ectokinesis cannot be separated from endokinesis. Thus, ectokinesis and endokinesis are really parts of a single system: system X. The disturbance of autonomic balance through trance induction procedures, for example, will necessarily be expressed in a biologically determined way by ectokinetic movements. Now, ectokinesis possesses a peculiar structure. Because these movements are bound to the body itself, they follow closed circuits and tend to be

rhythmic and repetitive. The skeletal musculature of the body is a system of compound levers, and

the homonymous levers of each symmetrical pair are equipotential or *isodynamic* in the sense that the work-potential (performance) and the postural configurations effected by the levers on one side of the plane of symmetry are equal and mirror those on the other side. It is noteworthy that all these symmetrical levers are mechanical levers either of the first or of the third class. Such a system of levers is a closed action system in which the body itself is the fulcrum, and the work effected is within the system (the body). (Yakovlev, 1970: 203)

As Kestenberg pointed out, every movement requires the mutual participation of an agonistic and antagonistic group of muscles pulling on opposite, symmetrical sides of a fulcrum. And now we see that Yakovlev's theory of ectokinesis and its relation to internal states of the body supports Kestenberg's (1965a: 33) suggestion that rhythmic motor patterns reflect autonomic (endokinetic) processes and also MacLean's (1955: 363) suspicion that "there may be a neuroanatomical substratum for the reciprocal innervation of 'feeling' states that compares to the reciprocal innervation of muscles." Thus, ectokinesis is a Great Round of movement and emotion.

Whereas ectokinesis necessarily serves the immediate biological need of an animal to maintain homeostasis by means of internal movements (endokinesis), teleokinesis moves external objects and so possesses no immediate, and possibly no mediate, biological utility. Because of the elaboration in humans of teleokinesis by the symbolic function, the possibility that teleokinesis will become detached from or even opposed to biological needs is particularly great (Yakovlev, 1970: 205). When that occurs we become *schizoid*. The best human world, on the other hand, is a "cosmos" in which teleokinesis is an expression of ectokinesis in the way that ectokinesis is an expression of endokinesis.

Supralimbic telencephalon 'totopar,' the outermost system and neuroanatomical basis for teleokinesis, consists of well myelinated, thick pyramidal cells arranged in

parallel and originating in the cerebral cortex (Yakovlev, 1948: 327; 1968: 260; 1970: 200-202). This system, system Y, integrates voluntary, ego-controlled "efforts" in external space. The longest of these pyramidal cells possess axons which are *asymmetrically* (unequally) distributed down the two sides of the spinal cord. The number of these cells increases in proportion with the evolution of the neocortex, until asymmetrical manual dexterity develops in humans (1970: 201 and 205).

Ectokinesis occurs within the finite, symmetrical space of bodily motility. Teleokinesis is targeted toward external objects arranged in an unlimited, dissymmetrical space.

These object-bound movements free energy in the environment and *produce work* outside the body. The energy of the system of levers of the first and third classes is translated into changes effected in the environment, and the closed system is converted into an *open* system of the body in action. The mechanical analogue of this action is a lever of the 'second class' in which the world about the body (terrestrial gravitational field) is the 'fulcrum,' and the 'work' (the changes effected in the environment) is *between* the 'fulcrum' (the world) and the 'power' (the body) ...

In this goal-directed motility the muscular levers on the two sides of the planed bilateral somatic symmetry are no longer equipotential. The body as a mechanical lever of the second class, with the terrestrial gravity as the fulcrum, and the work of the lever (*object-bound bodily action*) between it and the body, represents an action system which is wide open to the random forces (stimuli) of the dissymmetrical environment. (Yakovlev, 1970: 204-205)

The Great Round has been shattered. We are exposed to a world of dissymmetrically arranged objects with an indefinite temporal and spatial horizon. Teleokinesis is not spontaneous emotional expression but effortful object and goal directed movement. These movements do not tend to be cyclical and repetitive. There are beginnings and ends. Teleokinetic time is cumulative and can be *counted* (added up.)

The most elementary teleokinetic process is orienting which in the human infant develops into pointing at eight or nine months of age, soon followed by naming and finally by full-blown propositional speech (Kinsbourne, 1986). Locomotion (movement of the

body in relation to external objects) is generally preceded by orienting and followed by effectuation (actions directed toward external objects.) A cat, for example, may cease ongoing activity, turn its attention toward a mouse, then move toward it and finally strike it with one of its paws. In primates, the function of the forelimbs gets separated from the function of the hindlimbs. Locomotion becomes more exclusively a function of the hindlimbs and effectuation more exclusively a function of forelimbs. In human ontogenetic development, manual effectuation guided by focal vision, propositional (object directed) speech, and gesture (including pantomime), develop simultaneously and appear to function together. Writing is a human activity which exhibits the unity of these three processes in a particularly clear way. The unity of visually guided manipulation, propositional speech, and gesture in human teleokinesis means, then, that all human teleokinesis is a kind of writing. Human teleokinesis is not only intentional, in the sense of being goal and object directed, but also intensional, because human teleokinesis orients toward symbolically represented objects. Indeed we find that the development of forelimb teleokinesis is coordinated with the development of symbolic thought (see the next section of this chapter.)

The reader will recall from [Chapter II, Section B, The Death of God and the Spiral Dance](#), that for both Nietzschean-matriarchal philosophy and Platonic-patriarchal philosophy the cosmos is a spiral dance, but that these two philosophies differ according to their accounts of the origin of the dance. Whereas Nietzschean-matriarchal philosophy offers a "bottom up" interpretation of the cosmos, understanding the spiral dance performed by Dionysus, who is eternally born and reborn from *physis*, as the archetype for all other dances, Platonic-patriarchal philosophy offers a "top down" interpretation of the cosmos, understanding the cosmos as a text written by the hand of God (alias the "One," the "north star," the "ego," etc.), which is guided by God's *nous* (the "eye of the soul"). In terms of the concepts we have now developed, we can say that Nietzschean-matriarchal philosophy takes every dance to be either *system X* or a symbol (codification)



of system X. Platonic-patriarchal philosophy takes every dance to be either *system Y* or an imitation of system Y. Recall the use of the words "logos," "pantomimic," "gestures," "will" and "design" in Plotinus, *Ennead* 4.4.33 (as translated by Miller, 1986: 140-141). All of these name structures belonging to system Y.

The question arises as to how Platonic-patriarchal philosophy replaced system X (as it was recognized by the mystery religions, especially) with system Y. The answer is that system Y bears a great deal of analogy to system X. Indeed, it is this analogical relation which allows for the symbolic re-enactment of the dance performed by Dionysus, on the tragic stage. And, as stated at the end of [Chapter II, Section A, Nietzsche at Eleusis](#), the shared quality which allows for these metaphorical transpositions of the sacred body is *rhythmic movement*. System X and system Y are two systems of movement with different rhythms. System X is ecto- and endokinesis. System Y is teleokinesis. The profusion of musical images and metaphors in Plato's writings, as revealed by McClain (1976, 1978), must not be taken as evidence that Platonic-patriarchal philosophy recognizes the integral existence (let alone priority) of system X. For Platonic-patriarchal philosophy, music--which we recognize as ectokinetic--is an echo of another kind of "music": the song and dance of system Y.

Human forelimb teleokinesis includes at least the following elements: speech, gesture (including pantomime), and finely articulated practical movements of the hand. Neurological studies show that apraxia (disorders in the practical manipulation of external objects) is often associated with aphasia, suggesting a common neuroanatomical substratum for speech and manipulation (Lecours, Nespoulous, and Desaulniers, 1986). Many other studies suggest a close connection between speech and gesture. A number of studies of aphasia, for example,

have explored the relationship between impairment of spoken language abilities and impairment of certain aspects of gesture--in particular, the ability to produce and to recognize pantomimes. The evidence from these studies seems to suggest a rather close association between such gestural

abilities and abilities with spoken language. (Kendon, 1986: 30)

And yet,

left-hemisphere damaged aphasics, while impaired in their abilities to produce and to recognize pantomime in proportion to the degree of their impairment in verbal language, are not significantly different from normals or, indeed, from right hemisphere damaged patients, in their production of appropriate and coherent facial expressions of affect. Katz, LaPointe, and Markel (1978) have reported a study in which they have shown that aphasics show little impairment in those aspects of behavior that communicate emotional states ... All of this supports the view that gesture is indeed to be distinguished from emotional expression, and from those aspects of behavior that serve in the structuring and regulation of face-to-face interaction. (Kendon, 1986: 30)

Both speech and gesture are teleokinetic movements belonging to system Y and must be distinguished from emotional expression and face-to-face interactions which are ectokinetic movements belonging to system X.

Speech and gesture are two different channels (two parallel planes of signifiers: one auditory, the other visual) for the communication of the same "ideas." It is not without interest to us, given our discussion in [Chapter II, Section B, The Death of God and the Spiral Dance](#), that in addition to a shared semantic content, speech and gesture share a common rhythm. In fact, the detailed rhythmic coordination of speech with gesture

arises at the level of the organization of the execution of motor acts. The forms that gestures assume are organized directly from original conceptual representations in parallel with linguistic forms, but independently of them (Kendon, 1986: 35).

This suggests that an *idea* is indeed coded into the *logos* as a rhythm, which then regulates *both* speech *and* gesture.

In general the rhythm of speech and gesture, which is the rhythm of teleokinesis or of system Y, is not equal to the rhythm of ectokinesis or of system X. However, the possibility of a proportional relation between these two rhythms, in other words the possibility that they might be the same rhythm set to different meters, led Platonic-patriarchal philosophy to the conclusion that the same rhythm, the rhythm of the *logos*,

might govern both systems, and to the use of song and dance (which belong to system X) as analogies for speech and gesture (which belong to system Y.)

Careful observations made by psychologists show that speech and gesture can be described in terms similar to those used to describe song and dance. For example, it has been found that a stream of gestural movements can be divided into discrete units or "phrases." Each phrase returns the body to the postural configuration it had at the beginning of the phrase. Furthermore, each gesture phrase coincides temporally with a tone unit of speech and with a semantic unit or "idea."

If the flow of gesticulatory activity is thus analyzed into its component Phrases and these phrases are plotted out on a time-based chart against a time-based transcript of the concurrent speech it is found that there is a close fit between the phrasal organization of gesticulation and the phrasal organization of speech. For example, if the flow of speech is segmented into Tone Units (which are phonologically defined syllabic groupings united by a single intonation tune), it is usually found that there is a Gesture Phrase to correspond to each Tone Unit.

A Tone Unit, as mentioned, is a phonologically defined unit of speech production. However, it matches quite closely units of speech that may be defined in terms of units of content or 'idea units.' The association between Gesture Phrases and Tone Units arises because Gesture Phrases, like Tone Units, mark successive units of meaning. Gesture Phrases are not, thus, by-products of the speech production process. They are directly produced, as are Tone Units, from the same underlying unit of meaning. (Kendon, 1986: 34)

It is *this* "song and dance" which Platonic-patriarchal philosophy believes everything within the cosmos either is or imitates. But as we all know from our own experience this "song and dance" is very different than song and dance. What I have been calling a "rhythm" is a temporal pattern which divides a finite duration of time into unequal (non-metrical) segments. A period of time divided in this way possesses the property that, with respect to its "rhythmic" structure, its end is *identical* to its beginning. For this reason, the number of times a rhythm is repeated is irrelevant to its structure or meaning. Thus, a rhythmically ordered duration of time is best visualized as a circle, divided into unequal parts. Furthermore, this circle is better conceived positively, as a set of segments (some

of which may also be segmented), than negatively, as a series of "cuts," because each cut is in essence a *boundary* for segments coming *both* before *and* after it.

Now, a single gesture phrase is a rhythm. Its beginning is identical to its end. Also, it cannot be broken into parts. Only the whole gesture phrase, only the set of all segments bordering on any particular cut, is meaningful. The gestural articulation of time, however, is not rhythmic. And this is the difference between a phrase of music and a gesture phrase. A series of musical phrases is rhythmic, but a series of gestures is not. A song is a circle, but propositional speech proceeds down a line. It goes somewhere, it has a *goal* which is different than its *beginning*. It is *teleokinetic*, not *ectokinetic*. It participates in the open, extended space of external objects, not the closed space of the body. Plato and Hegel were wrong to depict speech as a circle. No paradigmatic hierarchy rules speech. A series of verbally and gesturally encoded ideas is not subsumed by one overarching idea, which would transform the entire series into a single gesture or verbal phrase, and hence, into a rhythm.

Though these rhythms are *not* the rhythms of emotion, a single gesture or verbal phrase is a syntagmatic chain of signifiers which does indeed possess a rhythmic structure. Each such chain functions as a metaphor in symbolic relation to an idea. Speech (and gesture), however, is not one single syntagmatic chain. Nor is it an exchange between equal valued chains or metaphors (which would each possess the same rhythm.) There is another, very different, process at work. And that is substitution between chains which are *causally associated*. Speech and gesture are codifications of ideational representations of the causal organization of external objects in space.

Limbic telencephalon 'semipar' consists of cells arranged in series, as are signifiers within syntagmatic chains, but these chains are not arranged in parallel with other chains, not even according to any paradigm. This principle of connection in a series is reflected by ectokinesis. Ectokinetic movements are "innate, rigidly automatic, unconditional and symmetrical, i.e., bilaterally equipotential (isodynamic) reflex configurations" (Yakovlev,

1970: 205). Ectokinetic movements permit no substitutes, or, one can equivalently say, no *choices*. Everything is fixed and unequivocal. The Great Round is the wheel of *fate*. Thus Nietzsche teaches amor fati.

Supralimbic telencephalon 'totopar' consists of cells arranged in parallel, allowing for choice and substitution between cells arranged in series.

The connections in-parallel widen the range of cortical modulation of the stereotyped and 'automatic' bilateral activities of the intermediate neuropil and of the ablatral 'autonomic' activities of the deep neuropil of the forebrain (Yakovlev, 1970: 205)

Parallel connections make possible an increase in the number of cells without the corresponding increase in the time of propagation of cortical activity that would occur if these cells were arranged only in series (1970: 205). In primates the synaptic surface of the cortex expands dramatically. In the association area of the human hemispheres surrounding sensory analyser areas (primary projection areas), we find the neuroanatomical basis for *symbols* "or *models* of the existing realities, and the symbols (models) are translated into bodily action (work) building the new realities in accordance with these models." (Yakovlev, 1970: 206). For the pre-symbolic animal there is only the immediately present environment. The symbolic human can remember and imagine objects which it knows are not present, can conceive of "permanent objects," and can construct causal models of the external environment (Piaget and Inhelder, 1969).

The parallel organization of the superficial neuropil transforms serially arranged cells into syntagmatic chains of signifiers which can be exchanged for other, parallel chains. At the level of experience the human symbolic order exhibits the parallel organization of the superficial neuropil by transforming immediate external sensations, endokinetic movements, and ectokinetic movements into syntagmatic chains of signifiers which can be exchanged for other, parallel chains, and which stand in symbolic relation to external, permanent objects. The process of symbol manipulation, manufacture and substitution is teleokinetic, not ectokinetic or endokinetic. Its principle of operation is the

causal organization of external space, not the internal structure of the body. For this reason teleokinesis can temporarily, or even permanently, deny the immediate biological needs of the body. Symbolic needs "tolerate a compromise in the means of their satisfaction by postponement of the response, and by symbolic surrogation (counterfeit) or sublimation of these conditional needs." (Yakovlev, 1970: 206).

### C. The Neuropsychological Development of System Y: A Mask is Born

Kinsbourne (1986), following Yakovlev, distinguishes between movements serving the homeostasis of the body (ectokinesis) and movements pointed toward external space (teleokinesis), and divides the latter into "the sequential elements of orienting toward, locomoting to, and then instrumentally acting upon whatever is there" (Kinsbourne, 1986: 65). He also proposes that in human infants pointing is an elaboration of the orienting response. Pointing then develops, he says, into naming, which, in turn, develops into shared, symbolic speech. Thus, Kinsbourne places orienting, locomotion, effectuation (including manipulation), and propositional speech all together within the orbit of teleokinetic movement.

Although orienting is controlled by the relatively "cold" hippocampal system (recall our discussion of Goldberg's 1984 article), and although orienting is a teleokinetic movement, it is also associated with an emotional response. The orienting response produces an activation of the sympathetic division of the autonomic nervous system for the purpose of preparing the subject for locomotion and instrumental acting upon external objects (see, for example, Pribram and McGuinness, 1975). Activation of the sympathetic nervous system places the subject in a high state of arousal, marked by such outwardly measurable signs as increased muscle tonus and the dilation of pupils. It is this emotional response to orienting which Pribram (1982), incidentally, uses to explain the emotional appreciation of patterns of novelty and redundancy in music.

When a subject is in an inappropriately high state of arousal (with respect to events in the external environment), or, conversely, when a subject is induced into such a high state of arousal by (what is for him, at least) too much novelty in the environment, he will engage in ectokinetic movements to lower his level of arousal and restore homeostatic balance to his body and to his autonomic nervous system. Kinsbourne (1986: 66) mentions self-touching movements such as repetitive scratching and rubbing as ways of restoring homeostasis to the body of a subject who finds himself in a high state of arousal. We have probably all experienced these. But in extremely high states of arousal, or when the capacity to respond appropriately is blocked or damaged, much more dramatic repetitive movements, such as whirling or flapping, or repeating a sentence or a jingle innumerable times, may be enacted. In general it is true that

In states of high arousal which cannot be discharged by appropriate action, a repetitive movement routine is substituted which is familiar, highly practiced but adaptively irrelevant, at least for external purposes. This is a movement which does not instrumentally affect anything, or signal anything, but discharges activation in some part of the brain. (Kinsbourne, 1986: 66)

Movements such as locomotion and speech which might otherwise function teleokinetically become ectokinetic. An autistic individual, for example, "might repeat what is said to him, or utter a jingle he heard on television. If the listener assumes that this was meant to inform him of something, he would be puzzled about what the message was." (Kinsbourne, 1986: 67). There was no message. What appeared to be a teleokinetic movement was an ectokinetic device to diminish excessive arousal. These and other

so-called stereotypic or manneristic gestures tend to occur when something novel has happened. Given damaged and unstable homeostatic control of activation level, even what is for the rest of us a very minor change might constitute a flood of information hard to resolve for a damaged and limited mind, causing a surge of central activation and precipitating the patient into a compensatory 'displacement' routine. (Kinsbourne, 1986: 67)

But stereotypy and the failure to orient properly are not caused only by clinical

neurological damage. Seizures produced in the amygdala by direct electrical stimulation or by amphetamines can also lead to stereotypy. Seizures in the hippocampus produced by any of a variety of trance induction procedures (including the ingestion of psychedelics) can lead to stereotypy when these seizures spread to the amygdala (Mandell, 1980: 397-400). Even hippocampal seizures which do not spread to the amygdala can activate compensatory displacement routines by interfering with the normal functioning of the orienting mechanism. The spiral dance of the labyrinth, too, is a displacement routine.

The orienting response is activated when novel stimuli are detected. Pribram and McGuinness (1975) believe that the amygdala registers novel stimuli but that the hippocampus co-ordinates the "emotive" or limbic and "cognitive" or neocortical brains (via the prefrontal cortex) to alter high level psychic models of the environment. Normally, models are continually updated and modified as the environment changes. This is particularly true of instrumental acts which require feedback from the object of effectuation. When this mechanism is disrupted, through an interruption in the normal functioning of the prefrontal cortex and/or hippocampus, as occurs, for example, during hippocampal seizures, displacement routines which effectively block out external stimuli are activated. In the case of animals suffering damage to their frontal lobes (the prefrontal cortex is a part of the frontal lobe of the neocortex which becomes highly elaborated in primates and in humans especially),

complex response components which normally accompany locomotion, and which ensure that the behavioral sequence is appropriate to the changing environment and influenced by learning and previous experience, do not occur. As a consequence, the animal lacks the appropriate cognitive input and continues a non-appropriate response. This behavior of the frontal animal is described as 'aimless pacing' or 'response perseveration.' (Mogenson, Jones and Yim, 1980: 89)

Frontal lobe damage and dysfunction, Mogenson, Jones and Yim (1980: 89) believe, disrupt integrative activities which co-ordinate the "emotive brain" and the "cognitive brain," producing stereotypic forms of behavior characteristic of the emotive brain and



unchecked by higher level cognitive control.

Electrically induced hippocampal seizures, MacLean (1955: 357-359) observed, result in the "loss of the ability for directed appropriate action" (in other words, *teleokinesis*) and reduce an animal to "an idling mechanism without a driver." Hippocampal seizures provide "a striking demonstration of the schizophysiology of limbic and neocortical systems" (MacLean, 1955: 357).

The interruption of either of two fronto-limbic circuits (connecting the prefrontal cortex with the limbic brain) identified by Pribram and McGuinness (1975), one including the amygdala and the other the hippocampus, may produce automatism and perseveration. When failure in registration of input by the amygdala "occurs, the organism's nervous system is temporarily swamped by the arousing input and reacts defensively to shut out all further input and thus leads to automatism" (Pribram and McGuinness, 1975: 123). The amygdala, connected to the hypothalamus, controls arousal and visceromotoric response to novelty in the environment. Mechanisms which alter and modify cognitive (neocortical) models of external events depend upon visceromotoric registration of novelty. Amygdalectomy or interruption in the normal functioning of the amygdala (for example during seizures) causes stimulus specific controls on visceromotoric arousal to be removed. The result is that "arousal fails to lead to the registration of the situation by altering the neuronal model" (Pribram and McGuinness, 1975: 123). Visceromotoric processes, and their ectokinetic accompaniments, continue unchecked and uncontrolled by feedback from the external environment. The cognitive map of the external environment remains, but it no longer serves a teleokinetic function, since instrumental action is not possible.

Similarly, interference with the hippocampal circuit

reduces the organism to a state in which the more effort demanding relationships between perception and action, between observing and instrumental responses, and between stimulus and response are

relinquished for more primitive relationships in which either input or output captures an aspect of the behavior of the organism without the coordinating intervention of central control operations. (Pribram and McGuinness, 1975: 129)

More specifically, it is in the CA3 cells of the hippocampus that a stream of incoming sensory information meets a stream of information about neocortically based cognitive models and memories of the external environment (Mandell, 1980: 404). CA3 cells, Mandell says, are seen as mediating and allowing for comparison between these two streams of information. But it is precisely hippocampal CA3 cells which undergo seizure activity during trance states, interrupting the comparator function of CA3 cells and making it impossible to orient to novel stimuli by modifying cognitive models of the external world.

This, Mandell suggests, is

the moment of contact with God as described by James, 'unity' in most of the literature on religious conversion, luminescence in the writings of Eastern metaphysics, transcendent consciousness as used in this essay, or loss of ego boundaries and psychotic consolidation in the literature of psychopathology, that is, the sensation of 'ego function' requiring the self versus nonself activities of mind. (Mandell, 1980: 404)

In short, because orienting is the foundation of outwardly directed teleokinetic movements, any interruption in the operation of the orienting mechanism suspends teleokinesis and may initiate ectokinetic movements (including repetitions of movements which otherwise function teleokinetically) to restore homeostasis. The resulting absence of both the ego and external objects, which in adults produces an experience of absolute unity and noumenal presence, resembles the condition of the neonate, who is also incapable of teleokinesis and without object relations or an ego.

Although system X is present and operating within the neonate, system Y does not begin to develop until six months after birth, with all of its elementary structures not present until the beginning of the second year. In what follows we will chart the course of infant development over the course of the second six months of post-natal life to gain an understanding of system Y in distinction from system X.

For the neonate and up until six months after birth there are only the rhythms of ectokinesis. Binocular stereoacuity does not exist. External sensations are experienced only as a two dimensional surface covering an emotional process embodied in visceral and kinaesthetic sensations. External sensations do not yet symbolize, or even immediately signal, external objects, which do not exist for the infant during this period. Psychoanalytic theory divides emotion into various biological drives (oral, anal, phallic). According to Piaget and Inhelder there is in the beginning no objective space or time.

There are, rather, several heterogeneous spaces all centered on the child's own body--buccal, tactile, visual, auditory, and postural spaces--and certain temporal impressions, but without objective co-ordination. (1969: 15)

Object relations theorist David Rubinfine (1981: 384) agrees, and adds that these heterogeneous sensorial spaces are "organized around the experience of drive tension and drive discharge." This organization of sensation around drive tension and discharge is the same as what is called primary process functioning within psychoanalytic theory. Kestenberg (1965a, 1965b, 1967) argued that the rhythms of drive discharge are reflected by the rhythms of movement between free flow (when antagonistic muscles do not resist agonistic muscles) and bound flow (when antagonistic do resist agonistic muscles, resulting in stiff and jerky movement.) Although she did (1965a: 33) express some doubt that all basic patterns of rhythmic movement could be accounted for by the classic psychoanalytic drives, she was (1965a: 33) confident that all rhythms of movement reflect some visceromotoric process or other, and accepted the psychoanalytic drives as a provisional classification of these processes.

Kestenberg drew another important connection.

In the basic rhythms of alternations between free and bound flow, we recognize a regulation familiar to us from primary process functioning. The primitive archaic regulations of the id shift from displacement to condensation of psychic energy. (1965b: 558)

Displacement corresponds to free flow and condensation to bound flow. Primary

processes occur, therefore, on the surface of the body and reflect ectokinetic movements. As Rubinfine (1981: 384) put it, mental activity at the early stage of infant development "consists of a series of dynamic energetic sequences representing and recording the flow and ebb of excitation." Behind the substitution of one image for another in a dream, for example, we must recognize an emotional process to which both belong. It is this emotional process which explains the dream, not the objective events projected by the dream surface, which only deceive us about the truth. Nietzsche (1954b: 496) extends this analysis further and finds that waking experience is also deceptive. There is no God. There is no ego. There are no objects. These are all produced, ultimately, by the will to power--in other words, they are symptoms of our bodies.

But two-dimensional surfaces are not sufficient for adult life, object relation therapists remind us. Depth must be added to the visual surface around our bodies. In the contorted prose of Susan Deri, analytic work

*translates* proprioceptively not discernible unconscious impulse into delineated and *therefore* perceptible mental structure. This structure is a mental symbol with a specific gestalt and can therefore be contemplated, thought *about*, instead of acted out. Perception of a unit that has a gestalt implies *distance across* which to look in order to perceive. (1981: 182)

Visual perception presents the external world in meaningfully ordered, delineated gestalts, instead of a medley of contiguous lines and surfaces. Delineation implies distance between objects and between the perceiving subject and the object. (1981: 183)

The symbolic activity of the "secondary processes" provide depth by projecting objects out from the visual surface and away from our bodies. Secondary processes provide another structure very different than the drive organization of the visual surface around our bodies. Rubinfine (1981: 392) believes that analysis works through the deployment of the ego's ray of attention to create associative connections which bind visual images "so they are now conceptually organized and not drive organized--thus they are no longer subject to primary processes and their energy or cathexis is not displaceable, as it must

be for symptom formation." But this is what all of modern culture does: it replaces our bodies with abstract conceptual representations of external objects causally arranged in space. While such conceptual organization of the visual surface of our bodies may prevent symptom formation, it may also result in a schizoid personality disorder.

Dionysian ecstasy transcends the opposition between good and evil by combining life (rebirth) with death and pleasure with (birth) pain. But not all destruction is Dionysian. Sometimes destruction is simply destruction, as it is when it is part of the linear, open-ended time of system Y. System Y is not in itself evil. It begins to develop in every human being about six months after birth, and without it we could not live. It becomes evil, however, when it becomes disconnected from system X. Ours is the age of the lobotomy (a surgical procedure which damages the frontal lobe of the cortex), in which we honestly believe that turning someone into an emotional vegetable is a "cure" (and not merely a social convenience.) The technological revolution of the last two centuries has been such a disappointment because it has been carried out without due consideration for what all these tools--let alone tools in general--ultimately serve. The answer cannot be found within system Y, where everything exists because of and for the sake of something else. Only system X--the sacred body--is autotelic (its own purpose).

This is why we need to build institutions—-independent, small scale, decentralized institutions, which are neither esoteric nor monastic--to disperse knowledge of ritual trance induction procedures and to share words and images related to the experiences they produce. It would not be easy. Mysticism hovers dangerously close to psychosis. But we as a culture now possess a secondary process explication of the sacred body, in terms of comparative religion, psychoanthropology, depth psychology, experimental psychology, and the neurosciences, which might prevent a slide into psychosis without paying the excessively high price of castration (the quintessentially *Christian* "cure") or by freezing all primary processes as Rubinfine advises us to do. In any case, without such institutions modern life will continue to be utterly absurd and to produce irrational religious

reactionaries who are starved for the sacred body.

However, object relation theorists are correct to associate separation and distance between visual objects with object relations and symbolic thought. Neuroanatomical studies have shown that nerve fibers in area 17 of the visual cortex are not myelinated until the end of Piaget's third stage of infant development (six months after birth). Malerstein (1986), resting his theory on the assumption that nerve fibers in this area of the cortex (belonging to telencephalon totopar) do not function until they are well myelinated (a plausible assumption), proposes that bringing area 17 of the visual cortex on-line at the end of Piaget's third stage of infant development through myelination induces the type of cognitive processing that begins in the fourth stage of development.

Different cells of the visual cortex respond to different structures within the visual field. Some cells of area 17 respond maximally when the eye is stimulated by a line of light at a particular angle. Other cells in area 17 respond maximally when a line of light moves across the retina. Still other cells in this area respond maximally to binocular light stimulation (Malerstein, 1986: 53). Together, these cells add depth to the visual field and make possible the differentiation of one visual object from another, although it will be six more months before the infant fully "equilibrates" to this newly developed neuroanatomical structure (imagine having access to a bicycle for the first time in your life: the level of skill at which you ride the bicycle will slowly rise, perhaps fluctuate a bit, for a certain period of time before reaching equilibrium.)

As mentioned above, which area 17 cell will fire depends upon the particular angle of a line of light cast on the retina and whether the line is moving or not. Malerstein adds that

Such distinctions of lines of light or boundaries between a light and dark region which I will call an edge of light would assist differentiation of one object from another, based on the different orientations of each object's boundaries or edges and on whether these lines or edges move as a set. (1986: 54)

Whether the image of an object cast upon the retina is somewhat larger or smaller, provided the image is the same configuration of lines and edges, the same basic set of area-17 cells would probably fire, giving rise to the same patterns of activity beyond area 17. ... Not differentiating an object's image on the retina when distance from the eye to the object changes, supports coding such variations in image size as belonging to the same object (scheme). (1986: 55)

Thus we can understand stages four, five and six (spanning the second six months of post-natal life) as a period of equilibration leading to the expansion of the visual surface covering our bodies into a three dimensional network of causally related but separate and distinct objects detached and removable from our bodies. Once it is possible to conceive of objects which are separate and distinct from our bodies, it is a short step to conceiving that objects might exist without the simultaneous presence of our bodies. Such an object is a "permanent object." Cognition of it requires the use of *symbols*. A symbol is a non-perceptual image, including but not limited to perceptual memories (internalized perceptions) and imaginative variations of perceptual memories, which represents an absent object.

The development of the visual surface covering our bodies into a three dimensional network of causally related permanent objects is not, however, merely a cognitive development because these objects are cathected with libido. Piaget and Inhelder (1969: 25) note that the "choice of the affective object" is made in "the course of stages 5 and 6 (with preparation as early as stage 4)." So the development of a network of causally related permanent objects occurs together with the development of affective object relations.

We have assumed that affective decentering is a correlative of cognitive decentering, not because one dominates the other, but because both occur as a result of a single integrated process. Indeed, when the little child ceases to relate everything to his states and to his own action, and begins to substitute for a world of fluctuating tableaux without spatiotemporal consistency or external physical causality a universe of permanent objects structured according to an objectified and spatialized causality, then his affectivity will also be attached to these localizable permanent objects and

sources of external causality which persons come to be. Whence the formation of 'object relations' in close connection with the scheme of permanent objects. (Piaget and Inhelder, 1969: 26)

The concept of *intentional action*, including *manipulation*, combines the cognitive and emotional sides of object relations. The ego is *motivated* to act by its libidinal investment in objects, but before it can act effectively it needs to cognitively apprehend (through perceptions and through symbols) the causal relationships between permanent objects. Intentional action combines several structures belonging to system Y: will or volition (making voluntary action possible), attention to distinct and separate objects (especially focal vision), and intension, or, the abstract, symbolic apprehension of objects. Dorpat (1981: 152), an object relations theorist, proposes that we take the term "relations" to mean "intentional or goal-directed human actions." And in his analysis of the way the word "object" is used in psychoanalysis he discovered one common factor.

This common factor, or defining property, of psychoanalytic objects is that they are the object of the subject's actions. An object is that which the subject consciously or unconsciously, in thought or in deed, acts upon. A similar concept of object was discovered by Chein, who used the term object 'to designate any thing, event, process, situation or what-have-you that is referred to in a sentence by the syntactical object--direct and/or indirect--of a transitive verb.' (Dorpat, 1981: 156)

Chein's concept of an object is helpful because it combines the symbolic activity of propositional speech with voluntary action or effectuation in the world of objects, as they are combined within human teleokinesis. The development of object relations is, in fact, the development of teleokinesis. If we observe the movements made by infants during the second six months of post-natal life, as Kestenbergs has done, we find that rhythmic drive-related ectokinetic movements are gradually appropriated and subsumed by 'effortful' teleokinetic movements in external space. More recently Trevarthen (1986) has charted the neuropsychological development of teleokinesis over the course of the second six months of post-natal life.

With the erection of the axis of the body over the course of primate evolution



locomotion becomes more exclusively an activity of the hind limbs and effectuation becomes more exclusively an activity of the forelimbs (Yakovlev, 1948: 318). Human forelimb teleokinesis can be divided into propositional speech, gesture, and manual effectuation or manipulation. The parallel ontogenetic development of these three aspects of human forelimb teleokinesis suggests that they share a common neuroanatomical foundation. The lateral asymmetry of motor coordination in human gestures and manipulation (with the right hand usually preferred) further suggests that this neuroanatomical foundation is located in the left-hemisphere. According to the theory developed by Kimura (1979, 1982) the neuroanatomical foundation of human manipulation is a coordinative mechanism for predictive motor sequencing located in the left-hemisphere. Later in the course of human evolution, Kimura believes, this mechanism was adapted for regulation of articulatory movements in speech. Furthermore, the detailed rhythmic coordination of speech with gesture suggests that the neuroanatomical foundation of gesture is also this mechanism for predictive motor sequencing located in the left-hemisphere.

During the first three months of infant development, which Trevarthen (1986) calls the period of "primary intersubjectivity," rhythmic hand movements continue a rhythmic engagement between mother and child which probably began *in utero* (Trevarthen, 1986: 173). Left hand movements executed by the child during this period tend to express negative emotions of withdrawal while right hand movements express positive emotions of affiliation (Trevarthen, 1986: 185). Lateralized manual expression of emotions during this period suggests that the limbic lobes, which have already developed at this time, are also lateralized in function. During the next three months of development the first teleokinetic movements appear. The infant will extend both arms toward objects within its reach and attempt to grasp them, without giving preference to either hand. Proximal reaching is made possible at about three or four months after birth (just before Piaget's third stage of infant development) by a shift in the child's awareness from internal to

external sensation induced by the myelination of neural tracts from the eye and ear to the geniculate ganglia, and to a lesser extent to the cortex, which allows for the rapid transmission of information from the eye and ear to the brain (Malerstein, 1986: 63).

Six months after birth lateralized hand movements reappear, but this time they are teleokinetic. Typically the left hand (right-hemisphere) is used to hold an object while the right hand (left-hemisphere) works on it under the guidance of focal vision. By nine or ten months after birth the first lateralized hand gestures appear along with babbling and other forms of protolanguage. In general hand movements become more definitely adapted "to the attentions and interpretations of other persons who are attempting to be partners in co-operative performance of a task" (Trevvarthen, 1986: 157). This trend continues and is exaggerated during the second year when handedness develops at the same rate as the ability to speak and use hand gestures (Trevvarthen, 1986: 157 and 193). In fact,

Both hand preference for gesture and speech appear to develop in consequence of maturation in cerebral mechanisms that integrate inherent capacities for identifying with and complementing the purposeful behaviors of other persons. This development allows the child to find interest in the shared meanings of a language community, while his or her manipulative and object-conceiving skills are growing. (Trevvarthen, 1986: 194)

Developmentally, speech, gesture and manipulation are three inseparable dimensions of teleokinesis. Writing provides perhaps the clearest example of how these three work together in practice. Movements of the preferred hand which resemble gestures are performed under the guidance of focal vision and the command of speech to manufacture something (the text) with another object (the writing instrument). But the command to write does not originate in the ego, who is merely a low level bureaucrat. Ultimately no single ego commands. Rather, the herd acts together as a group, with the ego serving as a mask or *persona* (legal representative) for the collective will of the group, which the herd calls "God." Human forelimb teleokinesis develops in strict co-ordination with the development of the capacity to view oneself and one's actions from the point of view of

some generalized Other. System Y is a herd phenomenon.

During the first three months of post-natal life, which Trevarthen calls the period of "primary intersubjectivity," movements performed by the infant express emotions and internal body states. During the next three months proximal reaching begins, but these movements lack an intersubjective dimension. At nine months after birth a second period of intersubjectivity begins, but this time the infant communicates information, not about its body, but about external objects and its own instrumental, goal-directed actions. At nine months the infant becomes increasingly capable of sharing a task and of attending to the mother's commands.

Hand signs must be made with orientation towards the interests and wishes of another. ... The hand movements of a message must also describe some goal or topic. At the very least, the orienting to another must be unambiguously linked with deliberate performance of a discrete handling of a present object. Coordination of infant hand action with maternal speech and gesture, and with protolinguistic vocalizations of the infant addressed to the mother will give us evidence on the first stage of symbolic gesture. (Trevarthen, 1986: 159)

During the second year,

The child gains awareness of the communicative value of all forms of actions, and use of the hands is increasingly either imitative or controlled by the reactions of other persons. ... Shared meaningful purposes largely control what a toddler will do with his or her hands. (Trevarthen, 1986: 158)

Instrumental acts communicate information about the ego and its intentions to Others. To write is to voluntarily construct an outward surface for Others to see. Like a mask it is manufactured with human hands. Also like a mask, however, it may dissimulate as well as reveal the true face of its owner. To this point we will return shortly.

Thus we find within human forelimb teleokinesis all the structures of consciousness as described by Nietzsche: causality, morality, volition, the ego, communication, language, goals, purposes, and substances (permanent objects.) With the development of object relations and teleokinesis we join the herd.

Kestenberg (1965b, 1967) tries to demonstrate a correlation between the development of object relations and a shift from rhythmic, drive related movements, which can be described in terms of free and bound flow, to practical movements in external space, which must be described in terms of 'effort' and 'shape' (shape, flow and effort are concepts developed by Rudolf Laban to describe movements performed by dancers--see North, 1975, for example.) This is clearly the shift from ectokinetic movements which express internal body states to teleokinetic movements oriented toward external objects.

Initially at least effort does not replace tension flow but rather is used to select and to sequentially organize tension flow characteristics.

Gradually movement becomes subservient to concepts of 'where, what, and when' as mature patterns of 'effort,' governed by the reality principle, subordinate rhythms of tension-flow to adaptive aims of the ego. (Kestenberg, 1967: 362-363)

For example, an infant might select an even flow to avoid deviating from the shortest, most direct route to a cabinet, but then select a high intensity of bound flow that develops gradually to open the cabinet (Kestenberg, 1965b: 543). Only in the extreme case do efforts completely replace flow elements, producing the "automated ego of a robot" who performs movements without emotion (Kestenberg, 1965b: 550). Ego regulation of ectokinesis is used even for activities such as eating or excretion. At first the mother lends the infant her ego for this purpose. An infant left to its own devices may have difficulty nursing, for example, because drive related rhythms from other parts of the body interfere with the oral rhythm of sucking. As the infant's own ego develops it is able to localize drive-related rhythms to specific, appropriate parts of the body. Centralization is a particular means of flow regulation which isolates certain flow characteristics and rhythms to one part of the body by either immobilizing other parts of the body or making them follow the same rhythm (Kestenberg, 1965b: 538). Centralization gets put to an entirely different purpose, however, when the leading movement pattern is a teleokinetic rhythm or sequence of rhythms.

According to Kestenberg (1965b: 537) frequent flow changes characteristic of rhythmic drive discharge (of ectokinesis) reduce perceptivity for external stimuli, and conversely, rhythmic movement increases whenever mechanisms (such as the orienting mechanism) geared toward external stimuli cease functioning. Visual pursuit of an object, for example, can effect localized delay of repetition in the eye, and through centralization can still rhythmic fluctuations in the rest of the body. When focal vision coupled to finely articulated hand movements develops, centralization of eye movements will bring the body into conformity with teleokinetic movement patterns in external space.

The division of movement into elements of 'flow' and 'effort' corresponds to the division of thinking into primary and secondary processes. 'Effort' elements in our movement reflect changes in our attitudes toward (objective) space, (objective) time, and gravity. Secondary processes belonging to the ego attempt to model the causal organization of the objective world, and so secondary process thinking is causal thinking. However,

Causal thinking is not only intimately connected with our attitude toward time and space, but also gravity. In contrast, primary process thinking is derived in part from the non-cognitive perception of rhythmic changes in the flow of muscle tension. (Kestenberg, 1965b: 521)

Noncognitive kinaesthetic perception of tension rhythms is characteristic of the id. The ego develops to the same degree that it incorporates non-rhythmic external sensations, particularly acoustic and visual perceptions, to "oppose rhythmic discharge and promote flow stabilization and delay in repetition" (Kestenberg, 1965b: 558). To describe the relationship between the ego and the id, or between effort and flow, Kestenberg uses the same Platonic metaphor which MacLean (1955: 364) used to describe the relationship between the neocortical and limbic brains, or between "conceptual will" and "feeling drive," while recognizing, however, that during hippocampal seizures this relationship no longer holds. 'Effort,' Kestenberg writes, is comparable to a rider who is in complete control of his horse

provided the horse has been tamed and trained to carry a rider, to start and stop, and to change the rhythm of its gait in subordination to the rider's commands. To complete the metaphor, one may add that the trainer has acted in the double capacity of training the horse and the rider as well. (1965b: 545)

The horse is system X. The rider and trainer is system Y.

Object relations and teleokinetic movements are two structures belonging to system Y which develop over the course of the second six months of post-natal life. The mask is another structure belonging to system Y which develops throughout this same period and which is especially important because it demonstrates the connection between system X and system Y.

Whereas the visual surface covering our bodies is an expression of the body and belongs to system X, the mask is a dissimulation (more generally, a *codification*) of this visual surface manufactured by system Y. Because it belongs to system Y it is an external object like any other. The nature of a mask is that it is always seen from *outside*: it is an *outward surface*. To the extent that we confuse our face (the visual surface of our bodies) with the mask we wear, we transform ourselves into objects and become disembodied. Piaget and Inhelder describe this process of reification as a kind of Copernican revolution.

In the course of the first eighteen months there occurs a kind of Copernican revolution, or, more simply, a kind of general decentering process whereby the child eventually comes to regard himself as an object among others in a universe that is made up of permanent objects (that is, structured in a spatio-temporal manner) and in which there is at work a causality that is both localized in space and objectified in things. (Piaget and Inhelder, 1969: 13)

A rudimentary mask may appear with protolanguage at nine or ten months after birth, but the mask is really a symbol and so doesn't fully appear until the beginning of the second year.

Unlike a face, a mask must be read or deciphered. Facial expressions are hard-wired to emotional states of the body within the limbically based extrapyramidal nervous

system, or telencephalon semipar (Malmo, 1975: 62-63; Ekman, 1980; Zivin, 1982). The neocortically based, lateralized pyramidal nervous system (telencephalon totopar) which develops during the second six months of post-natal life is responsible for voluntary, volitional movements and can over-ride or amplify the spontaneous hard-wired facial expressions produced by the limbically based extrapyramidal nervous system. When it does this a mask has been manufactured. Facial expressions don't need to be deciphered because they are hard-wired. Certain expressions are biologically inseparable from certain emotional states. The three to nine month old infant, for example, knows, immediately, what a smile means, and doesn't need to learn how to express disgust when fed a food it does not like. A mask, however, is artificially produced and signifies the intention (including volition, and therefore motivation) of the ego which manufactured it. There is no innate connection between an ego's intentions and the masks it manufactures. Masking is a socially learned communication device. The mask is a codification of the ego's intentions. To read these signs we require a key which we are neither born with nor biologically programmed to develop. The mask belongs to culture not to nature.

The development of masking occurs simultaneously with the development of system Y, and particularly with the development of intentionality and symbolic thought.

The theory that we are working on says that the voluntary, intentional modification of affective expression--as in the modes of intensification, minimization, neutralization, and dissimulation--become possible only around the time of the fifth stage of development in the sensori-motor period (around 10-12 months of age), at the same time as the emergence of other intentional behavior. We also suspect that such a capacity is dependent on two other prior changes in the affect system: (a) stabilization and clarification of emotional state and (b) some rudimentary symbolization of affect. (Malatesta and Haviland, 1985: 106)

The facial expression which, before the development of system Y, possessed an inborn, intrinsic emotional meaning, now becomes a symbolic representation of a special type of object: the Other.

images of affect, formed by viewing modeled expressions and developed from kinaesthetic feedback, form the infant's own face and eventually stand for, or represent, overt emotional expression. Once perceptual differentiation has occurred, assisted by the above processes, and once overt expressions (those of both the mother and the infant) have been internalized in the form of rudimentary representational images, greater modulation of affect becomes possible, and the child is well on his or her way to the ability to develop and use forced, or conventionalized, signals intentionally. (Malatesta and Haviland, 1985: 108)

The visual surface covering our bodies expands out again, this time not out into the network of causally related material objects, but into the "inner" mental space of motivationally related ego states or "thoughts." To read a face covered by a mask is to read someone's mind.



## Chapter IV

### Divine-Kingship and Trance Experience

In this chapter we return, equipped with our newly developed concepts of system X and system Y, to the spiral dance. The concepts of system X and system Y can be applied to a variety of experiences (perhaps to all experiences) but here I am concerned particularly with trance experience. Trance states can be induced by a variety of means: fasting, self-flagellation, social isolation, strobe lights, drumming, dancing, chanting, psychedelics, meditation and prayer. They can even occur spontaneously or as a result of mental illness. In this chapter I am not concerned with the means by which trance states are induced but with the states themselves.

In this chapter I will combine the neuropsychological concepts of system X and system Y with mythological images and concepts which, I believe, describe trance experiences. This is not an attempt to *reduce* mythology to neuropsychology. By mixing these two vocabularies I hope each will shed light on the other, making *both* the mythological *and* neuropsychological concepts more meaningful.

The most radical transformation of consciousness occurs through the psychotic process. Certainly there are other, less debilitating forms of transformation than psychosis, but it is easiest, I think, to gain a clear understanding of the transformative process in general through an examination of its most extreme form. Perry (1989: 69) makes similar use of psychosis to shed light on the transformative process (see also Laing, 1989 and Kalweit, 1989).

However, it is necessary to distinguish between psychosis and mental illness. Psychosis is a state of consciousness in which one becomes disassociated from the external environment ("reality testing" fails). Schizophrenia, on the other hand, is a medical condition which may induce psychotic states of consciousness. Recall that teleokinesis requires continuous feedback of information from the object of effectuation

and that (as Nietzsche believed) it is consciousness which communicates with the external environment and which mediates between the external environment and the internal processes of the body. In a "psychotic" state, consciousness no longer communicates with the external environment, and so teleokinesis is not possible. Consciousness withdraws from the external environment and sinks down into the body.

The same thing occurs in a deep trance state, which is why anthropologists have sometimes assumed that individuals who entered these states were mentally ill. However, psychotic states of consciousness, like deep trance states of consciousness, are not necessarily pathological or signs of mental illness. Goodman (1988: 36) points out that evidence of religious trance states in which subjects experience an alternate reality is nearly universal across human societies, so unless one wants to claim that the vast majority of humanity is insane, one must conclude that religious trance experience is not a sign of mental illness. The difference between pathological trance states and non-pathological ones does not lie in the phenomenology of these experiences but in their causes. One is caused by illness and the other is not.

According to Jung, Perry, and Laing, the schizophrenic psychotic state shares a similar phenomenology with religious trance experience. Perry has done the most work analyzing the phenomenology of these states of consciousness. His analysis reveals a culturally invariant process in which ego-consciousness undergoes a transformation ("death and rebirth"). If it is correct to understand trance experience in this way, then we will have shown how within trance experience it is the body (system X, Physis, etc.) which transforms and re-creates consciousness (system Y, Nous, etc.), instead of the reverse (instead of the body being created by consciousness). Since ego-consciousness is transformed in psychotic trance states, and since psychotic trance states are a bodily process, we conclude that ego-consciousness is transformed by means of a bodily process. This process is the spiral dance. It is the womb from which ego-consciousness is born. Describing its structure and showing how it reverberates in myth and political

history is the central task of this chapter.

Perry, like Laing, believes that schizophrenic psychosis is a process, not a static state. In his phenomenological analysis of this process in his schizophrenic patients Perry repeatedly found precisely ten steps (1976: 82):

1. Establishing a world center as the locus.
2. Undergoing death.
3. Return to the beginnings of time and the creation.
4. Cosmic conflict as a clash of opposites.
5. Threat of the reversal of opposites.
6. Apotheosis as king or messianic hero.
7. Sacred marriage as a union of opposites.
8. New birth as a reconciliation of opposites.
9. New society as the prophetic vision.
10. Quadrated world forms.

The net product of this process is the transformation or rebirth of the ego. If the journey is successful the ego emerges with a new personality and character structure that is better adapted to new circumstances.

Now this process that Perry identified happens to coincide with the archetypal myth and ritual sequence of divine kingship. The myth of divine kingship is a very widely disseminated constellation of archetypes that first appeared with the development of the state or government. The state first developed in at least these six geographic regions: the Nile River Valley (3500-3000 B.C.); the Mesopotamian River Valley (3500-3000 B.C.); The Indus River Valley of India (2500 B.C.); The Yellow River Valley of China (1500 B.C.); coastal Peru (Incas); and the Valley of Mexico (the Aztecs and the Mayans). Although it is possible that the development of the state in Mesopotamia was related to the development of the state in Egypt, and that the development of the states in Peru and Mexico were related, it is certain that some of these civilizations developed independently

(Service, 1975: 5). What is remarkable is that even though these states developed independently of one another, they were all originally theocratic states organized according to the archetypal myth and ritual sequence of divine kingship that Perry discovered in the psychotic process. The myth and ritual sequence of divine kingship also appeared independently in modern theocratic states such as Hawaii that existed prior to contact with Europeans but that have been studied in detail by anthropologists. The ritual sequence is typically performed during the New Year season, when the Divine King dies, is reborn, and reestablishes the quadrated order of the State.

Now there are two possible explanations for why the myth and ritual sequence of divine kingship appears independently in all of the original states. Since the first states were originally organized by an alliance between the elders and the shamans, and since shamanism was a universally disseminated religious form throughout human history prior to the development of the state, it is possible that the myth and ritual sequence of divine kingship is a shamanistic myth and ritual sequence dressed up in imagery that served the political needs of the new states. Indeed, the myth and ritual sequence of divine kingship parallels the myth and ritual sequence of the shaman's ecstatic (out of body-as-object = ego-death) journey along the world axis to the skyworld or to the underworld and his return (rebirth) to earth (Eliade, 1964). However, that begs the question as to why shamanism was universally disseminated around the world during most of human history when travel and communication were extremely limited.

The likely solution to this puzzle is that the archetypal myth and ritual sequence of divine kingship, like the analogous myth and ritual sequence of the shaman's journey to an alternate reality, is based in universal biological structures of the human brain. The reason these myths and rituals are so universal is that trance induction procedures have been practiced in almost all human societies and the trance state is a biologically determined process. What these myths and rituals are ultimately about is the trance state and process. The specific imagery and concepts used vary by culture. Goodman

classifies cultures according to their mode of interaction with their habitat: hunter-gatherers; horticulturalists; nomadic pastoralists; agriculturalists; and modern city dwellers. "As the interaction with the habitat changes, the use to which religious trance is put varies also." (Goodman, 1988: 42) However, the invariant phenomenological structures of the trance state and process do not vary by culture.

#### A. Symbolic Thought and Ego Directed Thought

Jung (1956: 7-33) distinguishes between two kinds of thinking: directed thought and symbolic thought. One of Jung's most important criticisms of modern Western culture is that during this period we stopped thinking "symbolically." The result was that we became disconnected from an entire domain of reality, the "sacred," or as Jung also calls it, the "collective unconscious."

Jung's use of the word "symbol" is consistent with my own use of this word except for the following difference. According to my own use of this word symbols may refer *both* to objects of consciousness *and* to bodily states or the "unconscious." Jung reserves the term "symbol" only for images which refer to the unconscious. Jung's notion of symbolic thought is comparable to the Freudian notion of primary processes which occur, as I say, on the surface of the Body.

Directed thought is directed by the ego. Symbolic thought, on the other hand, comes from below, from an "autonomous complex" (Jung's psychological concept) or from a "spirit" (the corresponding mythological concept) lodged within the collective unconscious. Only a life lived in a certain spirit, Jung says, is worth living: "life lived entirely from the ego is dull not only for the person himself but for all concerned. The fullness of life requires more than just an ego; it needs spirit" (Jung, 1960: 337). Symbolic thought is like ecstasy or trance. Ecstasy, Wasson (1980: 225) informs us, is in itself neither pleasant nor unpleasant. It may plunge you into bliss or terror or even both

simultaneously. But it is always *meaningful*. If life in the modern world has become a Beckett play, perhaps it is because we have become disconnected from the source of meaning.

To think symbolically (in Jung's sense) is to risk being misunderstood, not only by those who cling to modern, ego-centric modes of thought, but also by some of those who consider themselves to be "postmodern," and who seem to believe that because the ego (or God) can no longer provide meaning, there is no meaning to be had. On the face of it, symbolic thought is often just simply wrong. In the southern hemisphere the sun has never "danced" around the north star, and in spite of God's death, the north star continues to shine in the northern hemisphere. In this case it is obvious that what is being referred to, are not astronomical events. The sky serves here as a kind of screen upon which the unconscious projects symbolic images of itself. Living after the rise of modern chemistry we can easily recognize alchemy, too, as a projection of the unconscious. But when I write in terms of neuropsychology or political anthropology many readers (including myself) may be tempted to take at least this as literally true. And perhaps it is. But primarily it is a symbolic projection of the unconscious.

In addition to being literally false, symbolic thought may be rife with contradictions. Brown (1965: 23), for example, points out that various creation theories "are not mutually reconciled in the Rig Veda," and yet there is not "any intimation, for the most part, that they are considered or even suspected to be incompatible." Jung says something similar about the basis of the alchemical *opus*, the *prima materia*.

it is incorrect to maintain that the alchemists never said what the *prima materia* was; on the contrary, they gave all too many definitions and so were everlastingly contradicting themselves (1953: 317)

The *prima materia* is the alchemical symbol of the unconscious. It is the primordial Chaos out of which the ordered cosmos is created through the separation of opposites, beginning with the separation of the world parents. Around the world and throughout

history the primordial Chaos has often been depicted as a dragon or snake consuming itself, the “uroboros,” or sometimes as a mountain or large rock, or as a dark, tumultuous and foreboding sea. In the Rig Veda, the oldest Hindu scriptures, the image of the sea is used. During the day the Sun imposes order (in Sanskrit, “rita” or “ṛta,” which may also be translated as “way” or “law”) on the universe, creating an ordered world or *cosmos* in which the Sky and the Earth, the world parents, are separated by the atmosphere. During the evening the Sun descends down into the Sea, which is situated below the Earth and beyond the horizon. At dawn each morning the Sun is born anew from the Chaos below the Earth and recreates the cosmos by reestablishing order.

In writing this work I feel somewhat like an alchemist trying to define the *prima materia*. The object of my investigation demands the use of symbolic modes of thought, but symbols which imitate or metaphorically re-enact the unconscious can deeply offend our conscious, analytic intelligence. By the end of this work I hope, however, that the reader has come to appreciate such thought as a necessary foundation and ultimate source for conscious, directed modes of thought, just as the ordered cosmos, led by the Sun, is necessarily created out of the primordial Sea.

The same symbolic apprehension of the *prima materia* occurs within the trance state itself. Disruption of the orienting mechanism makes it impossible for consciousness to direct its processes toward external objects. Instead it assumes an attitude of introversion. Not only do neocortically-based, conscious processes operate unrestrained by the external environment, as Mandell (1980) demonstrated, but also, consciousness turns in toward the body. Within the trance state consciousness becomes, to a greater or lesser degree depending upon the depth and intensity of the trance, a symbolic image of, or reflection upon, the body (in other words, system X: endokinesis and ectokinesis.) Within the trance state *Nous* (consciousness) is united with *Physis* (Body). One of the images used by the alchemists to symbolize this state of consciousness was that of Mercurius as the tail-biting uroboric dragon, perhaps Neumann's (1954, 1955) favorite

example of the Great Round.

But the Great Round is the womb (and tomb) of the world. The uroboros is the *prima materia*, the beginning (and end) of all things. "Mercurius stands at the beginning and end of the work: he is the *prima materia*, the *caput corvi*, the *nigredo*; as dragon he devours himself and as dragon he dies, to rise again as the *lapis*." (Jung, 1953: 293). To enter a trance is to return to *the beginning*. Creation myths around the world and throughout history record the ensuing sequence of events, which is, in brief, the following: (1) the old conscious order is shattered (ego death, state of Chaos) as a result of being disconnected from the causal structure of the external environment; (2) a new conscious order is established *modelled on the structure of the body* (the world is ordered into pairs of symmetrical opposites); and (3) the new conscious order modelled on the body gets imposed upon the external environment to construct a *cosmos* (emergence from the trance state.) So we see that the world, or consciousness, or *Nous* is created out of and through the *prima materia*. *Nous* does not spontaneously generate itself.

The uroboric process of transformation and renewal that the Sun undergoes is both the *prima materia* in the Sea below the ordered cosmos as well as the process by which that *prima materia* is transformed and the cosmos renewed. It is a circular process, but the Sun's journey around the Earth is not a single circle, since the Sun's arc changes over the course of the year, rising to its apex at the summer solstice, and falling to its nadir at the winter solstice. Instead, the Sun's journey around the Earth follows the course of a spiral path that is a series of concentric circles, of rounds within rounds.

The spiral dance of the Sun is the Great Round. "The circle described by the sun is the 'line that runs back on itself, like the snake that with its head bites its own tail'" (Jung, 1953: 382). Only the North Star, representing a disembodied consciousness which, like Socrates in the *Symposium*, never sleeps, escapes this wheel of perpetual death and renewal. In the view of the Neopythagoreans,



the soul was swallowed by matter and only mind--nous--was left. But the nous is outside man: it is his daemon. One could hardly formulate its autonomy more aptly. Nous seems to be identical to the god Anthropos: he appears alongside the demiurge and is the adversary of the planetary spheres. (Jung, 1953: 301-302)

In the patriarchal view the world is created through an act of conscious intelligence imposed upon the *prima materia*, as a craftsman fashions his product out of formless raw material. Order is imposed from above and from outside the primordial Sea. In the matriarchal view, on the contrary, order is a product of the Sun's immersion in the Sea every Night. The *prima materia* is not a raw material fashioned by conscious intelligence but is a womb made fertile by the death of consciousness so that it can give birth to the cosmic order. With each new birth the *logos* or order of consciousness, measured by the Sun's movement, is transformed. No Mind exists outside this process.

In the matriarchal view consciousness is dependent upon the *prima materia* and ultimately derives its order from it. If the cosmos is a text then this text is woven by the Great Mother. The Sun, which marks time in the Day-world and whose sacred utterances order the cosmos, is born of the Night. Sacred speech, and sacred writing, is sung and marks time with rhythm. It comes from below and coordinates Day with Night, simultaneously referring both out and in, by mapping external objects onto the rhythmic processes of the body (not the reverse.) Such words (which the poets of the Rig Veda called *Vac*) possess not only a conscious meaning within system Y, but also a meaning within system X. This present work is itself a text which, though somewhat reworked by consciousness, was initially woven within the dark Night.

Profane discourse descends from above. In the patriarchal view, if the cosmos is a text, then this text is written by the hand of the demiurge, or by Nous, onto the *prima materia* which passively receives these inscriptions like a blank writing pad. Instead of consciousness and the external world being a metaphorical imitation or image of the body, the body is forced to conform to the order of consciousness and external objects. In the matriarchal view this is impossible because there is no autonomous source of order

within consciousness (no God, no substantial ego, no North Star.) Forcing the body to conform to consciousness would result, eventually, in a state of chaos from which no cosmos would be reborn.

With these reflections on the nature of the thinking being attempted here, we begin by following the Sun down into the Sea.

### B. The Sun's Journey to the Underworld

The New Year Season is a particularly important time for theocratic societies. Situated at the beginning/end of the solar year, it is analogous to the dark hours of the day. According to some mythologies, it is during the Night, and during the New Year season, that the Sun dies into the Sea. There, below the surface of the Sea, the Sun, or his protagonist, engages in battle with a monster. Often the monster is a reptile, such as a snake, symbolizing our lower psychophysiological functions. Sometimes it is a dragon, which is half bird and half lizard, representing the unity of Sky and Earth. After the monster has been killed and dismembered the Sun is reborn and re-establishes the cosmic order. In theocratic societies, the King, whose role in society is analogous to the Sun's role in the cosmos, ritually dies, engages in mock battles, and, after conquering the enemy, re-establishes order and renews the state. These cosmological and political stories are analogues for psychological events which occur within a trance. This is not surprising, given that theocratic societies were ruled by shamans (for whom trance states are of central importance).

The Sun and the divine-king may each be compared to system Y. During the "light hours of the day" the ego mediates between consciousness and external objects. By interrupting the normal functioning of the orienting mechanism trance induction procedures prevent the ego from turning conscious processes outward, and hence alter the structure of system Y. The ego becomes introverted. Instead of mediating between

consciousness and external objects it mediates between consciousness and system X. System Y unites with system X, the vault of the Sky falls upon the Earth, consciousness unites with the body, and the Sun descends into the Sea. The hero's night sea journey is an incestuous union of opposites, punishable by death (Jung, 1953: 329). When the ego becomes introverted

the regius filius--spirit, Logos, Nous--is swallowed up by Physis; that is to say, the body and the psychic representatives of the organs gain mastery over the conscious mind. In the hero myth this state is known as being swallowed up in the belly of the whale or dragon. The heat there is usually so intense that the hero loses his hair, i.e., he is reborn bald as a babe. This heat is the *ignis gehennalis*, the hell into which Christ descended in order to conquer death as part of his *opus*. (Jung, 1953: 338-339)

However, in opposition to the Christian myth, we deny the existence of the hero's Father (the North Star), who does not follow his son into the Sea. No transcendent Nous remains after being swallowed by Physis.

The withdrawal of libido from objects produces great anxiety. The ego believes it is dying, and indeed it is dying insofar as it has abandoned the external world. The structure of consciousness is radically altered, because it is now made to conform, not to external objects, primarily, but to the body.

In theocratic societies the state structure is destroyed during the New Year rituals, some of which may be described as carnivals. The divine-king is often subject to various forms of abuse, from mockery to murder. On New Year's Day in the Akan kingdom of Ghana "the king 'dies,' for he is deprived of his kingship" (Meyerowitz, 1960: 171). In Egypt authorized government was suspended for three days during the New Year season (Hadfield, 1949: 43). Perry (1976: 97-103) informs us that the second step in the typical New Year ritual sequence was the death of the king. In Hawaii the king retired to a secluded location while high ranking nobles nullified their superior status by joining the commoners in the New Year festivities, which included socio-politically indiscriminate sexual activities (Valeri, 1985: 219-220). Hadfield (1949: 44) tells us that "the custom of

killing the divine-king was widespread throughout Africa." Sometimes, he adds (on p. 46), a substitute for the king was made to die. Among the Akan of Ghana,

The divine-king's power had to be renewed annually, for it was believed that *kra* power diminishes and full potency must be restored periodically by the supreme deity. To achieve the renewal it was necessary for the king to die so that his *kra* could return to the moon Mother-goddess who would revive its original power. The king himself, however, did not actually die each year ... His death was thus only a ritual one and his *okra*, the 'bearer of his *kra*,' acted as a substitute, or 'mock-king' and died instead of his master. (Meyerowitz, 1960: 106)

Recall John Lee Hooker's "One of these Days": the king dies so that he can return to Mother.

In all of these societies the king's death parallels the destruction of the cosmos. The New Year is not only a political but a cosmic event. The Heavens unite with the Earth, the Sun sinks into the Sea, or, as the alchemists understood it, *Nous* is embraced by *Physis*. We recognize here the unity of consciousness and system X in the trance state. Objective space no longer exists, because it is made possible by the separation of the world parents, who have now been re-united (Neumann, 1954: 108). Interruption of the normal functioning of the orienting mechanism makes it difficult or impossible to locate oneself spatially. Teleokinesis in general is suspended (in Hawaii it was not permitted to work during the New Year festival season.) Changes in position with respect to external objects are not registered by changes in the conscious model of the external environment. It is as if the world has been destroyed, or at least as if the ego has transcended the world.

In ancient Hawaiian society (a typically theocratic society) the period of time during which the New Year rituals are performed belongs to the god "Lono," or as he is called during the New Year festival season, "Lonomakua," "Lono the father and provider." Lonomakua is also lord of the fire sticks, symbol of fertilization: "the production of fire, which is a masculine privilege, is considered a symbol of male penetration of the female."

(Valeri, 1985: 214). Just as consciousness unites with the body in the trance state, Lonomakua unites with the Earth, and fertilizes it, so that it may give birth to the new year and to the new Sun=Fire (in Hawaii the winter solstice happens to occur during the thunderstorm season, when fire and rain fall from the sky.) Valeri (1985: 214) tells us that Lonomakua may be identified "with a heavenly god uniting with the feminine earth." The beginning/end of the solar year is also the beginning/end of the cosmos. As a "being that contains within itself *in potentia* all differences, all acts, and thus realizes a sort of *coincidentia oppositorum*" (Valeri, 1985: 215), Lonomakua resembles the primordial Chaos, the *prima materia*.

In the trance state consciousness is made to conform not to the structure of the external environment but to the body. In other words, consciousness becomes a metaphorical imitation or symbol of the body. Now the reader will recall that system X is related to body-bound movements which alternate between opposing poles within a closed space (in contrast to teleokinetic movements which perform work on external objects.) These "ectokinetic" movements reflect "endokinetic" fluctuations between the two opposing poles of the autonomic nervous system. Trance induction procedures disturb the homeostatic mechanism of the autonomic nervous system in a manner which resembles exerting a large force against the pendulum of a finely tuned clock. Within the trance state consciousness metaphorically imitates these processes by alternating between *conceptual* opposites. Jung informs us that within alchemy the royal

brother-sister pair stands allegorically for the whole conception of opposites. These have a wide range of variation: dry-moist, hot-cold, male-female, sun-moon, gold-silver, mercury-sulphur, round-square, water-fire, volatile-solid, physical-spiritual, and so on. (1953: 329-330)

Among these the dry-moist and hot-cold pairs refer most obviously to opposing sensations and physiological conditions regulated by the autonomic nervous system.

These opposites cannot be separated in the way that it is possible to separate

external objects. Like the agonistic and antagonistic muscles they necessarily function together. Another way of putting it would be to say that they belong to the same kin group. Like ectokinetic processes they alternate in series, not in parallel; they are organized syntagmatically not paradigmatically. Thus the opposites are often symbolized by a brother-sister pair, and in theocratic society it was such a pair that ruled the state. Incest was the means by which the state was rejuvenated and renewed, just as the union of Heaven and Earth during the New Year season gave birth to the new Sun. As Jung (1953: 413) points out "endogamous mating is simply a variant of the Uroboros" or of the Great Round, in which *Nous* and *Physis*, system Y and system X, are united.

d'Aquili and Laughlin (1979) offer a possible neuropsychological explanation for the *coniunctio oppositorum* experienced within trance states. Recall that the autonomic nervous system is divided into sympathetic and parasympathetic halves, corresponding, respectively, to the body's ergotropic (energy expending) and trophotropic (energy conserving) systems. Trance induction procedures stimulate either the trophotropic or ergotropic systems to the point where there is a spillover into the complementary system, "so that, briefly at least, both systems are intensely stimulated" (d'Aquili and Laughlin, 1979: 175). Now d'Aquili and Laughlin further suggest that the cerebral representation of the sympathetic, ergotropic system is the dominant (usually left) hemisphere of the neocortex and the cerebral representation of the parasympathetic, trophotropic system is the nondominant (usually right) hemisphere. Their suggestion is consistent with split brain research which has found the "masculine" left hemisphere to be involved with active psychological processes (such as the targeting of limbs within the body schema) whereas the "feminine" right hemisphere has been found to be involved with passive psychological processes (such as visuo-spatial perception and context-fitting). Trance induction procedures, according to Gellhorn's autonomic tuning theory, simultaneously stimulate both the sympathetic and parasympathetic divisions of the autonomic nervous system. In humans,

with the simultaneous stimulation of lower aspects of both systems, their cerebral representations--that is, both hemispheres of the brain--may function simultaneously. This is manifested cognitively with the presentation of polar opposites by the analytic hemisphere (that is, the presentation of a problem to be solved in terms of the myth structure) and the *simultaneous* experience of their union via the excitation or stimulation of the minor hemisphere. (d'Aquili and Laughlin, 1979: 175)

Thus the simultaneous excitation of both hemispheres of the brain in trance states may cause us to experience opposites as parts of a holistic gestalt or unified whole. We can take d'Aquili and Laughlin's argument one step further. Bradshaw and Nettleton believe that

the left-hemisphere may act as a dynamic, kinaesthetic-interoceptive, temporally dependent control system for target acquisition within the body schema while the right acts in terms of static, exteroceptive, visuo-spatial functions largely outside of body space. (1983: 174)

Thus the opposites which d'Aquili and Laughlin say are unified within the trance state may include the antagonistic and agonistic muscles and their respective directions of movement within the body schema. This would be accomplished by turning the faculties of the right hemisphere in toward the body space rather than out toward the external environment as they are normally directed.

Lex (1979) summarizes Gellhorn's autonomic tuning theory of trance induction in the following words.

Three stages of tuning are recognized. In the first stage, response in one system increases while at the same time reactivity in the other system decreases. Augmented reactivity of the sensitized system continues; in the second stage of tuning, reached after stimuli exceed a threshold, not only is inhibition of the nonsensitized system complete, but also stimuli in the nonsensitized system instead evoke a response in the sensitized system. Behaviors resulting from this second stage of tuning are termed *reversal phenomena*. If stimulation continues, increased sensitization in this second stage can lead to a third, wherein reciprocal relationships fail and simultaneous discharges result. (Lex, 1979: 137)

According to d'Aquili and Laughlin (1979) the *coniunctio oppositorum* is an example of a *reversal phenomenon* as explained by Gellhorn, with analytic, conceptual oppositions

normally related to the left-brain being synthesized into a unity by the more holistic right-brain. Serially alternating though cyclically recurring kinaesthetic stimuli (such as would occur during ectokinesis) would then get processed by the right brain and perceived as a timeless, spatial whole.

Within a trance, time assumes the spatial form of a wheel. The world paradoxically appears to be a timeless dance. There is an experience of movement and of time passing, and yet there is also an experience of that movement as a spatial whole. This may be due to a reversal by which kinaesthetic stimuli evoke a response in the right brain. But because teleokinesis is made impossible by the inability to orient, the muscular activity related to these kinaesthetic stimuli and registered by kinaesthetic sensations must be ectokinetic, not teleokinetic, and must therefore serve to express emotion in order to restore homeostasis to the autonomic nervous system, as does the whirling and flapping of an autistic child, even if it must utilize neocortical motor centers belonging to system Y to do so. This ectokinetic use of consciousness is the result of the ego's introversion, which turns consciousness in toward the body. An ectokinetic use of consciousness (a displacement routine) becomes necessary to restore homeostasis when there are gross imbalances at the level of the autonomic nervous system such as those produced by trance induction procedures. Gellhorn and Loofbourrow (1963) believe that schizophrenia may be related to similar imbalances. Indeed both Jung's (1956) study of the sun-hero's night sea journey and Perry's (1953, 1966, 1974, 1976) study of divine-kingship are based on their respective studies of schizophrenic psychotic experience.

Earlier we saw that within a trance objective space is absent. The inability to orient makes it impossible to locate oneself within space. A kind of spatiality remains, but it is the circular space of body-bound movements. Now we see that the structure of time is also altered, because processes within this closed, finite, circular space get experienced as a timeless, spatial whole. On the one hand the entranced individual moves within the



wheel of ectokinesis. On the other hand he transcends time by comprehending the entire movement as a spatial whole. This "transcendence" is not, however, due to his existence outside the wheel (he is not the North Star) but to his simultaneous presence along the entire circumference of the wheel. Thus the entranced individual cannot be located at a specific point in time. He exists at all times, and at all places, within the closed, finite arena of ectokinesis and ectokinetic consciousness. But "all times" in the language of ego-consciousness is the entire course of history. Within a trance there is a strong tendency for consciousness to symbolize the closed, circular flow of ectokinetic time as the history of the objective world. But, due to the fact that this history must conform to the structure of ectokinetic time, there will be certain differences between the structure of this history and the way the modern West conceives of history in an ordinary state of consciousness. Because of these differences the world is experienced as a "cosmos." The important difference is this: in the *cosmos*, history begins and ends at a central point situated either at the top or bottom of its circular trajectory. History is circular, not linear.

Furthermore, the entranced ego is not alone. This is the underworld, after all. There are spirits about. The fear of the journey to Hades, Jung (1953: 336-337) says, is due to the possible "disintegration of the personality into its functional components, i.e., the separate functions of consciousness, the complexes, hereditary units, etc." According to Jung (1960) the unconscious may be divided into complexes each of which is a bundle of associated images held together by an affect (or emotion) at their core. Only one of these is the ego-complex. The other complexes are alien "spirits." The more powerful a shaman is the more spirits he controls and has formed friendly alliances with. These spirits protect him as he journeys through the underworld. In the case of possession trance the ego is replaced by an "autonomous" complex or spirit.

The history of the cosmos is therefore a collective history. There is an experience that not only I (ego) but all spirits--who have now gathered to perform a circle dance within the ectokinetic wheel--have traversed the entire course of history together since the

Beginning, to which we now return. But we have reached an impasse, a point of great danger. The Beginning is Chaos, the union of opposites. Absolute unity (without difference or opposition) would mean that the dance (led by the Sun, with which the ego identifies) would stop, because the dance is an alternation between opposite poles within the body schema. Spatially unified time is one thing, space without time another. The Terrible Mother, who possesses phallic teeth in her vagina (she is hermaphroditic), threatens to engulf us, destroying us all. It is the task of the hero--for example the Sun--to separate the opposites out of this Chaos. In the Beginning the hero must dismember the dragon to create the cosmos. Within a trance this battle between the hero and the dragon is repeated at the beginning/end of each complete revolution of the wheel (each solar year).

The history enacted by spirits within the solar wheel of trance experience is the same as the history of theocratic societies. In both cases history takes the form of a spiral dance through a conical genealogy. What is more, theocratic societies are situated exactly at the mid-point (or center) in human history, between primitive and military-bureaucratic society. Primitive society, in which political power extends no further than the limits of face-to-face communication, depends more on processes regulated by system X than does bureaucratic-military society, in which every citizen has developed a "hard" ego and the use of writing (a system Y process) extends political power beyond the limits of face-to-face communication. Theocratic society occurs at the historical intersection of primitive society and bureaucratic-military society just as trance experience occurs at the meeting or "marriage" of system X and system Y. In both cases the divine-king rises to power.

Only theocratic society achieves Unity in the body of the King. Although the body and blood of individuals outside the royal family is "polluted" and mixed with "impure" blood, everyone in Hawaii, for example (see Valeri, 1985: 150), whether nobleman or commoner, claimed to be a descendent of the king or of his ancestors (the kings of

theocratic societies possessed large harems and often *were* the fathers of their subjects.) Every member of the royal family of every theocratic society was of One body, the Body of the first ancestor (a mythical being such as the Sun or the Moon.) Every other member of theocratic society possessed life and power (=fire=libido) to a degree proportional to the fraction of royal blood in his or her body, in other words in accordance with his or her genealogical proximity to the founding ancestor. This is why during the New Year season it was necessary for the king to be reborn as the son of the founding ancestor-god, assuring his genealogical proximity to the ancestor-god and replenishing his own power and the power of the state. Outside the royal family (which possesses a quaternary, mandala structure: Father-Mother-Brother-Sister) every member of theocratic society is a diminished fraction and part of the king's body. Thus theocratic society in its entirety (the collection of all of its parts) is identical to the king's body, which is One.

It is as if human history rises from multiplicity in primitive society to a high (or low) point of unity with divine-kingship only to return to multiplicity and fragmentation in bureaucratic-military society, just as the spiral dance of the Sun rises and falls between the One and the Many. Clastres (1977) explains very clearly how primitive society is not only without a state but *against* the state. As the power of the state descends upon the Tupi-Guarani Indians of South America a religious prophetic discourse emerges which

identifies the One as the root of Evil, and asserts the possibility of breaking its hold. What makes it possible to conceive of the One? In one way or another, its presence, whether hated or desired, must be visible. And that is why I believe one can make out, beneath the metaphysical proposition that equates Evil with the One, another, more secret equation, of a political nature, which says that the One is the State. Tupi-Guarani prophetism is the heroic attempt of a primitive society to put an end to unhappiness by means of a radical refusal of the One, as the universal essence of the State. (Clastres, 1977: 184)

Contrary to Plato *the One is not the Good*. To be sure, at the center of the labyrinth is Ariadne, who gives us new life. But also at the center is the Minotaur who devours us. Theocratic societies were ones of libidinal excess but also ones of great violence. It is

the Minotaur (or the Terrible Mother, etc.--in short, *Death*) who makes the collective unconscious so frightening.

Sagan defends the thesis that the "development of the psyche is the paradigm for the development of culture and society." (1985: 364). But he adds the disclaimer that he is "not postulating an identity between psychic and social stages. A paradigm is not the thing itself." (1985: 365). A distinction must be made, however, between the personal and the transpersonal (or collective) levels of the soul.

Of course, at the personal level, an adult member of primitive society, for example, cannot be equated in terms of psychological development with a modern infant. Primitives had egos too, although those egos were "softer" (as Berman [1981] put it) than modern egos, as a *result*, as Sagan (1985) claims, of the *analogously* "infantile" level of *social* development reached by primitive society. But in spite of the analogy, and in spite of the causal relationship between the two, there is a difference between the structure of personal psychological development and the structure of social and cultural development. And there are invariant structures of personal psychological development which cannot be adequately explained by socio-cultural institutions.

But the collective soul, according to Jungian theory, does not develop within the life of an individual. Perry (1976) tells us that its development underlies and parallels the development of human society and culture. Indeed the collective soul is itself a society (of "spirits" or "autonomous complexes.") Because the collective soul has this history it is not limited to (or located within) any particular society or culture or historical stratum. It transcends culture by encompassing all cultures. According to this theory, just as it is possible to re-enact earlier stages in the personal development of the individual soul, it is possible to re-enact earlier stages in the transpersonal development of the collective soul. Indeed, the spiral dance is experienced as a re-enactment of the entire history (and future, since cosmic time is circular) of the collective soul.

Is there deep within us (within us all) a community of spirits which has existed since

the beginning of human history, and who recount that history to us when we enter a trance? Are we indeed of one Body? A mad question, perhaps, and a profoundly unsettling one, but there have been many, including entire civilizations, who have believed the answer was yes. Furthermore the existence of a collective unconscious is consistent with the data collected by Grof (1976) on LSD induced transpersonal experiences. Grof (1985) believes that these experiences challenge the Newtonian-Cartesian model of the physical world which locates an individual's experience within precise spatial and temporal boundaries, and that they provide empirical support for a holistic model of the (objective) physical world such as Bohm's (1980) interpretation of quantum mechanics. Before resorting to physics, however, we may be able to understand most transpersonal experiences in terms of system X.

Perry's distinction between consciousness and the unconscious corresponds to the distinction between system Y and system X.

I will be speaking of the *unconscious* as being the *autonomous psyche* or the *emotional psyche*. What enters the field of awareness may be conscious if it is directed by the ego, but autonomous, and hence unconscious, if it is not. Strictly speaking, unconsciousness does not imply that the subject is unaware of such and such a problematic emotion, but that such an emotion is autonomous, acting independently of the ego's intentions (Perry, 1976: 27)

In addition, this autonomous psyche

is composed or structured of complexes, some old and derived from childhood, some new and still developing. At the level of the clusters of personal associations, we speak of the *personal unconscious*, and at the level of the archetypal imagery, the *collective unconscious*. (Perry, 1976: 28)

Now, as we know, the ego (as a structure belonging to system Y) is not present until one year after birth. Before that time relations between mother and child occur exclusively at the level of the emotional psyche, in other words, at the level of system X. But there is no subject-object intentional structure within system X.

at this archaic level the child lives in a state of emotional participation (*participation mystique*) with the psyches around him, as if immersed in an emotional continuum where subject and object are indistinguishable. This unconscious emotional atmosphere plays a part in the formation of the complexes. The child takes on the complexes of the parents (Perry, 1976: 31)

Here we have the psychological mechanism by which the "spirits" can be transmitted from one generation to the next. Laing writes,

The family supplies the principal *domain* from which introjective maps are made. The *nexification* of the family is the intensive mapping again and again of F--F--F--F ... within sets and subsets of the network of whole persons and part-object familial relations, over generations. (1969:118)

Across how many generations can a pattern of familial relations be transmitted? Laing does not say, but he complains that it is difficult to detect patterns in family relationships (and projections of these onto non-familial relationships) when "we are restricted to three out of at least 4,000 generations" (1969: 86).

As the ego becomes progressively stronger it becomes better able to immunize itself, as it were, from contagious spirits in its social milieu, by wearing masks and by employing other devices to control its emotional engagement with others. This is why the social environment of early childhood (and especially the relation with mother), when the ego is relatively undeveloped, is especially important in the formation of the complexes. But we undoubtedly participate in the unconscious processes of other individuals even as adults. Thus the spirits we are exposed to are not limited to those transmitted to us from our matrilineal ancestors, although these will be the most powerful.

Where does the individual stand with respect to these spirits? The individual identifies with (or, we can say, is possessed by) one or more of these spirits, typically as a result of an unconscious projection on the part of the mother. The spirit with which we identify I will call the "self spirit." It is the unconscious foundation of the ego. The ego is the controlling center of consciousness. When it becomes introverted (journey to the underworld), withdrawing libido from external objects (including the society of Others, the

"real" social environment), a union between system Y and system X occurs (sacred marriage, union of Sky and Earth) whereby the ego and the self collude to establish themselves as the King and Queen or controlling center of the society of spirits. But because the King must undergo death and rebirth, the ego and the self get transformed as a result of their collusion. Indeed, Perry (1953, 1976) argues that the purpose of this collusion in the case of schizophrenic psychosis is to transform (or heal) an inadequate (or damaged) self-image which was projected onto the individual by his or her mother.

According to the mythology of theocratic societies and within psychotic experience (see Perry [1953, 1966, 1976]) the death of the King entails the collapse of the old social order and the King's rebirth entails the establishment of a new society. The transformation of the self spirit does not occur in isolation from the other spirits of the underworld. Laing says that the family must be understood as a *system*: "Relations and operations between elements and sets of elements are internalized, not elements in isolation." (1969: 4). No spirit dances alone. Spirits are essentially social beings (this is why the attainment of unity without difference is equivalent to the annihilation of the spiritual community.) Because the community of spirits forms an organic network, transformation of the self spirit requires that its relations to *all* other spirits be changed. A new social order among the spirits of the underworld is necessary. However, before we can describe the process in which the society of spirits is transformed, we need to know more about the nature of a "spirit" or complex.

Akhter Ahsen's notion of an eidetic complex or "ISM" is similar to the Jungian notion of a complex in many respects. At the core of both an ISM and a complex lies an emotion which was initially activated in and by a specific behavioral context. Images associated with this initial behavioral context collect around the emotional core of an ISM or complex and with each situation analogous to the first another layer of images collects around the core.

Presumably, new ISMs are formed when the stimulus situation lacks elements of similarity that would bring old ISMs into play. However, as time progresses, so many ISMs are in the repertoire that there are few situations to which these do not generalize. (Sheikh, 1978: 207)

The collective unconscious is composed of instincts for acting (without necessarily any conscious motive) in typical situations (see Jung [1960: 129-138]). These instincts need not, however, prescribe precise programs of action (which may be teleokinetic and directed by consciousness.) An example is the fight-or-flight response. The particular way in which humans fight or escape will vary depending on the situation, but the *emotional* readiness to fight or escape does not vary. The fight-or-flight response includes endokinetic processes such as increased muscle tonus, the reallocation of blood from visceral organs to muscles, increased pulse rate and blood pressure, etc., and ectokinetic processes such as the expression of aggressive or fearful emotion. But it does not determine, for example, whether I use a rock or a pistol to fight.

A complex is therefore not a static arrangement of spatial images but a process. For this reason the emotion at its core can be understood in terms of the concept of energy, as Jung understands it in "On Psychic Energy" (1960: 3-66). Now, any "packet" of energy has both a quantitative and a qualitative value. Particle physics provides a useful set of analogies. A sub-atomic particle possesses (within the limits of Heisenberg's uncertainty principle) a particular quantity of energy, and assumes a particular qualitative value (for example, the form of an electron rather than a proton.) The *quantity* of energy possessed by a sub-atomic particle is determined by its rate of vibration and mass (kinetic energy and rest energy.) The *quality* of a subatomic particle is determined by its frequency band or by its range of possible rates of vibration. If the frequency of a particle is increased beyond a certain point it can release kinetic energy in the form of particles possessing a different qualitative value than itself (for example, electrons can emit photons.) It can also transform itself into another kind of particle, or into a collection of other kinds of particles. Particles can suddenly switch "channels" into other qualitative



forms. This is precisely analogous to the way emotional energy can suddenly switch from one channel of emotional expression to another when the quantitative intensity of an emotion exceeds a certain limit, as described by Mindell (1985a,b).

At the core of any complex, then, is a packet of emotional energy possessing a specific qualitative value and limited to a specific range of quantitative values. According to Jung (1960: 12) the greater the quantity of energy at the core of a complex, the more power it has to constellate images around itself. And as Perry (1976: 28-32) mentions, the more powerful a complex is the more likely it is to be projected onto others. The qualitative value of the emotional energy at the core of a complex will determine the type of images which tend to constellate around it.

Now the spirits (or complexes) can be arranged hierarchically according to the quantity of energy they possess. A similar hierarchical arrangement is found in the theocratic state. In the transition from primitive society to the first chiefdoms

the lineages or clans of egalitarian society become, in Paul Kirchoff's words, 'conical clans,' wherein all collateral lines of descent as well as individuals in the families are ranked in terms of the birth order of the founders and of the order of each successive generation of perpetuators of the line and of its proliferating cadet lines. (Service, 1975: 79)

In matrilineal societies the first born female child possessed the greatest political power with each succeeding female child possessing progressively less power. All the children possessed less power than their mother or than any of their aunts or uncles (who assume the status of the woman they marry.) In Egypt, for example, "the queen did not acquire her position by right of marriage but invariably by right of birth, in contrast to the Pharaoh who, on many occasions, only occupied the throne by virtue of his marriage to the queen" (Meyerowitz, 1960: 52). The principle is the same in patrilineal societies except that there it is the first born male child who possesses the greatest power. This system produces a spiral shaped hierarchy along the surface of a cone (hence "conical" clan), in which each 360 degree revolution of the spiral corresponds to one generation. Although in the early

stages of the political development of chiefdom societies even the lowest members of society could trace their genealogy to the founding ancestor god, eventually a true state apparatus appears and there is a division between an aristocratic class which possesses an elaborate genealogy and a class of commoners who do not possess such a genealogy. In Polynesia, for example, when the chiefdoms reached the state level of development the commoners could no longer trace their genealogy. Their political status was determined by the area of land they worked on, which was controlled and taxed by a chief. Genealogies were the preoccupation of the nobility (the class of chiefs and their families.)

Sometimes, of course, political status was attained through military conquest. But even in these cases the conquering military machine tried to give itself authority (in addition to naked military force) by tracing its genealogical roots back to a founding ancestor god. Pastoralists (such as the historically important Aryans), who have always been patrilineal, and who are prone to engage in offensive warfare and predatory raids on sedentary peoples, lean more heavily on military force than on theocratic authority, whereas horticulturalists (such as the indigenous peoples of India and the eastern Mediterranean region), who as a rule are organized matrilineally, lean more heavily on theocratic authority.

The transition from theocratic authority to professional bureaucrats and secular law (such as existed in the archaic civilizations) is often preceded by a usurpation of theocratic power by military force, and this is especially likely among pastoralists or among agriculturalists who have been conquered by pastoralists. In order to understand this process it is necessary to go back to primitive society where we find three distinct institutions: shamanism, the warrior fraternities, and the council of elders or chiefs. In primitive society the warriors possess no political power. The elders possess political authority but no capacity to exert physical force. They function as mediators and advisors. Early on in the development of chiefdoms the elders form an alliance with the secretive shamans. This collusion between the shamans and the elders established the theocratic

authority system. For the first time in human history political decisions were made not through public discussion (as formerly led by the council of elders) but secretly by a limited circle of individuals who had privileged access to the gods (spirits). Even among the shaman-elders (priests) there was a ranked hierarchy, and at each higher level in the hierarchy an individual would be initiated into another set of secrets (or mysteries) and be given greater political authority. In this respect Plato's graduated system of education in the *Republic* reflects the structure of theocratic secret societies.

Later in the development of chiefdoms, however, the warrior fraternities usurp the power of the shaman-elders or priests. Especially "among the pastoral-herding peoples, the struggle between the war chief and the shaman-elders ended in triumph of the war chief" (Glassman, 1986b: 153). Perhaps the most extreme example is to be found among the Zulus. The great war-chief Shaka

decided to embark on two drastic measures, whereby he redefined the status of the old men; only those of warrior age were venerated. Ipso facto, the old men were not warrior-capable; therefore, being useless, they were slaughtered. (Glassman, 1986b: 156)

Shaka's campaign against the witches was equally ruthless. After spilling blood on the walls and surrounding grounds of his house he called a great meeting of thirty thousand citizens including 152 diviners who proceeded to accuse Shaka's close associates of this crime, which Shaka himself was responsible for.

When the diviners were through with their roundup, the witch hunt was turned against the witches: Shaka revealed the truth and pronounced that the diviners were useless and venal, that *they* should be executed instead of their intended victims. One afternoon's slaughter put an end to the whole tribe of false prophets. (Sagan, 1985: 328)

Military kingships are unstable institutions, however. They are unstable economically because they must perpetually conquer new lands and new peoples to feed large standing armies. They are unstable politically because they lack authority and rule by force only. This creates problems not only between chiefs and commoners but among

the chiefs themselves, who are locked into a military power struggle with one another. Like the tyrant in Plato's *Republic*, the military king cannot trust his associates (including, and especially, his closest kin.) The solution worked out by the archaic civilizations was to professionalize the state bureaucracy, and to institute a (written) code of law backed by moral principles (rather than by theocratic decree or secret religious truths.) The central place given to moral issues in Plato's philosophy shows that although the *Republic* bears structural similarities to theocratic society, in the last analysis Plato was a product of bureaucratic society. Socrates was plebs (Nietzsche, 1954b: 474); he belonged to neither a priestly nor to a military aristocracy.

Returning from the political to the spiritual realm we note that,

Chiefdoms known ethnologically seem to be typically, perhaps universally, theocracies. Ancestor worship is the typical form the priestly cult takes, adding it as a sort of cultural overlay to the original shamanism and mythology. (Service, 1975: 78)

The ancestors are the spirits. The spirits occupy the higher levels of the conical spiral above those occupied by living members of the aristocratic clan(s). At the apex of the conical spiral we usually find, in patrilineal theocracies, the Sun, and in matrilineal societies, the Moon. The Sun or the Moon is the ultimate source of all emotional energy. In psychoanalysis this energy is known as "libido." It has been imagined as light and as fire. In Polynesia it was called "mana." In ancient Egypt it was known as "ka." And in Ghana it was "kra." Above all this energy was conceived as a procreative force. It fell from the Sky in the form of rain and lightning and fertilized the Earth. In the ancient Sumerian theocracies *Amanita muscaria*, which grew quickly after a rain storm, was thought to be a particularly condensed form of this energy (Allegro, 1970). Consuming the sacred mushroom filled one with spiritual energy, making it possible to scale the sacred mountain, in other words, to traverse the spiral cone of spirits. The closer a spirit is to the apex of the cone (the source of all energy) the more energy it possesses and the higher energetic charge it can maintain. When the quantity of kinetic energy possessed by

a spirit is increased beyond a certain limit it can be transformed into a spirit situated more closely to the apex, just as a sub-atomic particle can "switch channels" into another particle or particles when its kinetic energy is increased beyond a certain limit. Trance induction procedures increase the libidinal load on the self spirit allowing it to become transformed into spirits located more closely to the apex of the spiral cone.

Shaman-priests who make it to the apex experience "enlightenment." At the apex all opposites are conjoined: it possesses both an infinite quantity of libido and yet no libido at all; it is both infinitely pleasurable and yet infinitely painful; it moves with infinite speed, but moving at an infinite speed means that it is present everywhere simultaneously and so does not move at all (this is how Bentov [1977] describes it). Paradoxically, the apex of the cone can maintain an infinite charge of kinetic energy only because even with infinite energy it cannot move or dance. The apex, in other words, is a singularity. We can use another metaphor from physics: it is a black/white hole. Like the black sun the alchemists spoke about, it is dark going in, light coming out. Like the cosmos of the cyclical big-bang theory, the mystical cosmos oscillates back and forth between many white holes extended out across space and a single black hole existing beyond space and time. The journey to the apex of the cone is successful only if, like the Minoan king's dance through the labyrinth, one makes the "*decisive turn* in the center" (Kerenyi, 1976: 96) and returns out from it; otherwise the cosmos is simply annihilated. The apex is not a final goal or resting place. It is both Life and Death, both infinite speed and zero speed, both Being and Non-Being. It is the most magnificent dance of all, and yet not a dance. This is why we insist that the One is neither Being nor the Good: it is also Non-Being and Evil.

One of the famous passages in Egyptian literature describes the journey of the deceased through the underworld as an appropriation of spiritual energy.

The sky is overcast, the stars are beclouded, ... the (very) bones of the earth-god tremble, ... when they see (this dead man) appear animated as a

god who lives on his fathers and feeds on his mothers. ... (He) is the one who eats their magic and devours their glory. The biggest of them are for his breakfast; their middle-sized are for his dinner; and the smallest of them are for his supper. Their old males and females (serve only) for his fuel. ("Cannibal Hymn," translated by John A. Wilson, in Frankfort, et al., 1946: 68)

Originally written for the deceased king of Egypt, the "Cannibal Hymn" was later taken over by commoners, who believed "that any human might become so magically potent that he could consume the greatest of the gods and, by consuming them, take their magic and their glory into his own being" (Wilson, in Frankfort, et al., 1946: 68).

The apex of the cone is the point of ego death. By the time the self spirit has reached the apex the King has eaten (that is, incorporated) every other spirit (this is the meaning of human sacrifice: the King must be fed.) There is no one left to lead. No one left to dance with. Infinite libido, and yet no-one to engage in intercourse with. The King is no longer King. The King has died and his social order has been destroyed. In the journey out from the apex, however, the social order of spirits is reconstituted. The apex is the point of transformation and renewal. How does this happen?

Each level of the spiral cone, each generation of spirits, forms a circle of dancers. The circle is divided into Day and Night, into a light segment and a dark segment, and with each earlier generation of spirits (as the winter solstice approaches) the dark segment grows larger. As the paramount chief of any particular generation of spirit-dancers, the King, who is the Self, encompasses and by doing so marries the entire circle of dancers within his Body. In spite of the libidinal pleasure of this marriage and a sense that a grievance has been mended the ego, who is also King and leads the circle dance as its choragus, retains its abhorrence of the negative spirits within the circle. Indeed it is profoundly shocking for the ego to discover that each spirit in the circle is part of its self. Nonetheless, it is through this marriage that the society of spirits is transformed. The war of opposites ends completely at the apex of the spiral cone, and a new society is established on the way out.

Each generation is a society of spirits who dance together. They "dance" because at the core of every spirit is a packet of emotional energy possessing a characteristic frequency or rate of change. Clynes (1977, 1982) has shown that each emotion is embodied with a characteristic dynamic contour which he calls a "sentic form." Each spirit has its own peculiar rhythm and dances in its own peculiar way, but does not and cannot dance alone. Only when dancing in a circle together with the other members of its generation does a spirit possess a characteristic *rhythm*.

An example should help clarify this. During infancy the relation between mother and child occurs exclusively at the emotional level. Mother and child dance together. If mother repeatedly performs a hostile dance a negative mother complex will become constellated. A negative mother complex

may be found on the earliest apperception of the annihilative aspect of the mother. The apperception is in terms of an affect image--perhaps of the witch image. If this hurtful interchange becomes a major problem for the child, it gains a strong emotional stress, becomes a complex swollen up with more and more associations, and thus is ever more easily projected. (Perry, 1976: 28)

Not only is the witch image projected onto objects but the self spirit performs the dance of a victimized child. The result of this interchange is that both the spirit of the witch and the spirit of the victimized child (with which the self in an ordinary state identifies) carry a surplus charge of emotional energy. Within a trance or psychotic experience this emotional energy can be amplified to the breaking point, until the self "switches" into the next earlier generation. The witch and the victimized child essentially kill each other during their incestuous union in the wheel of the entranced or psychotic self by filling with too much energy.

According to the alchemists "conflict was the beginning of transformation of the *prima materia*" (Mindell, 1985b: 129) but was resolved with the marriage of the hot, solar, male principle (sulphur) to the cold, lunar, female principle (mercury). Similarly, Mindell

(1985b) reports that the psychotherapeutic process gets started by focusing on conflicts but eventually moves out of the realm of opposites.

[Opposites] literally kill or exhaust one another. The alchemist looking into his pots imagined the solar and the lunar principles fighting to extinction. ... [The opposites] amalgamate or flip into one another so that they become indistinguishable. The angry father sounds like the little boy, the helpless child turns into a powerful god. The aggressive fists of the puncher turn into the fluttering chest of wailing depression. The opposites annihilate each other or become indistinguishable (Mindell, 1985b: 130)

And so the process continues with the death of each generation of opposites as each progressively deeper conflict is resolved.

But on the way back down the genealogical tree each formerly problematic generation of spirits is reborn with a different energy distribution. Spirits can never be utterly destroyed. They are universal (or archetypal) emotional possibilities of the human body. But the surplus energy given to them (at the cost of the self spirit--this is why the pre-psychotic schizophrenic or schizoid personality is emotionally flat) can be redistributed. The enlightened individual is the archetypal Person (the highest ranking King and Queen) and is free of any biased distribution of energy within the spiral cone. Having identified with every spirit in the cone on its way to the apex the enlightened self can identify with any spirit the objective situation requires. As Reich (1945) and more recently Johnson (1983) would put it, the enlightened individual is free of a "body armor," which means that he or she is not frozen into a limited set of emotional postures or movement patterns. Enlightenment is liberation.

### C. The Song and Dance of Divine-Kingship

Roheim (1952) presents many examples, taken from primitive to classical Greek culture, of the hero's journey to the underworld, which show that the hero's journey has



the form of a spiral dance through a labyrinth or maze. We also have Roheim to thank for the demonstration of an association between the hero's journey to the underworld and coitus, uterine regression, and the process of falling asleep. But we must disagree with the fundamental thesis of Roheim's (1952) book that "the myths on the descent to the other world and the return are based on the basic dream mechanism" (277). Our view is that the myths on the descent to the other world and the return are based on the mechanisms of trance experience. Although trance experience can be similar to dreaming (thereby explaining the association between falling asleep and the descent to the underworld), it must not be equated with dreaming. Since the time that Roheim wrote it has become clear to psychologists and anthropologists (see, for example, Winkelman [1986]) that a trance is a distinct altered state of consciousness not to be confused with dreaming. On the one hand it is surprising that Roheim missed this given his fieldwork among shamanistic peoples such as the Central Australian aborigines. On the other hand we may be able to understand his error as due to the fact that within the school of Freudian psychoanalysis, to which he gave dutiful service, dreams were believed to be the royal road to the unconscious. It is revealing, for example, that although Roheim (1952: 274) lists the same sequence of New Year rituals which Perry (1976), a Jungian, discovered in psychotic experience, Roheim can explain these only as a round-about description of the process of falling asleep. However, in spite of Roheim's basic error, his work is an invaluable source of information on the descent to the underworld.

According to the natives of Malekula the ghost of a dead man must travel to the underworld where he will find traced in the sand

a geometrical figure called 'Nahal' (the path). The route along which the ghost must go lies between the two halves of the figure. As the ghost approaches, Temes Savsap wipes out half the tracing and tells the traveler that before he goes on he must complete the picture correctly. Most men during their lifetime have learned how to make this and other geometrical figures so they pass safely on their way. But if a man fails the test Temes Savsap seizes him and devours him (Roheim, 1952: 263)

A successful journey to and from the underworld requires that one follow a path with a specific geometrical form. Roheim (1952: 264) believes that these maze patterns are variations of the *mandala*, and that the mandala is symbolic of the vulva or uterus. Entrance into the underworld through a maze or labyrinth is therefore equivalent to entering the womb and confronting the danger of being devoured by the Terrible Mother. The hero overcomes this danger by solving the riddle and dancing with the correct rhythm and form.

The geometrical form of the path to and from the underworld is a concentric spiral. On the Indonesian island of Ceram it was believed that "when people die, they go through the ninefold spiral to Satene." (Roheim, 1952: 266). Like the maro dance also performed in Ceram the spiral radiates to and from the center of a mandala, in other words, to and from the center of a uterus. Roheim recognizes that the path into the other world is a road leading to a "dangerous menstruating vagina" (1952: 266), but he does not connect the nine revolutions of the spiral with the nine months of gestation in the womb before birth, when, we may presume, the hero undergoes nine deaths. At least in West Africa Meyerowitz (1960: 83) reports that the concentric spiral was symbolic of birth. Later, however, Roheim does remind us that the "infant in the process of being born turns around" (1952: 290), and compares this to the whirling, spiral movement which, according to Roheim, is also experienced while falling asleep.

Roheim proposes that the shape of the id or primary process is a spiral:

Imre Hermann has noticed that if the patient really associates the way he should on the couch, the association is not completely free but sort of circulates round the original word from which it has started out. ... In general, he [Hermann] regards the straight line as belonging properly to the ego, while the spiral is the id or primary process.

It is of importance to note what Bender says about schizophrenic children: 'Rotating and whirling motor play in all planes make up a large part of their activity ...' (Roheim, 1952: 290-291)

Roheim believes that the journey to the underworld is the process of falling asleep

because as one falls asleep the ego merges with the id, which has the shape of a spiral. Similarly, we believe that the labyrinthine journey to the underworld is the process of entering a trance because as one enters a trance the ego merges with the id, which has the shape of a spiral.

The "id" is system X. System X includes both endokinesis and ectokinesis, which possess analogous and inter-connected structures. In what follows we will examine the mechanics of ectokinesis and compare it to the mechanics of the monochord. If this comparison is valid we will be able to understand why the mechanics of the monochord is the basic model which informs ancient cosmology, astronomy, music and mathematics (see Heelan, 1979 and McClain, 1976 and 1978).

The monochord is more than an elementary musical instrument: it is a metaphor of the Body. Just as we may sing and dance to the sound of a musical instrument, thereby becoming one with it, so in a trance does the ego sing and perform a spiral dance to the sound of the Body. Concerning the genealogical spiral of ancestral spirits Laing writes,

The more one studies families in detail, the more it becomes apparent that patterns are spread over generations. They undergo transformations. No one, as far as I know, has found out whether *these* patterns and their transformations *can* be expressed in terms that at present we call mathematical. This is understandable. We ourselves, all of us, are ourselves the elements of the pattern we are trying to discern. Family patterns are not laid out before us like the stars in the sky. (Laing, 1969: 86)

All of us are elements of the pattern except the King, who is the whole. And advanced theocratic societies believed that these patterns *were* laid out before us like the stars in the sky. Lastly, if our comparison between the mechanics of ectokinesis and the mechanics of the monochord is a valid one, then it *will* be possible to offer a mathematical description of the genealogical spiral of ancestral spirits experienced within a trance.

Trance induction procedures disturb the homeostatic balance of the autonomic nervous system and block the orienting response to novel stimuli (see above, chapter III,

section C). The consequent incapacity to act effectively (in a goal directed or instrumental way) within the world of external objects throws the entranced individual into an introverted, defensive posture. He may, for example, perform a circle dance to establish a protected space. Within the safety of the circle the entranced individual performs ectokinetic movements to restore autonomic (endokinetic) homeostasis. Alternately the entranced individual may withdraw from the external world by switching into the visual channel and performing dances within the "dreamworld."

Movements which are merely visualized may satisfy a need for emotionally expressive movements just as well as actual movements. Indeed, Lerner (1967) argues that the function of dreaming is to maintain the kinaesthetic integrity of the ego by allowing us to engage in movements which we cannot (for social or other reasons) perform while awake. LaBerge believes that research done on lucid dreaming at the Stanford dream laboratory shows that dreaming is more closely linked to perception than to fantasy: "a series of our experiments provides evidence that, from the point of view of both dreamers and their brains (and to a lesser extent, bodies), dreaming of doing something is more like actually doing it than like imagining it." (LaBerge, 1985: 14). What LaBerge is calling the "body" here are objective physiological parameters including those which measure autonomic processes such as the rate of respiration or galvanic skin response. For example, LaBerge discovered that the dream image of breathing

appears to affect the sleeper's actual pattern of breathing. The results are not surprising when viewed in the proper light. The same relationship would probably hold true for walking, talking, or any other form of behavior, except for the fact that most of our muscles are paralyzed during REM sleep. The brain-stem system that accomplishes the general suppression of muscle tone during REM dreaming saves us from running around with our eyes closed in the middle of the night-- (LaBerge, 1985: 80)

The only reason we do not actually move when visualizing movement is that the brain stem system prevents us from doing so. But the brain stem is the last part of the central nervous system to receive information about movement before sending signals down the

motor nerves to muscles. This suggests that other parts of the central nervous system above the brain stem--including the limbic brain--may operate exactly as if we were actually moving. It is at least true that we *experience* visualized movements with the same degree (if not with a greater degree) of emotional intensity as we experience actual movements.

Ectokinesis whether visualized or actually performed possesses a precise mathematical-musical structure. Recall that ectokinesis exerts force only against the body itself, not, as teleokinesis does, against external objects. For this reason the nature and structure of ectokinetic movement is determined solely by the mechanical structure of the body. But what is the mechanical structure of the body? Yakovlev informs us that,

The skeletal musculature of the body wall and extremities (soma) represent a system of compound symmetrical levers disposed seriatum in the somatic axis of the body. The inventory of levers is species-specific and finite, and the homonymous levers of each symmetrical pair are equipotential or *isodynamic* in the sense that the work-potential (performance) and the postural configurations effected by the levers on one side of the plane of symmetry are equal and mirror those on the other side. It is noteworthy that all these symmetrical levers are mechanical levers either of the first or of the third class. Such a system of levers is a closed action system in which the body itself is the fulcrum, and the work effected is within the system (the body). (Yakovlev, 1970: 203)

The mechanical nature of a lever requires that it rotate around a relatively fixed point, and after moving for a finite period of time it either comes full circle back to its initial position or reverses direction like a pendulum. All ectokinetic movements are of this kind. Teleokinetic movements on the other hand are not limited to the rotational movements of levers because external objects do not necessarily function as fulcrums or rotate around fulcrums. Ectokinetic movements are limited to the body's fixed, finite inventory of levers which together must rotate around the body's center of gravity. Even when teleokinesis does involve the rotation of a lever it is not limited to the body's own fixed, finite inventory of levers and does not necessarily use the body's center of gravity as a fulcrum but can employ an indefinite number of external objects as levers and as fulcrums.

The levers of the body as Yakovlev tells us are arranged *in series* along the somatic axis of the body. The arrangement of levers in a snake's body is simpler than in a human body (we might think of the human body as several inter-connected snakes) but the principle is the same: a series of body parts pivot and oscillate around joints. The analogy with the monochord is now easy to make. Rhythmic waves travel down the length of a snake's body (which, with regard to its relevant mechanical structures, is no different than a human body) just as waves travel down a monochord. The snake's body (like a human body) is a set of oscillating components connected in a series. More specifically, a snake's body oscillates in the way that standing waves do on a monochord. The joints of a snake's body divide it into an integer number of oscillating parts just as the nodes of a standing wave divide the monochord into an integer number of oscillating parts.

Pythagorean mysticism was based on the discovery that simple ratios of string length on the monochord correspond to consonant musical intervals. The Pythagoreans believed that the mathematical order of music that they discovered on the monochord applied to everything in the universe ranging from the microcosm of the human soul to the macrocosm of the celestial bodies. Similar ideas are found in all the ancient agricultural civilizations (see Heelan, 1979 and McClain, 1976 and 1978).

The reason that the monochord proved to be such a fruitful model of the universe for the Pythagoreans was that vibrations on a monochord are an example of harmonic motion that is particularly easy to study. Harmonic motion is a type of motion that explains an exceptionally wide range of phenomena including the movement of the celestial bodies and the change of the seasons, phenomena that were carefully observed by all of the ancient agricultural civilizations. The north-south-north-south movement of the sun over the course of the year is an example of harmonic motion. The orbit of an electron is a three dimensional standing wave form analogous to the standing waves that can be established on a monochord. Many mechanical systems such as a pendulum engage in harmonic motion when they are displaced from a position of stable equilibrium. Here I

am proposing that trance induction procedures disturb the equilibrium of the autonomic nervous system and thereby cause harmonic motion at the level of both endokinesis and ectokinesis that is similar to the harmonic motion of a monochord. Let us therefore examine the monochord in more detail.

When displaced from a position of stable equilibrium harmonic systems such as the monochord will vibrate only at specific resonant frequencies. Because wavelength is inversely related to frequency there is also a specific set of resonant wavelengths. Almost no energy is lost from resonating systems. Like the ectokinetic body or an electron they are closed energy systems. This is because they are confined within fixed boundaries. At the ends of a string (or monochord) that is vibrating at one of its resonant frequencies no vibration will occur. A point along a vibrating monochord at which no vibrations occur and which does not move lengthwise across the monochord is called a *node*. When a monochord is vibrating at one of its resonant frequencies there will be a node at the beginning and end of the monochord and at each half wavelength in between. An *antinode* is a point midway between two nodes at which maximum displacement occurs. The number of antinodes on a vibrating monochord is equal to twice the length of the monochord divided by the resonant wavelength. Inversely, the set of resonant wavelengths is  $\lambda_n = 2L/n$  where  $n = 1, 2, 3, 4 \dots$  and  $L =$  the length of the monochord. Resonant waves are called *harmonics*. The longest resonant wave is called the *fundamental* or *first harmonic*. The second longest resonant wave is the *second harmonic*. The third is the *third harmonic*, and so on.

Another concept which must be introduced is that of a *beat*. It is possible for the monochord to vibrate simultaneously at more than one harmonic. The second highest harmonic present is called the *first overtone*, the third highest harmonic present is the *second overtone*, and so on. Overtones do not generally vibrate at the same amplitude; instead the higher harmonics have progressively smaller amplitudes. Because amplitude is related to energy this means that the higher harmonics carry less energy. When the

string of a musical instrument is plucked it is the fundamental harmonic which we hear most loudly. A beat is a more complex wave form produced by the super-imposition of two or more harmonic waves. Fourier showed that *any* periodic form can be described mathematically as the summation of component sinusoidal waves, in other words, by a fundamental harmonic and its overtones.

The monochord produces compression waves in the air at the same frequency as its own rate of vibration which we hear as musical *tones*. The second harmonic is one octave up from the fundamental tone or first harmonic. The fourth harmonic is two octaves up from the fundamental. In general the  $2^n$ th harmonic is  $n$  octaves up from the fundamental. If the monochord is of unit length then a harmonic  $n$  octaves up from the fundamental will have a wavelength equal to  $2^{1-n}$  and a frequency proportional to  $2^n$ . In general the progression (and regression) of harmonic frequencies and wavelengths is defined by an exponential function. In the case of the octaves the exponential function is of the form  $2^x$ . In the case of musical "twelfths" it is  $3^x$ ; the next series has the form  $5^x$ ; and the one following that,  $7^x$ , and so on. This is important for our purposes because the radius of the spiral dance is also an exponential progression leading out from the center (with a positive exponent as it is for the progression of harmonic frequencies) and an exponential regression leading back in toward the center.

Now the musical scale has a peculiar property known as "octave invariance." Multiplying or dividing any frequency (or wavelength) by any multiple of 2 yields another frequency (or wavelength) which sounds (although different in some respect) like the same note. According to McClain (1976, 1978) octave invariance was the cornerstone of ancient cosmology, music and mathematics--and we must add, of politics too. Octave invariance means that the progression of harmonics recognized by musical notation will in some sense repeat at each octave. For this reason the progression of musical harmonics is better represented as a circle than as an exponential spiral, with each 360 degree revolution of the circle corresponding to one octave. However, if we draw radial



lines out from the center of our spiral, representing each note in the musical scale, then these lines will intersect the spiral exactly at each 360 degree revolution of the spiral. Since we know that notes repeat on each octave we now know that our exponential spiral is of base 2, in other words, of the form  $2^x$ . We can take the base 2 logarithm of this function and get a linear function of the form  $y = ax + b$ . Taking  $y$  as the angle of rotation around a circle we can then plot  $y$  as  $x$  varies along the circumference of a circle with fixed radius. What results is a *tone mandala* of the sort that McClain (1976, 1978) has found in abundance throughout ancient literature.

The exponential spiral dance is a spiral of octaves. The ancient civilizations which used the monochord as a model for cosmology, musicology and mathematics believed that the number two was female and that the octave was like a womb. Proceeding out from the center of the spiral the womb multiplies (1,2,4,8,16 ...) and returning back to the fundamental it divides. The spiral is a process of birth and death, progression and regression. The outermost point of the spiral corresponds to the summer solstice; the innermost point or circle corresponds to the winter solstice. Each revolution of the spiral out from the center gives birth to another overtone of the fundamental at one octave above the overtone produced in the previous revolution. These are the female children of the fundamental, the Queens of each generation (revolution of the spiral). But "male" children multiply too: powers of three, five and seven ... and multiplicative combinations of these (for example,  $3 \times 5$ ,  $3 \times 5 \times 7$ ,  $3 \times 7$ , etc.). In other words each revolution of the spiral corresponds to a level in a pyramid of tones. Because any integer (recall that every harmonic is an integer multiple of the fundamental frequency) can be expressed as the product of prime numbers, we can "generate" all overtones through the multiplication of prime numbers. Division would correspond to the "death" of an overtone. We can limit the population of our "city" by limiting the number of primes we use to generate "children." One possibility would be to limit the pyramid of overtones to combinations of 2, 3 and 5. Then every number in the pyramid would equal  $2^P \times 3^Q \times 5^R$  where P, Q and R are

chosen from the set of non-negative integers.

It is the task of the divine-king to fertilize the monochord with overtones. He does this by performing the spiral dance. If the  $m$ th overtone is the  $p$ th harmonic of the fundamental then as a standing wave the  $m$ th overtone will divide the monochord into  $p$  vibrating (or dancing) antinodes. Each antinode is a body part separated from other body parts by a joint or node around which it turns. According to the Rig Veda the hero must dismember a dragon to create the cosmos. The dragon is the monochord. It is dismembered by singing and dancing. It is cut by the nodes of standing waves produced by overtones of the fundamental. The Vedic people called the holy chant *Vac*. The Homeric bards called it *Logos*. In Egypt its name was *Hu*. The shamans of Meso-America told Wasson (1980: 39) that the mushroom es habla, is the Word. Maria Sabina chants:

Your heart is a book of songs;  
 You have come to let us hear your song.  
 You are sounding your drum.  
 You are a singer,  
 among flowers of spring  
 you delight people.  
 (Wasson, 1980: 89)

In theocratic oral cultures the Word provided an interface between the sacred and the profane, between the Body and the world of minds and objects. As tonal sound the Word imitates the Body's own song. As coded signifier carrying semantic content it refers to mental states and external objects. This dual reference of the Word gave members of theocratic societies confidence that if they followed the Word the world of minds and objects would conform to the shape of the Body. The Word was cosmogenic and cosmological (it both created and described the world.) Only the Word sung from the Body conveyed truth and knowledge about the existing order of things (Vedic *Ṛta* or *Rita*, Greek *Dike*, Indian *Dharma*, Chinese *Tao*): all else was Chaos. But the Word was also the instrument of statecraft. The spiral, let us not forget, was understood to be a genealogy. When the king recites his genealogy the noblemen learn of their place in the

state hierarchy.

Hawaiian society was a written text woven and bound together by the king with a sacred cord, but it was also a song. "The idea that the king is a 'binder' or 'weaver'" is reflected in the literal meaning of his title which means "'to weave' and, by extension, 'to put in order,' 'to compose a chant.'" (Valeri, 1985: 298).

in Hawaii the political function coincides with the poetic function. ... [the poem] becomes a bond that, bound in the memory of all, binds them. The text is the texture of society. The creation of the chant is the creation of society through the chant. In the same vein, by 'weaving' the `aha (ritual cord) the king 'weaves' his men. (Valeri, 1985: 298-299)

The sacred cords used by the king in the `aha rites are symbols of his *mana* (Valeri, 1985: 296). But since the king's *mana* or energy is derived from his spirit-ancestors and ultimately from the founding ancestor-god, the sacred cord must also be a symbol of his genealogy. People who enter the ceremonial house called the *hale naua* must prove their genealogical connection with the king. At the entrance of the *hale naua* is hung the `aha *kapu*, the king's sacred cord. When people of inadequate rank attempt to enter the *hale naua* they are killed by the cord. Others are admitted unharmed. "The magical way this cord is supposed to admit or reject people who claim kinship with the king reflects their inclusion in or exclusion from his genealogy." (Valeri, 1985: 296).

The sacred cord represents the king's relationship with the ancestor-spirits and binds them all together. But because the hierarchical organization of the nobility (the structure of the state) duplicates or imitates the genealogical structure of the spirit realm, because, that is to say, the king's genealogy determines the political structure (or texture) of the nobility, the cord not only binds the king and his ancestors together but binds the nobility to one another. The sacred cord (`aha *kapu*) is

the genealogy that binds together all other genealogies, since it is their reference point and the locus of their legitimacy or their truth. Hence, the king's 'cord' (`aha) is in fact also the 'association' or 'congregation' (`aha) of nobles ...

In sum, we may say that three relationships coincide in the cord: that

between the king and the god, that between the king and his followers, and that among the followers. Moreover, these relationships are hierarchized in that the reproduction of the superior one is the condition of possibility for the reproduction of the inferior. (Valeri, 1985: 296-297)

"The god" is the founding ancestor situated at the apex of the spiral cone who as archetypal Person includes within himself all other spirits as parts. The king, whose relationship to the nobility is analogous to the relationship between the founding ancestor-god and the other spirits, is the archetypal Person of the living state, holding together all members of the nobility as parts of his Body. The king's Body therefore serves the same function as the sacred cord: that of binding together diverse members. Valeri writes: "Insofar as the king embodies the ideal species in society ... he is represented as a 'binding cord.'" (1985: 297).

The king's Body binds together the members of the state but at the same time of course it must divide them. The state is not a homogeneous mass but a highly structured and indeed articulated whole. Consider the monochord: it too is a cord which binds together its parts and yet is divided by nodes, the hinges around which the levers of the Body turn. The king's song and dance, like the song (emitted tones) and dance (resonant vibrations) of the monochord, both binds together and divides. Indeed, as was mentioned above, it is the task of the divine-king to fertilize the monochord with overtones. The fundamental tone alone does not divide the monochord because its nodes are situated at the beginning and end of the monochord. Only by producing overtones (by singing and dancing) can the King divide the monochord, providing the model of the cosmos and the fundamental condition for its creation. Only with *Vac* can Indra (the hero of the Rig Veda) dismember the dragon Vritra and create the cosmos. At New Year, when the spiral returns to the fundamental and all overtones have been quieted, the monochord is not divided by any nodes. The dragon is let loose and Chaos reigns. New Year is the carnival season when no one knows their place.

The annual calendar of theocratic societies reflects the structure of trance

experience. In one common variation of this calendar the lunar year is divided into twelve months totaling 354 1/2 days with another 10 1/2 days set aside for the New Year ceremonies. Without this intervening period the solar and lunar years would become progressively more desynchronized. New Year is the season when the solar and lunar calendars are brought back into line with one another. If the Sun is male and the Moon is female then New Year is the time of the sacred marriage when opposites are conjoined. The state hierarchy collapses, genealogies are forgotten, and society becomes a politically homogeneous mass. Similarly, within a trance the genealogically organized spirits are transcended at the apex of the solar dance.

Earlier, we quoted an alchemist who believed that the orbit of the Sun was an uroboric dragon. This may be surprising since we might expect to find the dragon only in the lower portion of the Sun's orbit below the Earth. Isn't the hero's goal to escape from the belly of the whale? In the Rig Veda the priest Agni (the god of fire) is both sacrificer and sacrificed, both hero and dragon, Sun and Moon, Day and Night. Agni is the snake (monochord) which Agni sacrifices (dismembers). Day and Night are not opposites because it is within the Night that the models for the Day and the entire cosmic cycle between Day and Night are to be found. The models for an objective society are to be found within a trance (when object relations are temporarily suspended.)

But what is the structure of trance experience? According to my proposal trance induction procedures disturb the equilibrium of the autonomic nervous system and thereby cause harmonic motion both at the level of endokinesis and at the level of ectokinesis. But ectokinesis, we have suggested, can be compared to the vibration of a monochord. Both are harmonic oscillators. When the monochord is struck it will vibrate not only at the fundamental tone but at a set of overtones. But, we noted, overtones do not vibrate at the same amplitude because the higher harmonics carry less energy than the fundamental. The monochord vibrates because it has been displaced from a position of stable equilibrium. The amplitude of the fundamental and of all overtones is directly

related to the quantity of energy which has been added to a harmonic system. The more energy is added to the monochord the further it is displaced from its equilibrium position, and the larger the amplitude of its fundamental and of its overtones. Because each successive overtone has a progressively smaller amplitude there will come a point in the series when the amplitude is zero. Depending on the quantity of energy applied to the system this point will come earlier or later in the series. The further the system is displaced from equilibrium the greater the number of overtones present. In other words, the greater the quantity of energy in the system relative to the quantity of kinetic energy in the system at equilibrium (in the case of the monochord the equilibrium kinetic energy is zero) the greater the number of overtones present. The point of greatest displacement from equilibrium is the summer solstice when the sun is hottest and the earth is most fertile.

Now a monochord is a damped harmonic system. After a finite period of time it returns to equilibrium unless more energy is added to the system. As it approaches its equilibrium position (the winter solstice) the number of overtones gradually decreases, until only the fundamental is left and then finally that is lost. But if the monochord is struck again, of course, it will resume its "dance."

A *driven* harmonic oscillator is one to which energy is being added from outside the system. Stable systems always remain at equilibrium unless they are driven. When energy is added to stable systems they return to equilibrium at various rates. After it is struck a piano string continues to vibrate for a noticeable period of time. A violin string requires more continuous input. A wind instrument does not vibrate at all unless it is being driven. In this respect ectokinesis is more like a wind instrument than like a piano string.

I propose that we model the Body of the entranced individual as two interconnected sub-systems, one which drives the other. The driving system is the autonomic nervous system associated with endokinesis. This system oscillates back and forth

between ergotropic (energy expending) and trophotropic (energy conserving) poles. The driving system adds (surplus, dis-equilibrating) energy to the ectokinetic system at a rate proportional to  $F(\text{THETA}) = K + \text{COS}(\text{THETA})$  where  $\text{THETA} = \text{time}$ . The driving system may itself be moving toward equilibrium so this function may apply to only limited periods of time. At  $\text{THETA} = 0$  the quantity of energy being added to the ectokinetic system reaches its maximum value. This is the summer solstice when the greatest number of overtones exist. At  $\text{THETA} = \pi$  the quantity of energy being added to the ectokinetic system reaches its minimum value. This is the winter solstice when the least number of overtones (if any) exist. The more powerful the driving system is the deeper the quiet of "winter" will be and the louder and more energetic the singing and dancing of "summer" will be.

The sun drives the earth in the way that the autonomic nervous system drives ectokinesis within a trance. The energy the sun radiates upon the earth, which reaches its peak during summer when the earth is most fruitful, varies at a sinusoidal rate just as the driving system of trance experience does. But the sun is the divine-king. His power wanes in the winter when his song is not so richly melodious and his dance not so rhythmically complex but waxes in summer with a profusion of overtones. Recall that we can arrange harmonic tones in a pyramidal hierarchy. At the second level we find the number 2, one octave below the fundamental, and the first male tone, 3. At the third level we find the numbers 4, 5, 6 and 7. The fourth level is led by the number 8. Because the pyramid is an exponential spiral of base 2, each level is led by a power of 2. In general the  $n$ th level is led by  $2^{n-1}$ .

Now there are at least two ways one might co-ordinate the sun's spiral dance with the spiral of harmonic tones. First one could associate each Day of the solar year with one level of harmonics. The fact that each level is led by a multiple of the female number 2 (each level is an octave), symbolic of the womb-tomb, suggests that, on the journey south, the Sun receives an additional quantum of energy from the moon-mother-Goddess

each Night before rising again the next morning, and that on the journey north, the Sun receives one quantum of energy less from the moon-mother-Goddess each Night before rising again the next morning. Another possibility would be that the Sun's energy is either increased or decreased each lunar month, rather than each solar Day. In any case although the Sun may be masculine his energy is feminine because it waxes and wanes in the same way that the light of the Moon waxes and wanes.

If we adopt the second view, then the pyramid of tones will have seven levels including the apex. The apex would correspond to the New Year season and the other six levels with the six months between the winter solstice and the summer solstice (on the way down the pyramid) and with the six months between the summer solstice and the winter solstice (on the way up the pyramid.)

Because at this point perhaps even more than at others the reader may object that I am *making* myths rather than writing *about* them I must pause to explain why any sincere study of myth *must* be *mythopoetic*. The Neapolitan philosopher Giambattista Vico (1668-1744) argued against the Cartesians that contrary to the physical sciences where we can know the object of knowledge only from "outside" of it, in the case of the human sciences we can know the object of knowledge from the "inside," i.e., from the perspective of the object of our study, because as fellow humans we are capable of imagining what it is like to be another human. Indeed, anthropologists know that if they want to understand an alien culture they have to see it through the eyes of those they are studying. This type of "sympathetic" understanding is characteristically "feminine" and opposed to the Cartesian ideal of objective knowledge. According to the feminist epistemologist Susan Bordo (1987) a whole cluster of feminine epistemological values died with the Cartesian revolution of the seventeenth century.

Descartes' program for the purification of the understanding, as we have seen, has as its ideal the rendering *impossible* of any such continuity between subject and object. The scientific mind must be cleansed of all its 'sympathies' toward the objects it tries to understand. It must cultivate



absolute *detachment*. Recognizing the centrality of such ideals to modern science has led writers like Sandra Harding to characterize modern science in terms of a 'super-masculinization of rational thought.' (Bordo, 1987: 103-104)

Ancient cultures were not nearly as "masculine." According to Frankfort, et al. the mythopoetic thought of the ancient Near East regards the surrounding world as a "Thou" (not an "It") to be "experienced emotionally in a dynamic reciprocal relationship." (1946: 5). Cartesian epistemology has no place in a Nietzschean-matriarchal study of non-Cartesian ancient cultures.

To sympathize with an ancient culture is not, however, to regress or return to the past. To sympathize with an ancient culture is to re-em-*body* it. But by providing an ancient text with a living body (by animating the text) we make it possible for that culture to *move* into the future, in a way that an unembodied text, as a mere lifeless *object*, cannot. Thus we are not clinging to the myths of the past but making a new myth for the New Year. It is in this spirit that I weave the concepts of systems engineering into transformed and idealized versions of ancient myths.

The King's spiral dance can be divided into thirteen periods (the twelve lunar months plus the New Year season.) In the transition from one period to another either the lowest level of harmonic tones is lost or another level of harmonics is added below the existing lowest level. This process of adding and subtracting harmonic levels can be understood as a process of birth and death. Each 360 degree revolution of the spiral corresponds to one *generation* of harmonic tones. The spiral therefore possesses a genealogical structure. Each level is born from the one above it and dies by returning back to the womb from which it was born. Between the winter solstice and the summer solstice (when the King's fertility reaches its height) each level of harmonic tones is born, one after the other. Between the summer solstice and the winter solstice each level of harmonic tones dies, again, one after the other, in discrete steps. This cyclical process of birth and death reflects the waxing and waning of the King's energy.

In a matrilineal society one traces one's genealogy along the female line. A matrilineal version of the genealogical structure of the pyramid would be the following: the founding ancestor-god (the number 1) is either female or hermaphroditic. The founding ancestor-god gives birth first to a female child, the number 2, who becomes the Queen of her generation, and then to the number 3, the Queen's brother, the divine-king. These two mate and give birth to the numbers 4, 5, 6 and 7. 4 is the first born female child of her generation and becomes, in accordance with the universal law of primogeniture, the Queen of her generation. She will marry the highest ranking male member of her generation, the divine-king, 5. It is possible that the number 6 may become the Queen of her own clan, which has split off from the parent clan. This clan, however, will be ranked lower than the original clan.

In the matrilineal version of the genealogical structure of the pyramid the line of descent is the number series  $2^n$ . The Egyptians, for example, who were a matrilineal people, devised an ingenious arithmetical procedure whereby "the 'female number 2' was made to 'give birth' to all larger numbers." (McClain, 1976: 176). In the patrilineal version, however, one traces one's genealogy down a line of *odd* (male) numbers. How is this possible? We begin with the number 1 who is the father of numbers 2 and 3. The number 3 will be the divine-king of his generation. But if 3 is the father of 4, 5, 6 and 7 we run into a problem, because the first born male child, who should be the heir to number 3, does not resemble his father: the number 5 is not a multiple of the number 3 as the number 4 is a multiple of the number 2. Going down to the next generation we find that the numbers 9, 11, 13 and 15 are not multiples of 5 or 7. The number 35 which can be generated by multiplying 5 and 7 is three generations down--surely too late to be the heir to number 5.

The generations of legitimate Kings are not defined by multiples of 2 but by multiples of odd numbers ( $3^n, 5^n, 7^n \dots$ ) with the exception of the number 1 (any multiple of 1 is still 1). The problem can be stated as follows: how do we insure that musical intervals defined by odd numbers will repeat on each octave (=generation)? How will a

true heir to the King be born from the Queen's womb? In Plato's *Republic* the King's first born male child always falls short of his father. Consequently the state deteriorates with each generation. The state begins as an aristocracy but deteriorates with the next generation into a timocracy, followed by an oligarchic government, which degenerates into democracy, followed finally by tyranny. According to McClain the incommensurability of thirds, fifths and octaves is the central musical problem of Plato's *Republic*.

From a musician's perspective, Plato's *Republic* embodies a treatise on equal temperament. Temperament is a fundamental musical problem arising from the incommensurability of musical thirds, fifths, and octaves. The marriage allegory dramatizes the discrepancy between musical fifths and thirds as a genetic problem between children fathered by 3 and those fathered by 5. The tyrant's allegory dramatizes the discrepancy between fifths and octaves as that between powers of 3 and powers of 2. The myth of Er closes the *Republic* with the description of how the celestial harmony sung by the Sirens is actually tempered by the Fates, Lachesis, Clotho and Atropos, who must interfere with planetary orbits defined by integers in order to keep them perfectly co-ordinated. (McClain, 1978: 5)

In general the spiral can accommodate any possible genealogical structure. Each revolution of the spiral corresponds to a generation composed of male and female members. How we connect up these generations with lines of genealogical descent will vary depending on psychological and sociological variables. Equal temperament was Plato's way of imposing a patrilineal genealogy onto the spiral.

To sum up: the spiral is both a hierarchy of ancestral spirits and a hierarchy of harmonic tones (with their corresponding frequencies or rates of vibration.) The connecting link between these two aspects of the spiral is *emotion*. There is a one-to-one correspondence between emotions and the community of spirits and also between emotions and harmonic tones. Thus a particular spirit and a particular harmonic tone may be assigned to each emotion.

Harmonic tones superimpose upon one another to form complex wave patterns (beats) which possess characteristic *rhythms* and characteristic wave shapes. For example, suppose that we strike a monochord sufficiently hard to produce only the first

three harmonics (1, 2 and 3). If 1 is represented like this: |\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_| ... , and if 2 is represented like this: |\_|\_|\_|\_|\_|\_|\_|\_|\_| ... , and if 3 is represented in this way: |\_|\_|\_|\_|\_|\_|\_|\_|\_|\_|\_|\_|\_| ... , then superimposing 1, 2 and 3 yields the following rhythmic pattern: |\_|||\_|||\_|||\_|||\_|||\_| ... This is a beat with a frequency equal to 1. Unlike pure tones, the amplitude of beat waves fluctuates in a periodic way. Because amplitude corresponds to energy, the characteristic wave shape of a particular rhythm corresponds to a specific *dynamic contour*. A dynamic contour is a function which plots energy against time. Clynes (1977, 1982) has found that we experience particular emotions as particular dynamic contours, which he calls "sentic forms," and conversely, that we experience particular dynamic contours as expressive of particular emotions. In cross cultural studies subjects were found to move their fingers in characteristic ways when asked to express particular emotions. In other studies Clynes demonstrated a correlation between sentic forms and rhythmic patterns in music. In yet other studies Clynes found that subjects could recognize the emotion expressed by sentic forms produced by varying the loudness (or amplitude) of sound waves with fixed frequencies.

Von Franz reminds us that according to Jung a spirit is "a spontaneous principle of movement in the unconscious psyche which engenders, autonomously manipulates, and orders inner images," but adds that "number is, as it were, the most accessible primitive manifestation of this transcendental spontaneous principle of movement in the psyche." (1974: 53). A number must not be understood as merely a quantity, Von Franz insists, but as a *rhythmic pattern of movement*. But that is precisely what a spirit or archetype is.

The archetypes primarily represent dynamic units of psychic energy. In preconscious processes they assimilate representational material originating in the phenomenal world to specific images and models, so that they become introspectively perceptible as 'psychic' happenings. (Von Franz, 1974: 155)

A field of numbers is a field of archetypes-spirits is a field of rhythmical sequences. Von

Franz offers many examples of number fields which she believes were meant as maps of the collective unconscious (the totality of all archetypes or spirits.)

the Pythagoreans, the aging Plato, as well as the bulk of mythological and qualitative Western number theories, all postulated an equation between archetypal images (or ideas) and numbers--seeking to arrange them in hierarchical order. ... they were attempts to outline *the total order of the collective unconscious* (Von Franz, 1974: 142)

The spiral we have been speaking about is an example of such a number field. Each generation of harmonic frequencies within the spiral forms a complex rhythmic pattern. Alone the spirits are monotonous. Together they perform a circle dance as they cycle through a series of emotions (some pleasant, some painful) which characterize their generation.

Makeig (1982) has mapped Osgood's (1975) three dimensions of affective meaning or emotion onto the field of tone intervals. Specifically, Osgood's active-passive dimension of affective meaning corresponds to positive and negative powers of 3 (musical fifths with respect to the octave) in an interval ratio. Osgood's potent-impotent dimension of affective meaning or emotion corresponds to negative and positive powers of 2 (octave intervals). Lastly, Osgood's good-bad dimension corresponds to positive and negative powers of 5 (musical thirds with respect to the octave) in an interval ratio. Any musical interval composed of a sum or difference of octaves, fifths and thirds relative to the fundamental or tonic has an affective quality equal to the sum or difference of the affective qualities of its constituent upwards and downwards octaves, fifths and thirds (Makeig, 1982: 241).

there exists a particular set of integer-ratio musical intervals which do tend to qualitatively affect our affective imaginations in consistent ways; that is, when we listen to harmonic musical intervals while imagining that they are expressing some feeling, we then tend to agree about what feeling each interval expresses. (Makeig, 1982: 228)

This means that musical tone intervals are situated on the surface of the Body just like spontaneous facial expressions. Just as a smile (unless it is contrived; in other words,

unless it is a mask) can never be symbolic of anything else but joy or happiness (Ekman, 1980), the interval ratio 1:5 can never be symbolic of anything else but positive affect. Unlike the semantic content or objective referent of semiotically coded signifiers (such as written words) the emotional meaning of these symbols is biologically fixed and culturally invariant. If a word or phrase is sung it will have two meanings: a biologically determined emotional meaning and an objective meaning (which may, of course, also evoke emotion though not in a biologically fixed way.)

An important consequence of Makeig's theory is that the musical surface of the Body has an analogical structure. Because the pitch ratios 6:8 and 9:12 are equal they carry the same affective meaning and can be used as interchangeable (equal valued) metaphors. The analogy 6:8::9:12 is based on a common *affect*, not on a shared *idea* (as it is in the case of Plato's divided line.) A written text may possess an analogical structure too. But whereas analogical textual metaphors merely *signify* the same object (or mental state), analogical tone intervals when appreciated by the human ear *become* the same emotion. A tone interval is not a *codification* of an emotion but the *mimesis* (imitation) or *re-enactment* of an emotion. The spiral of harmonic wavelengths and frequencies is the most appropriate number field to use to map the collective unconscious because each harmonic value in the spiral defines a tone interval relative to the fundamental with a specific emotional meaning. But emotion is the essence of a spirit. Thus the spiral is at once the total community of spirits, emotions and tone intervals or musical sounds. This connection via emotion of tone intervals and spirits explains why in both possession trance rituals (Rouget, 1985) and shamanic hallucinogenic rituals (Dobkin de Rios and Katz, 1975) particular melodies are associated with particular deities. In addition, each deity possesses a characteristic face, which may be symbolically represented by a mask. The spiral dance is also a spiral song and recital of the genealogy of spirits.

The fundamental harmonic is the mystic center of the cosmos. As we approach

the winter solstice (the center) the number of harmonic tones and vibrations within the octave or circle of dancing spirits is gradually reduced. Because there are fewer component frequencies the rhythm of our dance becomes simpler. We are inflated with the power of the oldest, most powerful spirits. And yet, there is a sense of impending cosmic doom, of being on a runaway train, or of rushing into a black hole. Our steps grow fewer and larger, we feel the wind rush by our faces as our speed accelerates and we ascend to the Sky. The air is very thin.

On the way toward the summer solstice the Sun is warm and bright. Our dance--though rhythmically complex--is effortless and playful. Our song--though loud and boisterous--is sweetly melodious. We have solved the riddle of existence. We have danced the labyrinth.

## Conclusion

I have identified and described the phenomenological structures of two distinct neuropsychological systems: "system X" and "system Y." System Y cannot operate without System X. However, although it normally does not, System X *can* operate independently of System Y. The most profound transformation of System Y occurs in a trance state in which System X operates independently and System Y (teleokinesis) is temporarily suspended. The trance process can be described *mathematically* as a harmonic system and *mythologically* or allegorically in terms of the birth, marriage, death, and rebirth of the divine-king. The most fundamental structure of system X is that of a spiral.

I have developed a view of the world and of human experience that is nearly an upside down image of the traditional Western world view that is found within the history of philosophy. The Western philosophical tradition has always privileged what I have identified as System Y. It has privileged cognitive processes such as emotionally disengaged ("objective") perception, willed or volitional manipulation of the external environment, and ego-directed thinking, i.e., logical and linguistic analysis. Plato privileged abstract reasoning. Descartes believed that the emotions could only lead us astray. The only way to ensure the veracity of propositional judgment (belief) was to isolate it from emotion and its associated visceral and kinaesthetic sensations. The modern empiricists privileged sensations and perceptions of external objects. They believed that the emotions could be reduced to sensations of pleasure or pain. There was no appreciation of the complexity of emotion experienced when listening to music or in interpersonal relationships. Phenomenology took the intentional relation between subject and object to be a universal structure of experience, denying the existence of emotions which lack an intentional object. The phenomenologist Merleau-Ponty believed that the fundamental phenomenological structure of human experience was the



perceptual-motor feedback loop of teleokinesis. Contemporary academic philosophy is almost exclusively preoccupied with logic and linguistics.

There was a time and a place when Western rationalism and empiricism served the important function of freeing us from the bonds of authoritarian and repressive religious belief, superstition, and plain old garden variety ignorance. Western rationalism and empiricism can still serve that function. But it's time we made the next leap in our evolution to a culture that has retained its capacity for objective cognition while also reintegrating the symbolic modes of thinking and trance states of consciousness that formed the basis of nearly all premodern cultures.

Western artists and intellectuals began to question the limits of Western rationalism and empiricism after the debacle of World War I, and I am indebted to the work they did. These include anarchists, modernist and neoromantic artists, Nietzscheans and Jungians, anthropologists, Wilhelm Reich and the sexual revolution, body-oriented psychotherapy (bioenergetics, Rolfing, the Feldenkrais method, dance-movement therapy, etc.), the beat poets and the hippy counterculture (see D'Angelo, 2012), the blues, jazz, rock 'n roll and the psychedelic revolution. It does not include the nihilistic reaction to World War I leading through the Nazi writings of Martin Heidegger to Derrida and the postmodern skeptics.

The educational system we now have supposes that it is possible to develop System Y cognitive skills independently of System X. That however is a fallacy. The emotions are not a distraction from clear and distinct thinking as Descartes believed they were. Without emotion we cannot think at all. Without emotion the world is a booming buzzing confusion in which all information is of equal value. The unconscious is not just a source of primitive biological drives. It is also a source of creativity. Certainly we don't want to remove our frontal cortices. But it is impossible to think well without being sensitive to one's emotions and without access to the unconscious. Comparative religion and mythology, art, music, dance, imaginative literature and poetry, even dream analysis

and meditation could all play an important role in education. Symbolic thought should be integrated into disciplines that require ego-directed thought.

There is a strain of radical feminist thought that supports the work I have done here. This includes Starhawk (1979, 1982), Johnson (1983), Merchant (1980) and Bordo (1987). These writers promote "feminine" values and sensibilities, as opposed to "patriarchal" values that degrade the Body and the Earth and glorify ego-consciousness. Patriarchal values encourage the development of large-scale hierarchical institutions and technologies which alienate humanity from its natural environment. Feminine values encourage the development of small-scale, cooperative, bioregional communities. Hierarchical, coercive relationships are impossible on the basis of radical feminist values because there is no subject/object, active/passive, doer/done-to relationship within the Body (system X).

Within the patriarchal domain, the body is forced to conform to the order of consciousness and external objects. In the matriarchal view, on the other hand, it is believed that forcing the body to conform to consciousness would result, eventually, in a state of chaos, because there is no autonomous source of order within consciousness (no God, no substantial ego, no North Star). The order of consciousness is maintained through processes of transformation and regeneration regulated by system X. Similarly, any attempt by human consciousness to manipulate or manage Nature will inevitably fail because such attempts are blind to the fact that human consciousness is itself a product of Nature and should never pretend to be its ultimate ground: Nature was not created by God; rather, God was created by Nature. We must listen to the Body and to the Earth.

The work I have done here could be used to develop a better understanding of pre-literate oral culture and of post-literate, electronic oral culture. Oral cultures rely much more heavily upon system X than do literate cultures. Ong (1977, 1982) and Schwartz (1973) make this clear in their respective studies of oral culture and electronic oral culture, although, of course, they do not use the concept of "system X." Schwartz, for example,

describes electronic oral culture in terms of "resonance," "fields," and "waves" (all concepts which can be used to describe system X), rather than in terms of "particles," "transportation," "codes," "information," etc., which he uses to describe literate or print-based cultures, and which can be used to describe system Y. Ong emphasizes that oral cultures are much more intensely somatic and emotional than are literate cultures, which he believes tend to over-develop ego-consciousness.

We cannot find a place for the mad in our society and we cannot make sense out of their delusions. We treat them like broken machines which can no longer "function" in society and so must be "fixed" (if the budget allows). But the mad are not just broken-down versions of us "normal" people. Their delusions *do* make sense--so much sense, in fact, that we can learn a great deal about who we are from them. But, as Nietzsche tried to explain, the soul is laid bare only at the cost of great pain. The mad (like the mystics) are those who suffer inordinately so that we can gain knowledge of our souls.

Finally, and above all, we must reintegrate trance experience into our culture. Since the easiest and most effective way to induce a trance is with psychedelics, we must end their prohibition. According to a recent article in *The New Yorker*, Stanislav Grof, the famous LSD researcher, "believes that psychedelics 'loosed the Dionysian element' on America, posing a threat to the country's Puritan values that was bound to be repulsed." (Pollan, 2015). I made a similar argument in *The Humanist* (D'Angelo, 1994).

The prohibition of psychedelics is a human rights abuse. The anthropological evidence is overwhelming that trance induction procedures including psychedelics have been an integral part of nearly every human culture that has existed except for the modern West. Trance states of consciousness are essential to who we are as human beings. To deny them is to deny our humanity. It is even more egregious than the prohibition of religious practice, because nearly all religions have their origin in trance states of consciousness. Therefore, trance is even more fundamental to our humanity than religion, which is also nearly universally practiced.

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