

~~Book One~~

A T R E A T I S E   O N   M A T H E M A T I C S

"Know yourself.

If you are not wholly purified

The wedding feast will harm you.

Woe to him who stays too long

Let the light-hearted keep away."

By David R. Graham

February 1973

This note made  
(19/NOV/07) → Done in Berkeley, CA, could not  
pay rent, eating water and whole wheat  
flour pancakes & honey, studying in  
all the libraries in the area, writing for  
Wenner-Crenn conference ended not  
attending (paper "Ritual"), finally late  
Spring <sup>1973</sup> Sagar & Phelps brought me to San  
Diego where I met Saary at Roccas.

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## Chapter 1: Introduction

Western culture can be strengthened morally through modifications of its own mathematics.

Mathematics underlies all efforts of the human being to discriminate or sort together his situation. A clear, concise, simple mathematics is the best tool in the arsenal of discrimination.

Our schools lack instruction in a spiritual achievement. Both parents and students are hungry for this type of instruction. Education is the nurturing of spiritual values and ideals, the coming together of teachers and students in a common search for wisdom. That is, for their spirit.

Discrimination is one part of this search. Devotion is another part and renunciation is another.

It is not sufficient or even desirable to leave the instruction of spiritual values to the old sources. These sources, such as philosophers, moralists, playwrights, musicians, painters and dancers, have been read and reread, listened to and seen many times without positive effect.

The fault is with the mathematics we bring to these sources.

The problem is that we seek to build models, that is, to do mathematics -- to think -- from parts of the basic  $n$ -dimensional reality rather than from the whole. We reason from the mathematical quadrant system and in particular, we disregard and mistake the significant aspect of the quadrant system, namely its center, which leads to point zero.

Western culture is committed to its science. Science is based on mathematics. But our mathematics is weak and faulty in being incomplete. Therefore, Western culture is committed to weakness and error.

This judgment is made through cybernetics as well as from the local street ~~corner~~ corner. It is also made by observing our scientific procedure.

Our scientific procedure recognizes the cause and effect under observation but not the cause and effect of observation itself -- in spite of Heisenberg's principle. Not recognizing a part is not recognizing the whole. Therefore, it is true that our science assumes that causes exist without effects and effects exist without causes.

A child understands that this premise is <sup>untrue.</sup> ~~untrue~~. Yet few scientists recognize that they employ it in their procedure. Understanding that leads one directly, though perhaps not immediately, to the alternative pre mise that everything causes everything else. Or, causes are their own effects and effects are their own causes.

This premise promises -- or threatens, depending on the point of view -- to spill forth an alternative mathematics, one which explicates reality it is and thus aids us in the task of discrimination.

There is much talk today of alternatives: alternative futures, alternative education, alternative communities, alternative life-styles, alternative economics. Such talk is impotent apart from the establishment of an alternative mathematics -- a different way of thinking.

The expansion of moral character in Western culture and the establishment of desirable "alter natives " is based upon an alternative mathematics. That mathematics cofrelates with the mathematics of point zero herein set forth.

## Chapter 2: Summary

There are four types of reality. Each type of reality has a mathematics, a logic, peculiar to it. Therefore, the four types of reality are called logical types. These logical types correlate with the four states of consciousness expressed in Hindu philosophy.

They are in order:

<u>logical type</u>	<u>State of consciousness</u>
Splendor	Brahman (Stateless)
Point Zero	Deep Sleep
Inner Principle of Duality	Dreaming
Elemental Principles	Waking

For purposes of exposition, these logical types are presented as parallel and cojunct planes. They are described as different but related. The terms logical type, state and plans<sup>u</sup> are used synonymously.

The planes are arranged, in order of back to front:

Point Zero  
 Inner Principle of Duality  
 Elemental Principles.

The fourth logical type, Brahman, is the splendor of logic itself and the splendor of type itself. It is the splendor of mathematics. Therefore, it cannot be represented with the others. "The others" are names and forms of Brahman. Brahman has no second.

Point zero is the first emanation of Brahman. It is called a plane in order to maintain linguistic symmetry with the two actual planes which emanate from it. In reality, it is a point. In alchemical tradition it is matere premiere, prinaml matter. In this Treatise it is hyperspace. In Space Community/ Community Space of Book Two it is polytime. A mathematics of point zero is the doing or not doing of anything arising from enjoyment. It is the experience of unity. Seer, seen and sight are one.

The inner principle of duality is the second emanation of Brahman. It emerges from point zero and is the inner principle male and female, cosmos and effort negative, and positive. The mathematics of the inner principle of duality is set theory, the dance of null set and universal set.

The elemental principles are the third emanation of Brahman. They are five in number and emerge in order; either from the inner principle of duality, air from ether, fire from air, water from fire and earth from water. The mathematics of the elemental principles is modern mathematics: algebra, geometry, trigonometry and calculus and its derivatives. Astrology is also a mathematics of elemental principles.

The individual starting on his spiritual pilgrimage sees the planes, the logical types, in order of front to backk, that is:

Elemental principles  
Inner Principle of Duality  
Point Zero

The man of knowledge, who has no mind, is the planes in order of back to front (or, for him, in to out), that is:

Point Zero  
Inner Principle of Duality  
Elemental Principles

The pilgrim must travel the path of discrimination (mathematics, logic), renunciation and devotion to God. Starting at the plane of elemental principles he must see through the center of each plane to the plane "behind" it. By dilligence at this process he will arrive at point zero. The pilgrimage toward point zero is described as keeping the eye upon the hole and not upon the donut.

However, upon arrival at point zero conversion occurs. The pilgrim's mind is turned around, that is, destroyed. He now experiences the planes in reverse og

the order he used approaching point zero. Or, more correctly, he is the planes, and that is enough.

At point zero the pilgrim experiences unity. On the approach to point zero tastes of unity pull him forward. However, point zero is the full experience of unity of spirit in the heart.

Brahman is the splendor of that experience. Brahman, not point zero, is the real treasure. However, while the three planes are approached and reached by effort, Brahman simply is. There is no approach to Brahman. It gives itself.

A mathematics of point zero eliminates the allegiance of the mind to the symbol (body, word, picture, sound) which appears to separate the one which is you and I. However, the elimination of this allegiance is not experienced until the end of the pilgrimage toward point zero.

This Treatise is written as the view from the pilgrimage and not as the view from point zero, for there is no view from point zero. The Treatise is a call to the use of a mathematics of point zero as a tool of discrimination in reaching point zero —on the assumption that one is wise to start out where one wants to end up, the distance and period of travel thereby being zero-ized.

If you feel the humor of attaining goals by starting toward them from them, then you understand this Treatise and are very close to Brahman.

## Chapter 3: The Error

The error of human perception may be described in three ways:

The first description is from Sai Baba, who was asked, "Is all creation just illusion?" He replied, "No. Taking it as creation is the illusion. "

The second description is from a statement by Gregory Bateson: our problems result from a simple error in logical typing (differentiating logical types of reality): namely, eating the menu instead of the meal.

The third description is from Alfred North Whitehead: "there is only one mistake: trying to locate anything anywhere."

Paul Tillich appealed to us concerning this error of human perception. He said a symbol is a medium we see through to the reality it symbolizes. The symbol is unimportant in itself.

Tillich's appeal is helpful, but it is only the beginning.

Catherine Bateson informs us that symbols signify realities of variable richness, the scale running from very little to very much. This fact, of which Tillich was no doubt aware, makes his discussion helpful but unsatisfying.

We are closer to the dynamics of the situation if we reverse both Tillich's and Catherine Bateson's point of view. Instead of looking through the symbol <sup>to</sup> the reality it symbolizes, let us imagine that reality coming through the symbol at us. Let us empathize with what exists on the other side of the symbol.

The symbol is a pair of spectacles we put on ourselves for convenience. In truth, the reality on the other side of the symbol is always there, coming at us. The symbol is menu. What comes at us through the symbol is meal.



A mathematics of point zero exists from the other side of the symbol. It takes place on our side of the symbol but comes from the other side. The direction of operation is from it to us even though the operation occurs on our side of the symbol.

It is axiomatic that were we to turn the situation around and explicate a mathematics of point zero from the point of view of the reality seeing us come through the symbol at it, the mathematics would be identical with ~~the~~ <sup>that</sup> herein set forth.

This axiom has the effect of identifying "reality" and "we" as one and the same. We can only imagine that reality looking through the symbol at us by being it, which we are.

Some may state that this axiom is a priori, without evidence of being a fact. To which the reply: any view otherwise is schizophrenic. Or, any assumption otherwise is an eating of the menu (symbol) instead of the meal (reality), which is to say, oneself. The symbol is a name or a form of oneself. There is more to oneself than the symbol.

Schizophrenia is the giving of allegiance to the symbol which appears to separate us from ourself instead of to ourself.

The effect of a mathematics of point zero on the operator of it is to remove his allegiance to the symbol which appears to intervene between him and point zero which is located everywhere. This removes the symbol itself.

The proof of the pudding is in the eating, that is, in this case, the assumption that "we" and "reality" are the same bears out clinically. Discrimination of logical types leads to the conclusion that reality is a tautology that what is is. The question is, what is? A mathematics of point zero is simultaneously a formulation of that question and an answer to it.

A mathematics of point zero is discrimination between what is reality and what is symbol, what is continuation and what is intervention, what is lasting and what is passing, what is meal and what is menu, what is and what isn't.

All things are symbols of one reality which is you and I. You and I are. The symbols between us exist but the use of them is so impregnated with illusion that an explication of the pilgrimage toward point zero can say they do not exist, they aren't. Or better, there is more to reality than these symbols. A mathematics of point zero is a partaking of ourself, the meal, which removes allegiance to the symbols, the menu.

Marshall McLuhan's famous statement is the error. The medium is not the message. McLuhan mistook the center of the plane of elemental principles, namely Ether, for point zero. This is the error. He instiuted point zero but allowed his mind to identify and locate it as a logical type which it is not.

The error is an illusion of perspective. McLuhan was looking at three parallel and conjunct planes, each a different logical type, positioned one in front of the other. Closest to him was the plane of elemental principles. Then, behind it, the plane of the inner principle of duality. Then, behind it and farthest from him, was point zero. Point zero is really not a plane but a point. However, it is dimly visible through the centers of the two planes in front of it.

McLuhan saw point zero dimly, knew it was an important "discovery" and in haste made the mistake of "seeing" it at the center of the plane nearest him, the plane of elemental principles. McLuhan was fooled by an illusion of perspective. He made an error in differentiating logical types. He ate the menu instead of the meal.

Many alchemists made the same error in placing matiere premiere, primal matter, at the center of the chart of elemental principles. The Bible refers to the error as "idolatry." Interest in ESP and related para-psychological, para-normal and occult phenomena is the same error. The Aquarian Gospel of Jesus the Christ. ~~XXXXXXXXXX~~

a rendering of the life of Jesus through one branch of alchemical tradition, perpetuates the error. The apostle Paul calls it being "carnally minded," "in the flesh." This error is the cause of human suffering.

*Had*

~~He~~ he been referring to point zero, McLuhan's statement would have been correct.

At point zero the medium is the message -- and we are both medium and message.

However, McLuhan was referring to books, radios and TV's, that is, to the plane of elemental principles. His statement is, therefore, the error. The statement "the medium is the message" follows predictably from this error.

The mind is the trickster, attributing to the medium -- radio, TV, body, etc. -- a reality which it is not. The medium only more or less distorts the message which is that you and I are one. Still more correctly, the weak, indiscriminatory mind lets the medium more or less distort the message for us. The mind is the source of trouble. The medium is neutral. It is a problem of discrimination, of differentiating logical types.

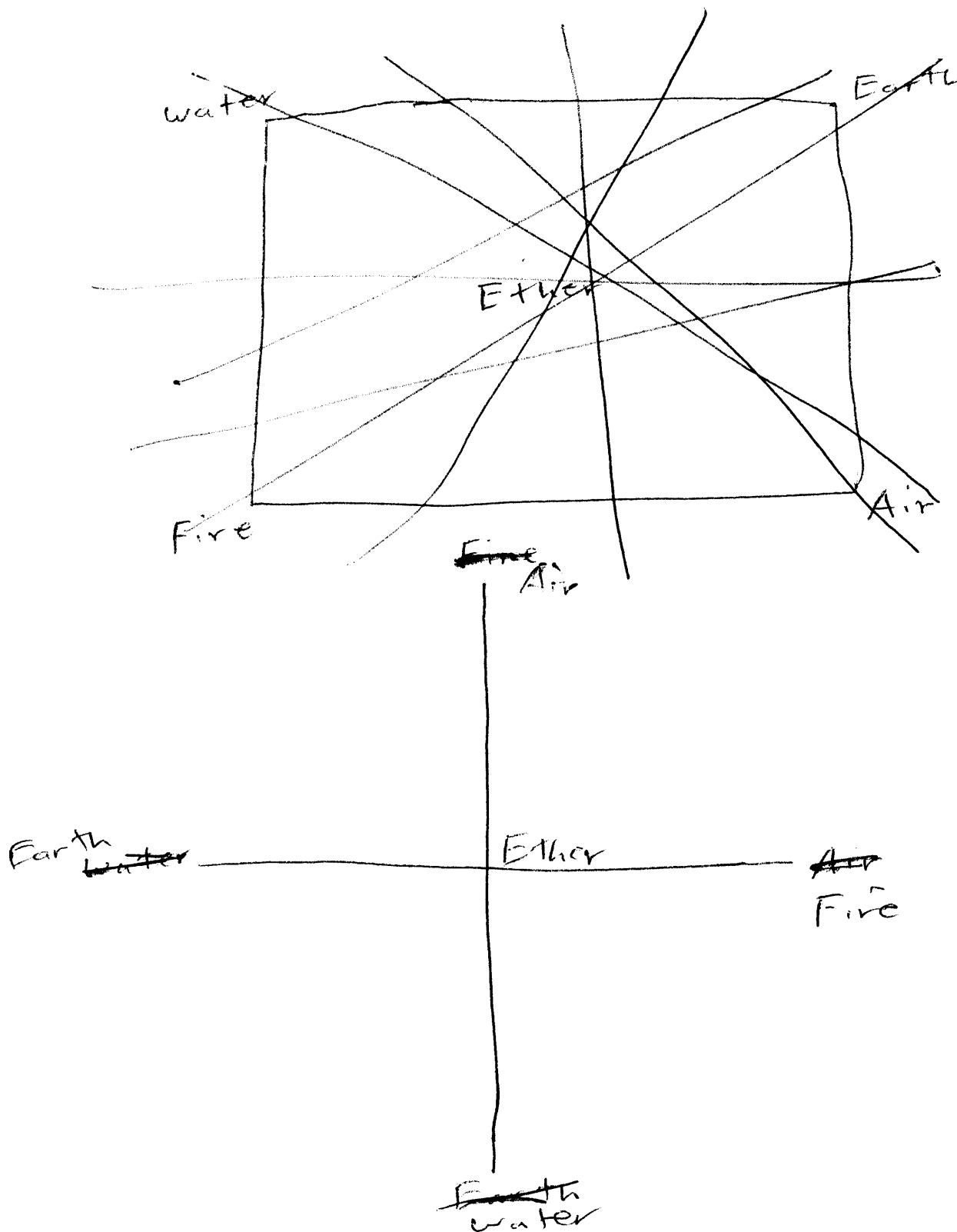
Discrimination is using the mind to destroy the mind. Just as two trees rubbing in the forest are both consumed in the fire, so also, knowledge of the world is consumed by the knowledge of God which comes from discrimination. However, the knowledge of God ~~which comes from discrimination~~ is consumed by the same fire which consumes the knowledge of the world. What remains after the fire is knowledge. itself, without any object, without a second.

It will be felt that I use the term "zero" in other than a conventional way.

Indeed, I am using it as of a different, though related, logical type to the conventional zero. Usually the term "zero" denotes one of the series of finite numbers. I mean the term "zero" to denote the first place that unity is experienced.

# Chapter 4: Plane of the 5 Elemental Principles

The following chart depicts the plane of the 5 elemental principles. The 5 principles are arranged according to alchemical tradition except that I have located Ether in the middle of the chart where it indicates that the plane of elemental principles emanates from its center, namely, Ether.



Much confusion results if Ether is taken as of a different logical type from the other four. In the alchemical traditions this confusion persisted for two reasons: (1) it was not agreed that Ether was an elemental principle and only a minority accepted it as such, and (2) the question of where to locate Ether on existing charts perplexed those who accepted it because the center of most charts was already occupied by matiere premiere, primal matter, or compositum solis, sun light, with the four elemental principles, (excluding Ether) arranged as shown here.

How is Ether different from matiere premiere and how is it to be charted? I suggest 3 charts arranged to denote 3 parallel and conjunct planes or logical types of reality. First, the chart of 5 elemental principles. Ether is on this chart since it is an elemental principle. Second, the chart of the inner principle of duality. Third, point zero, which is described verbally rather than charted.

Matiere premiere is point zero. *It does not belong on the chart of the 5 elemental principles.*

This organization of charts denoting parallel and conjunct planes eliminates confusion of Ether and point zero, the alchemical matiere premiere. This confusion is the error of human perception and causes our suffering.

Ether is an elemental principle. It is of the same logical type as the other four. It is the first elemental principle to emanate from the inner principle of duality which is charted behind the chart of elemental principles. The other elemental principles emanate in order: Air from Ether, Fire from Air, Water from Fire and Earth from Water.

The mathematics of this plane is the "conjunction of opposites" which forms limitless diversity by the mixing of elemental principles. We call the mix "the world."

However, positive and negative values only appear to exist in this plane. Actually they exist in the plane of the inner principle of duality, and not as values but as aspects of the one principle. The "conjunction of opposites" is an appearance. The

The mathematical quadrant system taken as a system is an illusion.

The chart of elemental principles appears to correlate with the mathematical quadrant system. The four basic mathematical functions -- which are built on the quadrant system -- and also algebra, geometry, trigonometry and calculus and its derivatives are all of this logical type. But being built on the quadrant system, they are illusions. The same is true of astrology which is another mathematics of this logical type. These mathematics are methods of mixing the 5 elemental principles in their own situation. The world is combinations and permutations of the 5 elemental principles.

ESP, para-psychological, para-normal and occult phenomena witness to the operation of those elemental principles which are prior in order of emanation -- mostly Ether and Air.

The alchemist Paracelsus suggested essentially the pattern of logical typing used here and his pattern correlates with the pattern expressed by Hindu philosophers of the Upanishads.

The correlate in Hindu philosophy of the plane of the 5 elemental principles is the waking state, the state of the gross body.

The plane of elemental principles is the first step on the road toward understanding, This road leads through the center of the plane to another plane waiting behind it.

## Chapter 5: Plane of the Inner Principle of Duality

Behind the plane of elemental principles waits the plane of the inner principle of duality. The following chart depicts the plane of the inner principle of duality.

It is drawn from alchemical and other sources.

## Chart of the Inner Principle of Duality

Male	Female
Cosmos	Effort
Sperm	Menses
<i>Positive</i> Negative	<i>Negative</i> Positive
Passive	Active
Implosion	Explosion
Fixed	Volatile
Involution	Evelution
Form	Matter
Soul	Body
Cold	Hot
Dry	Damp
Mercury	Sulphur
Yin	Yang
Gold	Silver
Sun	Moon
Black	White
Unleaven <sup>ed</sup> dough	Leaven

The inner principle of duality is an inner principle. It is also one principle. It is not visible to the eye. For example, taking a female body as one aspect of the principle and a male body as the other is foolishness. Each body expresses both aspects of the principle in full measure.

In the plane of the inner principle of duality there is no activity. Mathematics is for mathematics' sake. It is the experience of purposelessness.

The alchemical "Work," the bringing about of marriage between mercury (male ~~principle~~<sup>aspect</sup> and sulphur (female ~~principle~~<sup>aspect</sup>) is a mathematics of the inner principle of duality.

Modern set theory is also a mathematics of the inner principle of duality. By analogy, therefore, modern set theory correlates with the alchemical "Work." Set theory is

a dance of two sets: the null set and the universal set, the empty set and the full set, the male set and the female set. <sup>It is not two sets; it is a (one) dance of two sets</sup> "Pure mathematicians" are today's alchemists.

The correlate in Hindu philosophy of the plane of the inner principle of duality is the dream state, the state of the subtle body.

The plane of the inner principle of duality is the second step on the road toward understanding. This road leads through the center of the plane to point zero waiting behind it.



## Chapter 6: Point Zero

Behind the plane of the inner principle of duality waits point zero. Point zero is described verbally rather than charted.

All points in reality are the same. Therefore, we only take one point for discussion.

What is the same everywhere yet manifests itself to us (on our side of the symbol) and also is us is, by definition, hyperspace. This is point zero, hyperspace. Each point in reality is point zero.

The other two planes, the plane of the inner principle of duality and the plane of elemental principles, are emanations from point zero which appear overlaid on it. They are projections of the mind. From point zero there is no seeing of something. There is seeing itself.

Point zero is the sum and substance of reality. It is consciousness. It is a collection of 5 dimensions. These 5 dimensions correlate with the inner forces of the 5 elemental principles;

Is	(Ether)
Movement (Time)	(Air)
Height	(Fire)
Width	(Water)
Depth	(Earth)

"Is" is added to the usual list of dimensions. Confirmation of this addition can be gained -- if it is needed -- from a recognition that the Chinese T'ai chi symbol also has 5 parts: 2 halves, 2 dots and the circle.

It is incorrect to say that point zero has these dimensions or inner forces of elemental principles as its characteristics. It is correct to say that point zero is these dimensions, it is the inner forces of the elemental principles. So we say, point zero is hyperspace.

A mathematics of point zero is bliss, a mathematics of non-duality. Operator, operand and operation are one. Seer, seen and sight are one. Lover, loved and love are one.

When point zero is reached, the mathematician realizes that it, namely, point zero, is he. This has always been true. The direction of operation is now cognized as from it.

A fundamental shift has occurred, a transformation of the approach and attitude of the mathematician, the operator. Conversion has occurred: the mind is turned around, no longer facing in its direction, now facing in the direction. In effect, the mind is destroyed.

The correlate in Hindu philosophy of point zero is the deep sleep state, the state of the causal body. In this state there is no mixture of elemental principles.

Point zero is the third step on the road of understanding. Here achievement ceases. One waits for Brahman to give Itself.

#### Summary

Discrimination leads one to disregard all aspects of each plane of reality except its center -- which leads one on to the next plane. Thus we have a mathematics of the religious pilgrimage toward liberation. Mathematics is part of religion. Devotion is another part of religion and renunciation another.

The old adage about the donut and the hole is reversed. Keeping the eye upon the hole, through successive donuts, is the purpose of discrimination.

The first plane is the plane of elemental principles. The second plane is the plane of the inner principle of duality. The third plane is point zero itself, the alchemical matiere premiere. Point zero is called a plane in order to maintain linguistic symmetry with the two actual planes which emanate from it. In reality it is a point, everywhere, and everywhere the same.

The three planes correlate with the three states of consciousness posited by Hindu philosophy: in order, the waking state (state of the gross body), the dream state (state of

the subtle body) and the deep-sleep state (state of the causal body). The fourth state is the Stateless, the Unconditioned, the Uncognizable, namely, Reality. It is, therefore, not a state.

While there are mathematics to approach the first three states, there is no approach to the Stateless, It is ~~us~~. It is the treasure, the effulgence of the gold at the end of the rainbow.

Each plane is gotten to through the center of the plane "in front " of it. The center of a plane is, of course, anywhere on it. We have depicted the planes standing one in front of another between us and reality. In fact, reality is coming at us through the planes. And more correctly, reality is us and the intervening planes are symbols not worth of our allegiance. But this fact is unclear until the inquirer reaches point zero. Point zero is the first plane or logical type of reality it makes sense to give some allegiance ~~to~~<sup>to</sup>. But care is required. The treasure, reality, is not it. It is more.

Beyond point zero is the Unconditioned which is. There is no approaching it for we are it. It has no second. It is all. Achievement ceases. Reality gives Itself which is Bliss. That is the treasure.

The <sup>order</sup> ~~order~~ of causality runs as follows. The Uncaused issues forth point zero, point zero issues forth the inner principle of duality, the inner principle of duality issues forth Ether, Ether issues forth Air, Air issues forth Fire, Fire issues forth Water and Water issues forth Earth. These elemental principles mix and there is "the world." The Uncaused, Brahman, is still in what issues forth from It. So it is correct to say that every thing of the world is another Name and Form of God, the Uncaused. To see ~~it~~<sup>it is</sup> to be it and that is Bliss. So, keep your eye upon the hold and not upon the donut.

Here is an analogy to help understand the distinctions between the logical types, the planes. Operating mathematics is the waking state; the plane of the 5 elemental principles. Differentiating operator and operand is the dream state, the plane of the inner principle of duality. The unity of operator, operand and operation is the deep-sleep state, point zero. The splendor of the unity is the Stateless, Reality Itself.

Here is an analogy from Sai Baba. The black retina of the eye is the waking state. The inner circle of the retina is the dream state. The light that shines through the inner circle is the deep-sleep state. The splendor of the light is the Stateless, Reality Itself. That art thou.

Here is repeated the final paragraph of Section 2. It will be felt that I use the term "zero" in other than a conventional way. Indeed, I am using it as a different, though related, logical type to the conventional zero. Usually the term "zero" denotes one of the series of finite numbers. I mean the term "zero" to denote the first place that unity is experienced.

Chapter 7: A Mathematics of Point Zero

The significance of the inner principle of duality is that "heaven" and "hell" are both here on earth. "Heaven" corresponds to the inner principle of duality and "hell" corresponds to the mixture of elemental principles, namely, the world, illusion.

Moral strength is being the fullness of both and then neither: recognizing the world for what it is, we use heaven to get rid of it: finally, we let go of heaven also so that we are neither. What is the use of "yes" in the absence of "no?" Love is the thorn we use to remove the thorn of hatred.

But when hatred is gone, love also is set aside. The state of being neither has been reached. More is yet to be given.

A mathematics of point zero is a mathematics of the state of being neither, neither heaven nor hell, neither good nor bad, neither this nor that, neither here nor there, neither now nor then, neither male nor female. But comprehending all.

Alchemists shared an interesting definition of God: God is a circle whose center is everywhere and whose circumference is infinite.

This definition lends itself to a mathematics of a point which is hyperspace, that is, a point which is 5 dimensions:

- 1 - Is
- 2 - Movement (Time)
- 3.- Height
- 4 - Width
- 5 - Depth

This mathematics exists so that the following conditions are met:

- (a) dimensions 1, 3, 4 and 5 are regarded as fixed but non-mutually-attractive. Non-mutually-attractive means that if non-fixity were to occur, the mathematics in whole and in part would neither gain nor lose validity. Put another way, the content

of point zero does not change. Therefore, the four basic mathematical functions do not apply to this mathematics.

- (b) dimensions 2 is regarded as meta-random in operation. That is, the sequencing of behaviors of this dimension is unpredictable absolutely. Explanation: the effect of this dimension is to permanently remove a mathematics of point zero from distinctions of past, present and future.

The symbol for a mathematics of point zero is a line. This mathematics consists in doing or not doing with the line anything which arises from enjoyment. Indeed, any thought, word or deed, nay, anything at all which proceeds from bliss alone is a mathematics of point zero.

This mathematics has no significance. The line or lack of it stands as a simple, unified utterance, without beginning and without ending, without source and without goal. The line or lack of it is the footprint of enjoyment, the visible sign that happiness occurred here.

A mathematics of point zero is unmixed with any planning, decision-making or effort. It does not incline one way or another. It does not wish for this or for that. It proceeds from joy, that is, from consciousness itself. Indeed, it is consciousness.

A mathematics of point zero occurs because the mind has been destroyed. It is a perpetual reinvention of the wheel. It is a reinvention of the ouroboros, the snake biting its tail which was the alchemical symbol for the unity of matter.

A mathematics of point zero is an explication of the state of being both and neither. The operator of this mathematics realizes that he, the mathematics and the operation are one and the same.

It is the birthright of each of us.