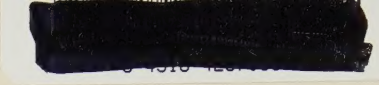


THE MATHEMATICS
OF THE
COSMIC MIND

L. Gordon Plummer


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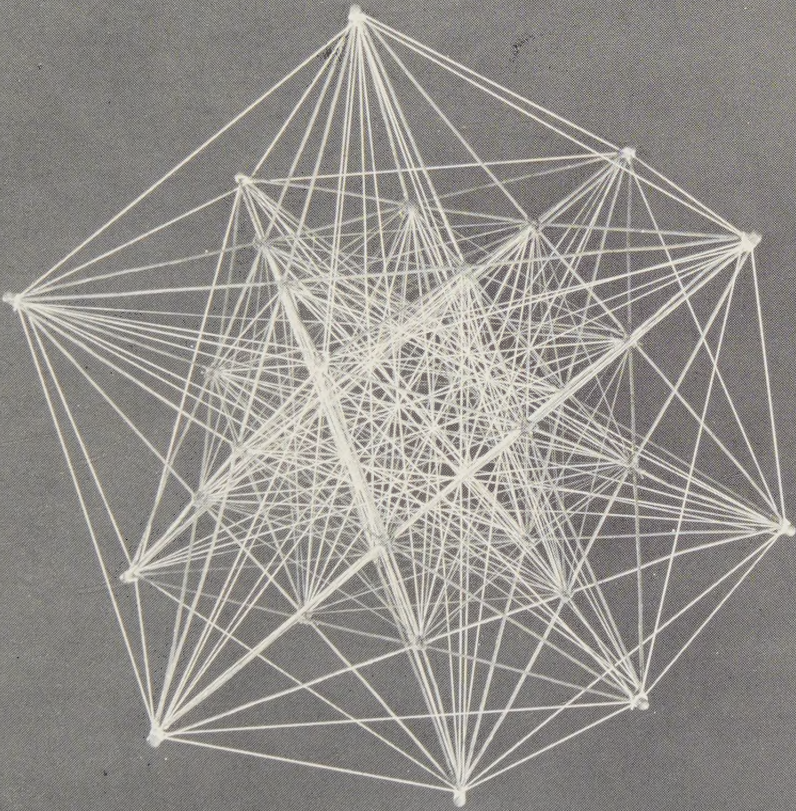
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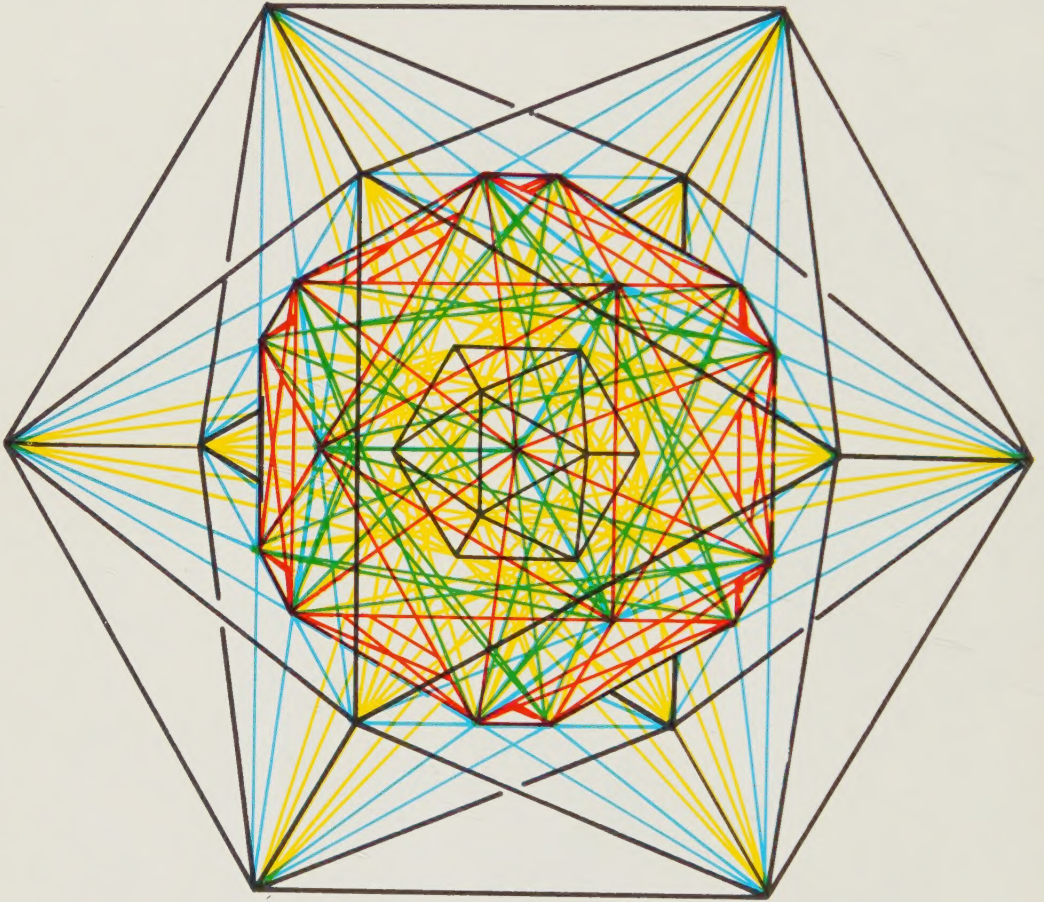
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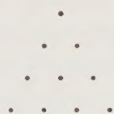
Frontispiece II – Drawing of the Greater Maze

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THE MATHEMATICS OF THE COSMIC MIND

The Mathematics of the Cosmic Mind

A Study in Mathematical Symbolism



L. GORDON PLUMMER

THE THEOSOPHICAL PUBLISHING HOUSE
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PREFACE TO THE FIRST EDITION

The purposes of this book are:

1. To study, by the aid of Mathematics, the inner structure of the Solar System.
2. To study the Pythagorean Solids as embodying mathematically the keys to the mysteries about Man and the Universe.
3. To interpret these solids as the embodiment in geometrical form of the basic principles underlying Cosmic Life, thus giving us a comprehensive view of the Esoteric Philosophy.
4. To demonstrate that Mathematical Symbolism is a tool that may be used to test experimentally the concept of a living universe, comprising numberless planes of consciousness as taught in Theosophy.

Part One

Part One of this book defines and explains certain concepts basic to an understanding of Theosophy, and then develops the theme of the study, showing the generation of the Pythagorean Solids, which are the five regular Polyhedra, from a moving circle. The relationships between the regular Polyhedra are explained, and the Lesser Maze is constructed, consisting of an Octahedron enclosed within a pair of interlacing Tetrahedra, these within a Cube, which is set within a Dodecahedron, the whole enclosed within an Icosahedron.

These figures are described in detail, and the symbolism that relates them to man's place within the universe is developed.

Part Two

This portion of the book consists mainly of an exposition of the teachings of Theosophy. Those aspects are brought out that have a direct bearing on the principles of Mathematical Symbolism.

The subjects under discussion are: the Planes of Consciousness known as the Lokas and Talas; the various Cosmic Elements known as the Tattvas and the Bhûtas; and the teachings about Globe Chains and the entities that inhabit them. The teachings about the Rounds and the Races are explained, and the further illumination shed by Mathematical Symbolism is brought to bear upon these subjects.

The direct relationship between the regular Polyhedra and the Solar System is explained, first as relating to the planetary time-periods, and then expanded into a consideration of the teachings about the Circulations of the Cosmos.

Part Three

Here we return to the more strictly mathematical aspect of the subject, and the Lesser Maze as constructed in Part One is now expanded into the Greater Maze, in which the Cube, the interlacing Tetrahedra, and the Octahedron, each of which appeared once in the Lesser Maze, are now seen to be fivefold in the Greater Maze, making a geometrical figure of great complexity and of vast meaning.

The climax of the study is reached at the end of Part Three when it is found that it is possible to conceive of five Icosahedra clustered about a central Icosahedron. It is shown that these are mathematical concepts, rather than actual figures, since they have no place within the Greater Maze as such, but their relationships to one another, different from the relationship that they bear to the central Icosahedron, throw a strong light upon the teaching about the relationship between our world as we know it, and certain other invisible worlds of energy and consciousness that are an essential part of the inner structure of the Solar System.

Throughout this study there is a certain inquiry into the nature of man, and his place within the cosmos of which he is an integral part.

L. GORDON PLUMMER,
San Diego, California,
September, 1966.

PREFACE TO THE SECOND EDITION

In offering this book to the public for the second time, I wish first of all to thank my many friends for their generous and constructive comments. Among those most worthy of attention are two which I would like to consider briefly at this time.

The first may be expressed thus: What is the reason for so many Sanskrit terms? Since most of our teachings are derived from Eastern Religions and Philosophy, it has long been the custom of students to explain our theosophical principles with the liberal use of Sanskrit terms. On the other hand, many excellent books have appeared wherein the authors used few, if any, Sanskrit terms, within their intended scope, and these works have lost nothing in clarity of expression. But in all fields of investigation there is room for the technical as well as the non-technical presentation. The present book is written for the technically minded student, whether Theosophist or otherwise, and the Sanskrit terms are as necessary in this type of presentation as are the technical terms used in the more advanced works in any area of study, such as nuclear physics, astronomy, medicine and the like.

The reason is that such terms become a kind of universal language, and once mastered, their meanings are clearly understood, and they are used by students everywhere. Any effort made to master them is well rewarded.

The second point, also well taken, is that much that appears in this treatise seems to be rather far-fetched, as one of my friends put it. No reference was made to the mathematical aspect of the subject, but rather to its application and interpretation. Let me point out once more that the effort here is to find a pattern that underlies Nature's processes. It is freely acknowledged that Nature varies from her own patterns of behavior, and this is only to be expected. In fact, this variance only goes to support my case, for the pattern and the variance point equally well to the existence of cosmic intelligences working not only harmoniously, but in opposition as well, and that these intelligences not only produced the universe in the first place, but are the very framework upon which the structure of the cosmos is built.

It is recognized that this is in direct conflict with the materialistic viewpoint, and for this I make no apology. This book has a specific purpose; to answer a need felt by many for whom the materialistic viewpoint is not enough. There is an awareness in the minds of many that within themselves there are reaches of consciousness which go far beyond the faculties of mind and body, and the teachings explained herein are an appeal to these higher faculties.

A number of important corrections and additions have been made in the hope that the student will find this book somewhat more readable.

My sincere thanks go to my many friends whose generous and painstaking help has in a sense made this their book as well as mine.

L. GORDON PLUMMER.

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FOREWORD

A limited acquaintance with the teachings of Theosophy may be compared to the view one gets through a window when one stands at the far end of a room. Depending of course upon where the house may be located, one certainly does see something of the out-of-doors, maybe a part of a building, some trees or a bit of sky. If he is fortunate enough to have an unobstructed view of countryside, then from the far end of the room he may catch a glimpse of distant hills, some trees, and he might even see a few stars at night. How much broader is his view if he will step up to the window! It is as if the wide world awaits his exploration.

To make my meaning clearer, the following experiment might be well worth trying. You will observe an interesting optical illusion. First, stand close to your window and observe the wide expanse before you. Objects in the landscape assume rightful proportions. Each object is seen in relation to all others. There is a completeness to the picture. The distant hills, the stretches of meadowland, the trees, the sky above, all blend into an harmonious whole. Now fix your eyes upon some object that is directly in front of you—a tree, let us say. It may not appear to be very large when seen as a part of the general landscape. Now step backwards to the far side of the room, keeping your eyes fixed upon the tree. As you move away from the window and lose sight of the surrounding objects, the tree appears to be greatly magnified, and eventually perhaps only a portion of it fills the entire window. So convincing is this effect, that you imagine you can see details you had not been able to see before. This is pure illusion. The tree is not really magnified, and the details you now see were visible all the time, only they did not claim your attention because they merged into the much greater view to be had by a close approach to the window.

The limited acquaintance with Theosophy can give a similar “optical” illusion. Certain teachings are studied almost as though they were things in themselves with little or no consideration of their relationship to the many other aspects of the Wisdom-Religion. This is an error we may all fall into. We have a tendency sometimes to attempt to study an individual teaching as an isolated tenet allowing it to fill the whole window of the mind. We then become entirely concerned with the details. Such details often become confusing, often even distorted. We have become subject to an intellectual optical illusion.

Many students feel a hunger to know the deeper significance of the teachings, which in itself is a perfectly laudable desire; but first one must step up to the window of the mind and heart and look upon the magnificent view that the teachings present in their panoramic sweep. This can be done by an earnest study of the many books of standard Theosophical literature. The writings of such teachers as H. P. Blavatsky, William Quan Judge and G. de Purucker, who stand highest in the writer’s opinion, give the student not only a grandiose panorama, but within this broad sweep offer possibilities for study vast enough and deep enough for a lifetime of dedicated effort. Each teaching studied is seen as an integral part of the harmonious whole. Each reflects light from all the others. Each sheds light of its own, thus illumining all other teachings.

FOREWORD

In the present work, the aim has been to discuss the marvels of Mathematical Symbolism within the vast frame of reference mentioned above. For this purpose it has been felt necessary to give considerable space to an exposition of subjects essential to the main theme. It might seem redundant to discuss teachings that may be found elsewhere, but the convenience of the student has here been considered. To have the teachings readily available makes unnecessary the perusal of many volumes in search of points germane to the subject. Furthermore, the present volume may come into the hands of some students who have little or no access to standard Theosophical literature.

However, it should be borne in mind that this is not a book for beginners. Some teachings will be alluded to with the assumption that the student is already familiar with them. Further, since elaborate explanations would make this book cumbersome reading, the student is urged by all means to seek elsewhere whenever he deems it necessary for further explanations that would prepare him for a greater understanding of the material covered in these pages. May a study of this book also whet the appetite of students to pursue their own studies.

It is in a spirit of gratitude, first of all to Katherine Tingley and to G. de Purucker who inspired me many years ago to undertake these studies, and to all others who have encouraged me in this work, that I now offer this book. I hope that I can impart to all who read these pages some of the inspiration and joy that have come to me in such full measure through many years of research in the field of Mathematical Symbolism.

THREE FUNDAMENTAL PROPOSITIONS

“The Secret Doctrine establishes three fundamental propositions:

(a) An Omnipresent, Eternal, Boundless, and Immutable PRINCIPLE on which all speculation is impossible, since it transcends the power of human conception and could only be dwarfed by any human expression or similitude. It is beyond the range and reach of thought — in the words of *Māṇḍūkya*, ‘unthinkable and unspeakable.’ . . .

(b) The Eternity of the Universe *in toto* as a boundless plane; periodically ‘the playground of numberless Universes incessantly manifesting and disappearing,’ called ‘the manifesting stars,’ and the ‘sparks of Eternity.’ ‘The Eternity of the Pilgrim’ is like a wink of the Eye of Self-Existence (*Book of Dzyan*). ‘The appearance and disappearance of Worlds is like a regular tidal ebb [and flow], flux and reflux.’ . . .

(c) The fundamental identity of all Souls with the Universal Over-Soul, the latter being itself an aspect of the Unknown Root; and the obligatory pilgrimage for every Soul — a spark of the former — through the Cycle of Incarnation (or ‘Necessity’) in accordance with Cyclic and Karmic Law, during the whole term. In other words, no purely spiritual Buddhi (divine Soul) can have an independent (conscious) existence before the spark which issued from the pure Essence of the Universal Sixth principle — or the OVER-SOUL — has (a) passed through every elemental form of the phenomenal world of that Manvantara, and (b) acquired individuality, first by natural impulse, and then by self-induced and self-devised efforts (checked by its Karma), thus ascending through all the degrees of intelligence, from the lowest to the highest Manas, from mineral and plant, up to the holiest archangel (Dhyâni-Buddha) . . .”

—H. P. Blavatsky, *The Secret Doctrine* (1888), Vol. I, pp. 14-17.

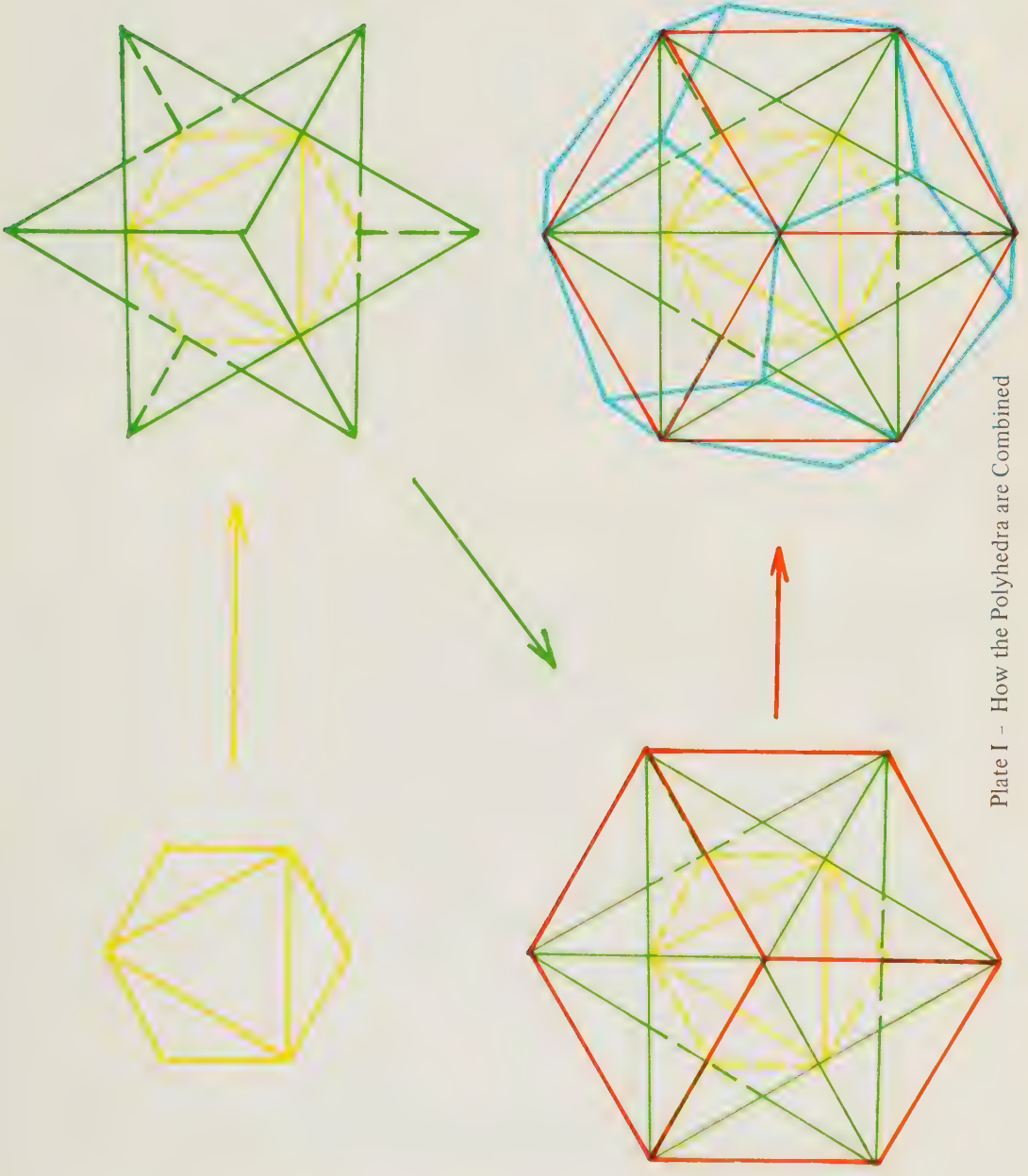


Plate I - How the Polyhedra are Combined

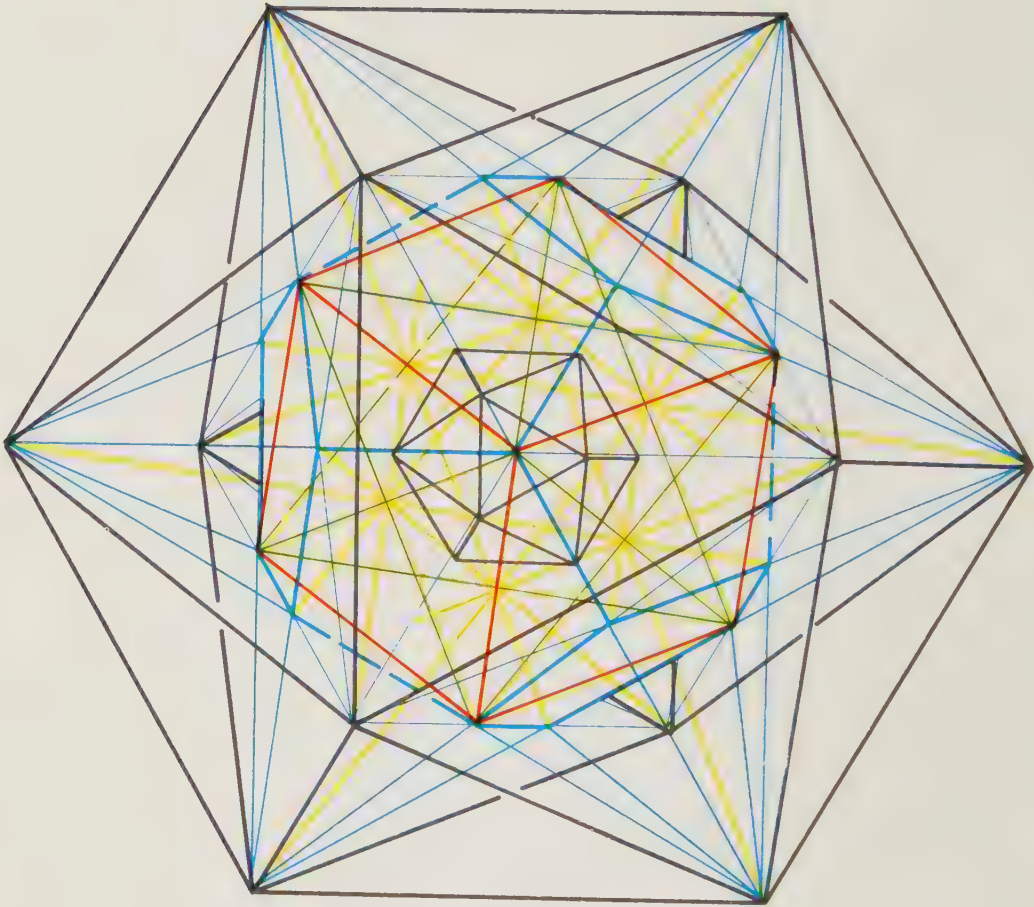
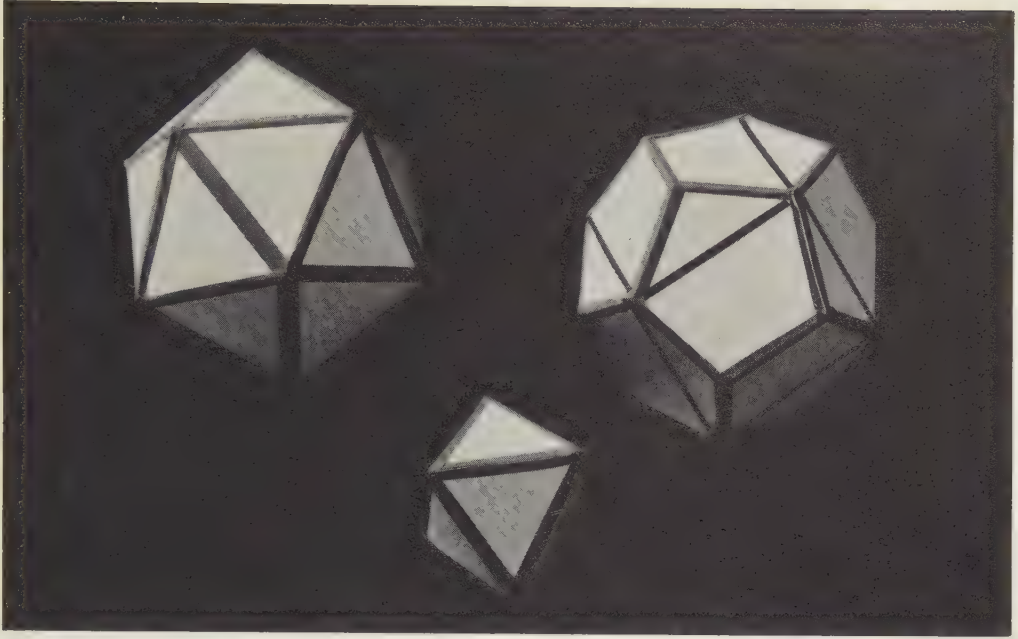


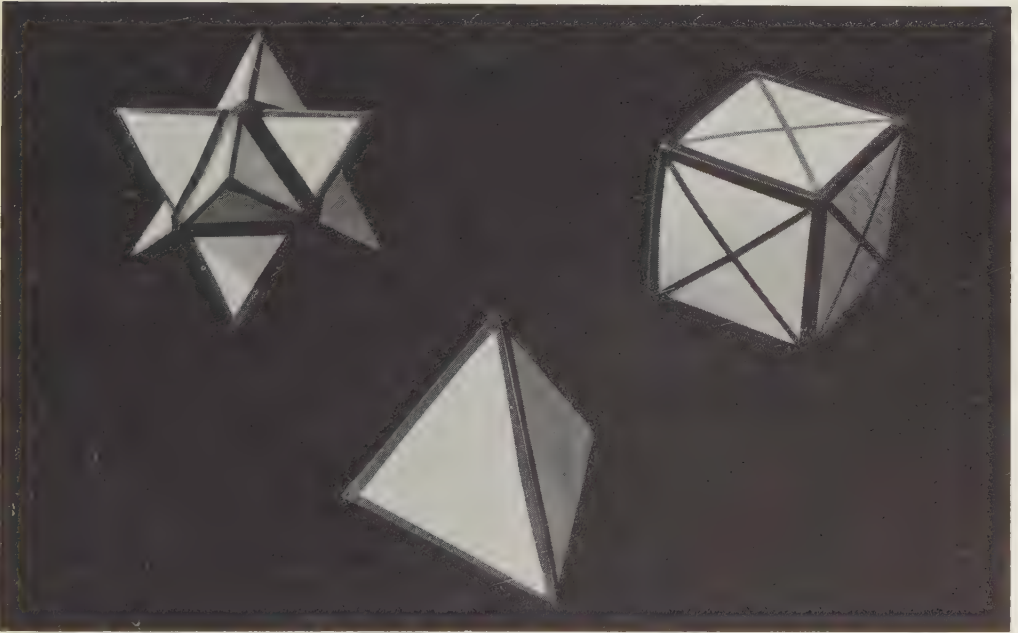
Plate II – Drawing of the Lesser Maze



ICOSAHEDRON

DODECAHEDRON

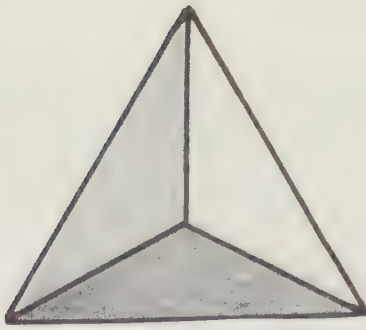
OCTAHEDRON



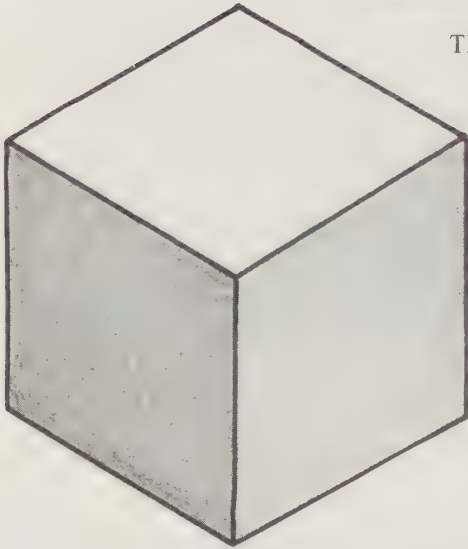
INTERLACING
TETRAHEDRA

CUBE

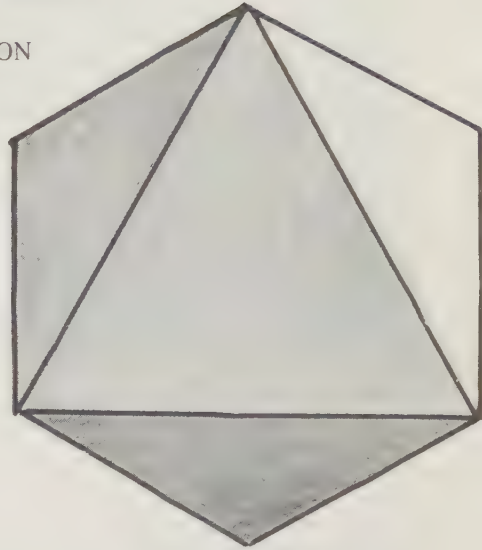
TETRAHEDRON



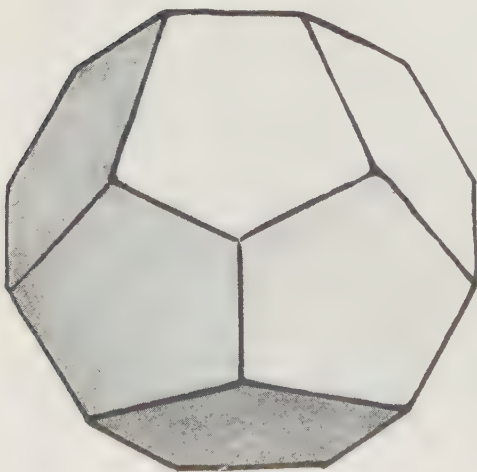
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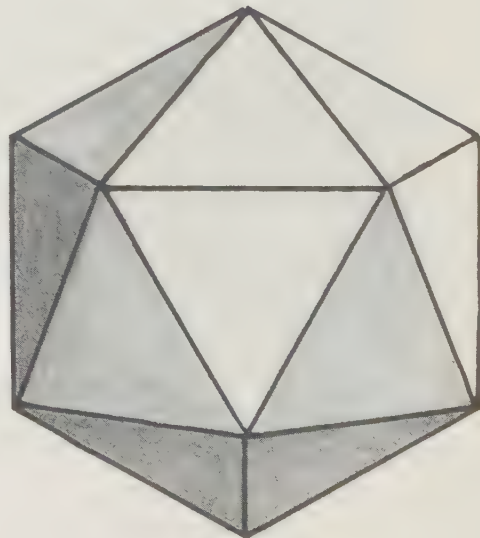
CUBE (HEXAHEDRON)



OCTAHEDRON



DODECAHEDRON



ICOSAHEDRON

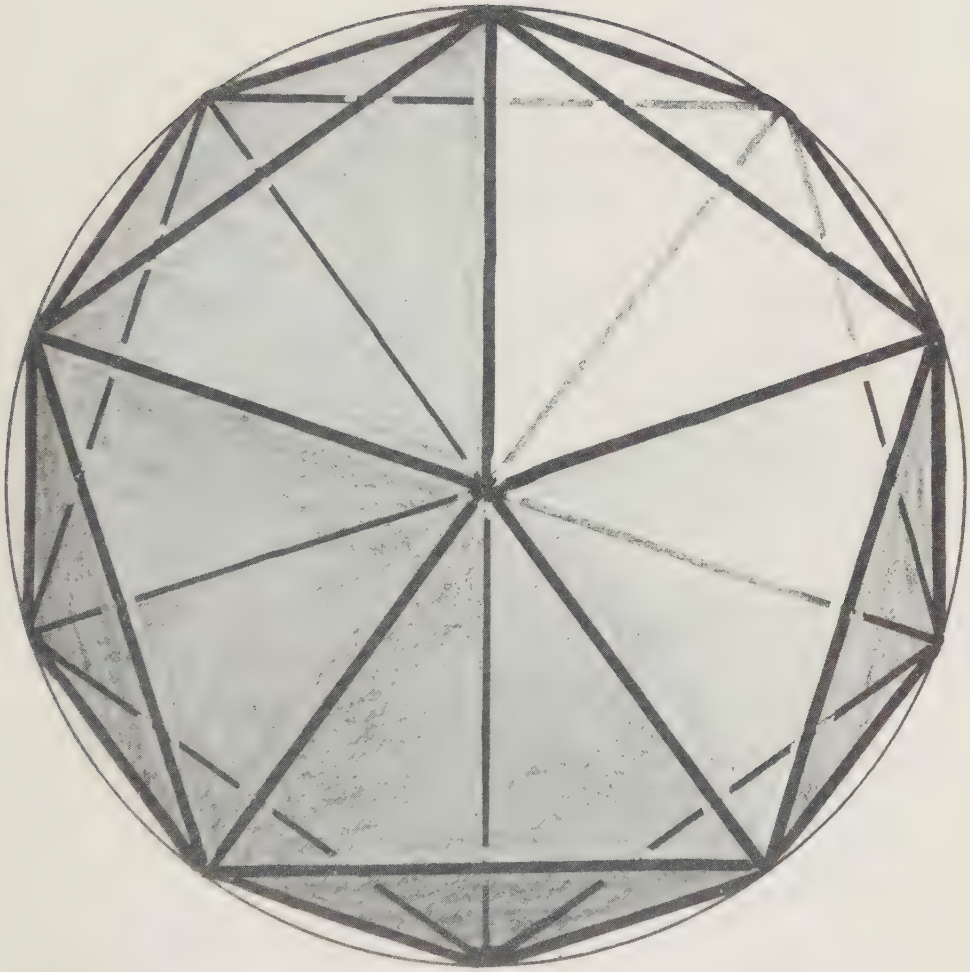
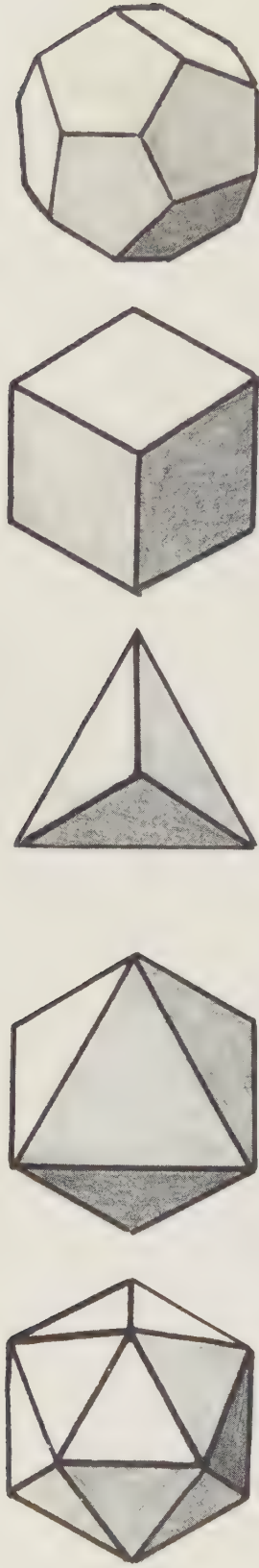


Plate 3 — The Icosahedron as formed by the descending Circle



	Icosahedron	Octahedron	Tetrahedron	Hexahedron	Dodecahedron
Edges	30	12	6	12	30
Faces	20	8	4	6	12
Vertices	12	6	4	8	20
Length of Edge		.707	1.414	1.00	.618
Inner*	.382				
Outer*	1.618				
Sum of Degrees	6,480	1,440	720	2,160	6,480

*By the terms Inner and Outer Icosahedron, we mean the Icosahedron which surrounds the Dodecahedron and the smaller one at the center, formed by joining internally the vertices of the Dodecahedron

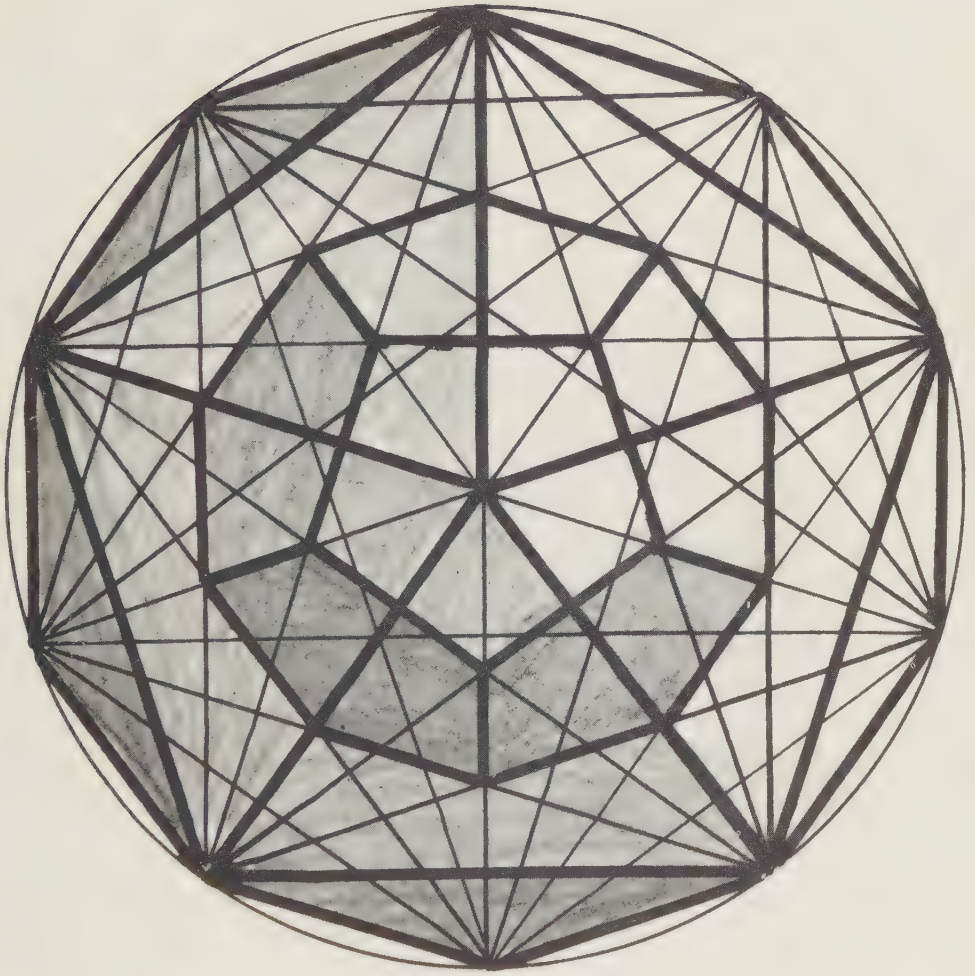


Plate 5 – The Icosahedron enclosing a Dodecahedron

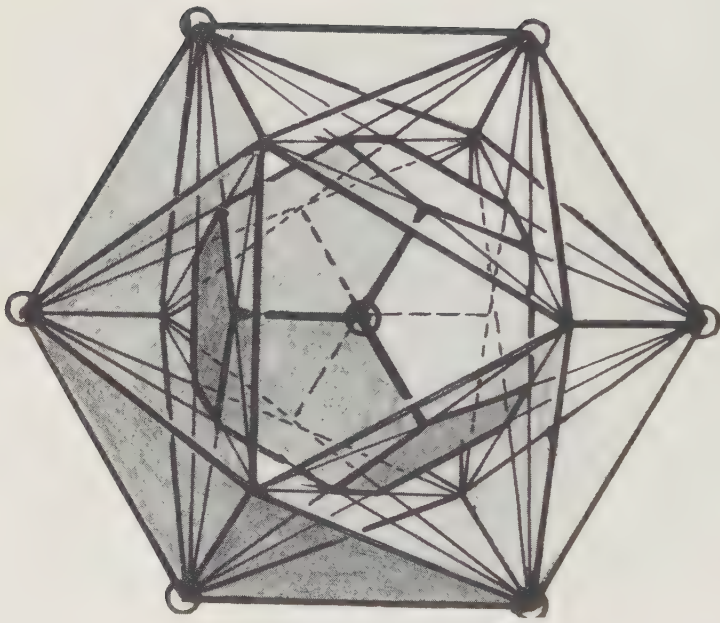


Plate 6 — The Icosahedron and Dodecahedron
within a Tetraktys

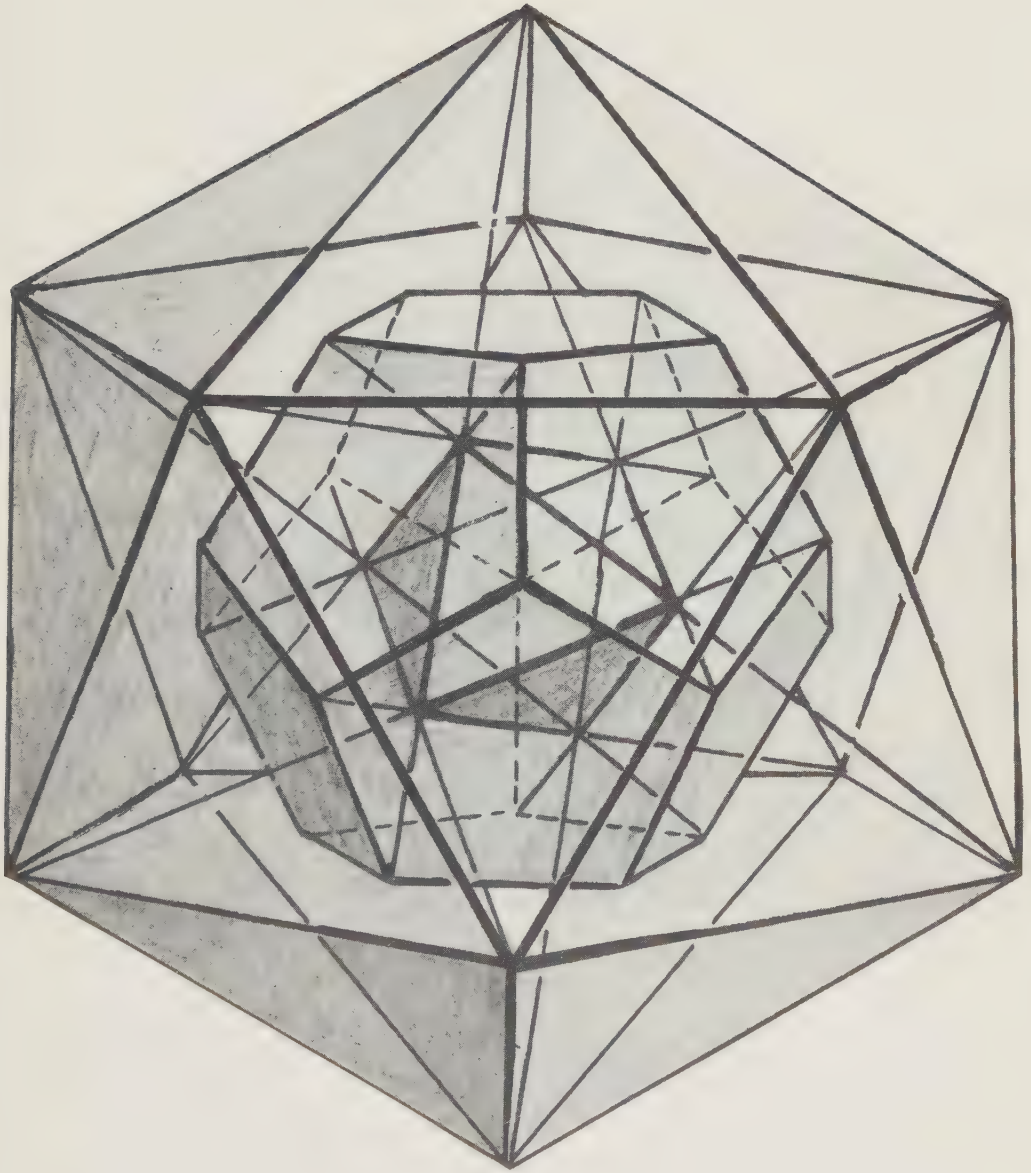


Plate 7 – The Icosahedron and Dodecahedron joined internally to form an Octahedron

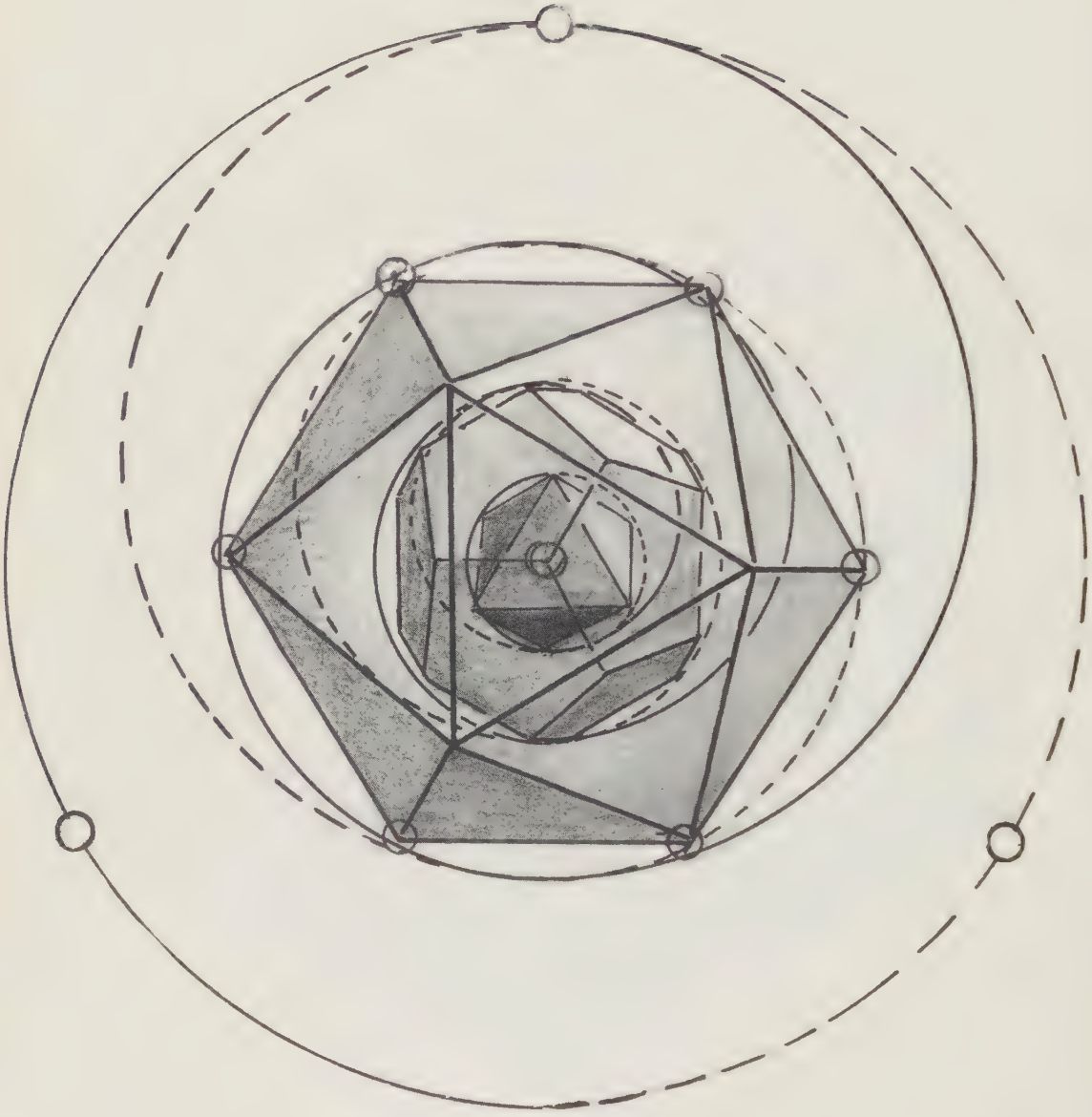


Plate 8 — Involution and Evolution within
the Tetraktys

PART ONE
THE LESSER MAZE

SECTION ONE

Chapter I

SOME TERMS DEFINED

We must be aware at all times during these studies that we are dealing with a living universe. Whereas Science is coming to realize more and more that energy and matter are one and the same — and in this respect it might be said that Science is approaching the Theosophical viewpoint — yet it must be admitted that to the average scientist this is a strictly mechanistic universe. Nothing could be farther from his mind than the idea of the sun as the visible, vital aura of a mighty Solar Consciousness. To him the idea of a living universe in the sense of its providing the environment for countless hosts of entities of all conceivable kinds is untenable. Therefore, although it is necessary for every serious student to acquaint himself with the findings and hypotheses of modern science, nevertheless he must become increasingly aware of the teachings of the Ancient Wisdom. He must seek to give modern scientific ideas their proper place, to see them in their right perspective; but he must never make the mistake of trying to adapt the teachings of Theosophy so that they fit into modern ideas. To do this would be a fatal error. Not only would he lose sight of the real meaning of the teachings, but he would find that he would have to embark on a continuing series of concessions and adaptations in his efforts to reconcile them with the changing viewpoints of scientists of today and of the future.

Once that we have established firmly in our minds the concept of the living universe, we then can see that it is of the utmost importance that we know when we are talking about entities and when we are discussing bodies. The importance of this cannot be overemphasized. This is because in our studies we are going to deal with embodied entities, even though the manner of embodiment and the types of bodies may vary considerably.

Now there are certain technical terms used in this book which could be difficult to understand. They embody concepts which H.P.B. stated clearly to be non-understandable — certainly so with our very imperfect intellectual equipment. Nevertheless an attempt will now be made to define these terms and elucidate the ideas they embody. The result will of necessity be an over-simplification, but let it be made clear that what follows is at least an effort to establish pointers in the right direction.

A word of warning is in order. If adhered to beyond their immediate usefulness, these explanations will tend to crystallize in our minds, making it then more difficult for us to approach higher teachings which cannot be explained in these present terms.

Objective and Subjective

During the course of these studies we shall delve into some of the mysteries of invisible nature, touching on the many states of consciousness that it is possible to achieve, and which point to the existence of invisible worlds and the denizens thereof. These are often referred to as the subjective worlds and entities, as contrasted with the objective world in which we live.

Recognizing that the words *objective* and *subjective* may mean many things to many people, it is well to state clearly the sense in which these terms are to be used in this book.

The terms are not to be equated with *real* and *unreal*. Although reality may be defined as that which is, yet it is a relative thing, for something that may be very real to one individual may be non-existent to another. In such a case, we may be right in saying that the first individual has had a subjective experience, recognizing at the same time that it may be affecting his life very profoundly. We do not deny reality of the experience so far as he is concerned. Some of these experiences may be harmful, and might be thought of as karmic ghosts from his own past. He must conquer them, or he may fall by the wayside. On the other hand, some subjective experiences may be lofty and inspiring. He may profit by them, but he must understand them as well, and recognize their illusory character. He must learn from them, and seek the way to the greater realities that are a part of Nature itself.

A wider meaning of the term touches on those ideas that are shared in by many people, and yet have little or no bearing on actual fact. Take, for example, the childhood belief in Santa Claus. The child who has not believed in Santa Claus has missed much, yet he soon outgrows it, and if his parents do not explain to him that it is the expression of the spirit of giving that belongs to the Christmas-time, a feeling of disillusionment and distrust will take the place of a very natural thrill and joy that is a part of childhood. Here, we might say that Santa Claus is a subjective idea that is shared in (in one form or another) by hundreds of thousands of children all over the world.

Yet another aspect of the subjective, and one which comes a step closer to the studies that we are about to undertake, is to be found in the folklore and the myths and legends that are common to all the nations of the world. These ideas actually have a basis in fact, and point to certain realities that are to be studied concerning the invisible worlds and their inhabitants. The manner in which the gods and demigods, or again, the "little people" of folklore appear to the various peoples of the earth are the expressions of certain race characteristics. Because little is known of these invisible worlds, it is only natural that their impact on human life should take the form of the stories of the ancient Gods and Heroes, or the fairies and nature sprites of more modern times. It is interesting that most of these myths and legends are becoming more and more displaced by modern ways of thinking, wherein the

emphasis is laid on science with its traditionally materialistic viewpoint. Modern religion also relegates these ideas to the realm of superstition, and yet the acquaintance of young people with the legends and folklore of other times is still considered to be a necessary part of their education.

The exact meaning that must be attached to such terms so far as these studies are concerned then, is all that aspect of Nature that cannot be taken in the instruments of Science and weighed and tested by modern approved methods of inquiry.

We must now consider such terms as "Being and non-Being"; "manifested and unmanifested"; "Pralaya and Obscuration." In order to explain these I am going to use an illustration which I have found to be useful in my own thinking. I am going to outline the establishment of schools in our country. If we think back to the days before the white man came to America, we see the land peopled with the race now known as the Indians. So far as we are able to say, there were then no schools in this country. So we might say that the schools were *non-existent*, or in a state of *non-being*. In due course of time, with the westward migration of Europeans, schooling was established, however crudely by modern standards. School in this country may then be said to have been in a state of *being*.

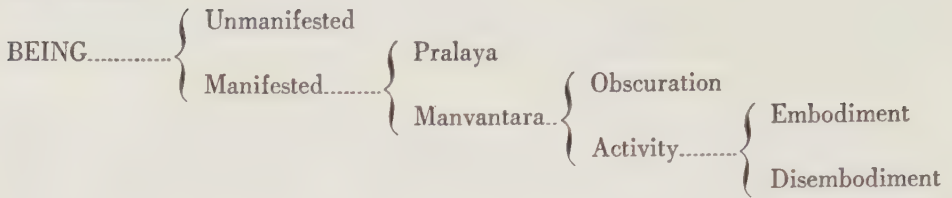
The process of establishing schools was not a simple one; in the course of time, schooling became more *manifest*, although in many areas there would have been a time when it was as yet *unmanifest*. When schools were pretty well established, they were then in a state of *manifestation*.

Now we may suppose that the custom of summer vacations was introduced quite early in the process of establishing public education; we may then say that during summer vacation the schools were in *pralaya*, and that during the school year they were in *manvantara*. Summer vacation does not mean in any sense of the word that the school system is non-existent; on the administrative level there may be much activity, preparing for the opening of school in the fall. Now then, during the fall, winter and spring months, when the schools are in session, or, using the Theosophical terms that we are trying to explain, in *manvantara*, there will be occasions when the schools must be temporarily closed, perhaps due to widespread epidemics or heavy snowstorms. Such temporary closing of the schools would be called in our terms *obscuration*, which in no sense affects the school sessions as such.

To summarize: We have, first, a state of *non-being*, wherein there is no educational effort. Then there is *being*, in which there is the possibility of the establishment of schools in some areas, and, again, the waiting for schools to be established in others. This is *manifestation*, and *unmanifestation*. Further in those areas where schools are established, or in manifestation, there is the matter of school sessions and vacations, or *manvantara* and *pralaya*. Then, during sessions, there is the possibility of the schools being temporarily closed for one reason or another. This would be *obscuration*. Finally, during active school sessions, there may be a reason for one child or another to be absent. When the child is present, this may be likened to *embodiment*, and when absent, to *disembodiment*.

Let us now present a paradigm, which may help in an understanding of the Theosophical terms:

NON-BEING



Let us only say briefly at this time that the lofty entity, the Planetary Spirit, issues forth from a state of Non-being—viewing this from our standpoint—and comes into a state of Being. As this is only one incident in a vastly greater cosmic drama, we must say for now that the unnumbered hosts of entities that are destined to aid in the building of the Globe Chain-to-be have “slept,” if we may use the term, in a state of Nirvâna and must awaken from their state of Unmanifestation and become Manifested. The Globe Chain enters upon its Manvantaric life-cycle, after which it will sink into the deep rest of Pralaya. In the course of its Manvantara, what with the building of the Globes and the passage of the monads through them, there are the component periods of activity (known as Rounds), followed by the periods of rest during which the planet is in Obscuration. Finally, during the periods of activity on any one Globe of the Chain, there are the cycles of human Embodiment and Disembodiment, studied under the heading of Reincarnation.*

There is another presentation of teaching that can cause some difficulty, and we might give some space to it in this present chapter. This is the matter of the First, Second and Third Logos. Just what is meant by these terms?

In the first place, the word Logos (plural Logoi) is derived from the Greek, meaning Word or Reason. The value of this becomes apparent when we think of the three steps involved in speaking. First there is the Idea, then Reason, which in its turn is expressed in Words. There you have in a small way the idea embodied in the term the Three Logoi: Cosmic Ideation, Cosmic Mind, then the manifested Word, or the whole of the manifested universe, on all its planes from the highest spiritual right down to the material.

We could state this concept in other terms, to wit: the First Logos is the unmanifested, the Second Logos is the intermediate or partially manifested, and the Third Logos is the fully manifested.

Thus far, we have considered this on the cosmic scale. Actually, every entity has its own three Logoi. In man, these are: Âtman, the First Logos; Buddhi, the Second Logos; and Manas, the Third Logos. Similarly with every plane of consciousness, or sub-plane, or sub-sub-plane: the First Logos is the Hyparxis of any hierarchical being; the Second is its first substantial expression, representing all the higher faculties that are latent and as yet but dimly manifest; and the Third Logos is that portion of the entity that is manifest, regardless of the cosmical plane on which it is

*All the above presupposes a knowledge of the doctrine of the Globe Chains. Those not familiar with this teaching are referred to William Quan Judge's *Ocean of Theosophy*, with its clearly expressed presentation of the teachings.

functioning. Immediately, we come to see that these terms in themselves are relative. What is manifest to an entity on a particular plane of consciousness may be unmanifest from our own standpoint, denizens of the physical plane that we are.

It is usual to think of these Three Logoi as they apply cosmically.

Before even the First Logos, we must speak of the Boundless, or

T H A T

It is almost an impertinence to speak of THAT for the reason that all speculation upon THAT is impossible. We have no faculties developed which will enable us to comprehend the Boundless, although we are in it, and it is within us. In fact, it is the core of the core, the heart of the heart of every entity, whatever, or wherever it may be. All that is, ever was, or ever will be is rooted in THAT.

Even so, we must use words in order to convey ideas upon a printed page, and we hope that as our understanding grows, we shall develop the ability to experience what we cannot express in words. Thus, we must state that in the beginningless beginning, before Time was, there was THAT.

Before we can consider the three Logoi, we must understand that even THAT, the Boundless, has what might be termed its nether pole, although in this instance, we must not equate the word nether with "lower," or "material," because as yet there was no "material." Let us rather think that the veil of THAT is called Parabrahman-Mûlaprakṛiti.

The word Brahman is from the Sanskrit verb-root *bṛih*, meaning to expand. In this sense, the universe is said to expand or to be breathed forth from THAT. It is also spoken of as the Great Breath. Para-Brahman means Beyond Brahman, or the loftiest reaches of Brahman itself. The word for its other self, Mûlaprakṛiti, is also Sanskrit, meaning Root-Nature or Root-Substance. The term Parabrahman does not imply manifestation, but that it has emerged from the state of Non-being is indicated by its being paired with Mûlaprakṛiti, its veil.

The First Logos is Brahman-Pradhâna, as yet unmanifest although it is the loftiest hierarch of a hierarchy. It is the emanation or outpouring from Parabrahman-Mûlaprakṛiti; and just as Mûlaprakṛiti is the "veil" or counterpart of Parabrahman, so Pradhâna is the "veil" or counterpart of Brahman. From Brahman-Pradhâna emanates the Second Logos, Brahmâ-Prakṛiti. Technically, Brahmâ is the Hierarch of our own Solar System—or of any other solar system within our Galaxy, for that matter; and in later chapters, when studying the Plates and Diagrams, Brahmâ or Brahmâ-Prakṛiti will have this specific meaning.

How can we differentiate between *Brahman* and *Brahmâ*? The problem here hinges on the difference between the galaxy itself and the stars of which it is composed. When we look up at the sky, do we really see the Galaxy or Milky Way, or do we see only a vast assemblage of stars? According to the teachings of the Ancient Wisdom, every star enshrines within its heart a Divinity known as Brahmâ. Its vehicle (usually visible) is called Prakṛiti. This duality, Brahmâ-Prakṛiti, manifests as a star, often with accompanying planets. While each one, in its own sphere of life, is the outgrowth of its *own* Three Logoi, nevertheless as a host of Brahmâs they owe allegiance to the Heart of the Galaxy itself, utterly beyond our ken, and which is not to be confused with the

stars that we see. This heart of the Galaxy is known as Brahman, and its *invisible veil* is Pradhâna. Its full manifestation contains all of the Brahmâ-Prakṛitis.

From a still higher viewpoint, even this Brahman-Pradhâna is the Brahmâ-Prakṛiti to a vastly superior "super-galaxy." This thought could be extended infinitely, and yet we would never reach Parabrahman itself. Paradoxically, Parabrahman is everywhere, and nowhere.

The Third Logos is Mahat, itself a duality. The best definition that can be found is given by G. de Purucker in his *Occult Glossary*:

"Mahat (Sanskrit). This word means 'great.' Mahat is a technical term in the Brâhmanic system, and is the 'Father-Mother' of Manas; it is the 'mother' of the Mânasaputras or 'Sons of Mind,' or that element from which they spring, that element which they breathe and of which they are the children. In the Sâmkhya philosophy — one of the six *darśanas* or 'visions,' *i.e.*, systems of philosophical visioning of ancient India—Mahat is a term that corresponds to Kosmic *Buddhi*, but more accurately perhaps to Mahâ-Buddhi."

We may now tabulate the Three Logoi for easy reference:

The First Logos.....	Brahman-Pradhâna
The Second Logos.....	Brahmâ-Prakṛiti
The Third Logos.....	Mahat or Purusha-Prakṛiti

We are in a position now to carry our study a step further. This relates to the statement made earlier that it is of the utmost importance that we understand when we are talking about entities and when we are discussing bodies. We have now to consider the teaching that there are two main lines of evolution in the Universe, and these two stem from the dual nature of the Three Logoi. From the consciousness side of the Three Logoi, represented by Brahman, Brahmâ and Purusha, there flows forth the consciousness, the light or luminous side of Nature, while from the other aspects of the Three Logoi, called Pradhâna and Prakṛiti, there flows forth the vehicular or shadowy side of cosmic evolution. The word "shadowy" is to be used with caution, because it is not intended to imply anything evil or dark; all is life and energy really, and the entities radiating from the vehicular side of Nature are, in fact, very lofty indeed in their higher spheres of consciousness. We use the terms "vehicular" or "shadowy" in order to bring out the contrasting functions of the two aspects of nature. These do not oppose one another, they complement one another.

There are terms we use which throw more light on the subject. The entities springing forth from the Brahmâ side are sometimes called the Architects, and those springing forth from the Prakṛiti or Nature side are called the Builders. The Sanskrit equivalent terms for these are the Dhyâni-Buddhas and the Dhyâni-Chohans respectively. The word *dhyâni* is a derivative from *dhyânin*, one who is in a state of lofty meditation or *dhyâna*.

The entities on the Builders side of evolution run the gamut from the elementals, through all the Kingdoms of Nature, to and beyond men. The Dhyâni-Chohans are the men made perfect, those who have passed beyond humanhood; they represent the kingdoms above the human. Therefore we see that it is no disparagement to refer to them as occupying varying positions on the "shadowy" side of Nature.

The other side, the luminous side, is composed of beings of a loftier type still, those who direct and inspire all the entities before spoken of, of whatever class they may be. These spiritual guides, known collectively as the Architects, are spoken of in the Vedantic philosophy as the Dhyâni-Buddhas. (The term *buddha* means spiritually awakened.) To phrase this more succinctly, they form what is known as the Hierarchy of Compassion, ranging from the Mahâtmans, the Bodhisattvas, the Mânushya Buddhas or human Buddhas, on to the Celestial Bodhisattvas, and the Celestial Buddhas, and further still. They welcome into their ranks many grades of the Workers, beginners on the Path, often called Disciples or Chelas. This proves that within every individual both lines of evolution are represented.

The Hierarchy of Compassion stems from Âdi-Buddha, which may be called the Silent Watcher of our Solar System. Its members, as the Architects, direct and guide the evolutionary growth of the Builders.

In the natural course of evolution, reaching into the far, far future of the Earth Chain, all men will eventually become perfected humans, but they will still remain in the Hierarchy of the Dhyâni-Chohans unless they make the choice of joining in the work of the Architects, the Hierarchy of Compassion. Having become perfected men by reason of evolutionary development will not necessarily make of them Buddhas of Compassion. However, any one of us may even now direct his steps toward the "Luminous Arc," and in however humble a way it may be for us, we may come within the influence of the Hierarchy of Compassion by virtue of our self-dedication to the service of Humanity. That is the grand hope that is held out to every earnest student. No one is denied the right to participate. The reason for this is that, paradoxical as it may seem, everyone has within himself even now a representative of the Hierarchy of Compassion, a ray as it were, from the heart of the Silent Watcher itself.

According to the teachings, it is the interactions of the two streams of evolution, the Architects and the Builders, that produce the vast armies of Monads.

We now come to the consideration of new terms. These will be more readily understood if we remember the threefold division of Man's constitution as given by St. Paul, to wit: Spirit, Soul and Body. As it is in Man, so is it in the Universe: these three elements in the constitution of man are derived from the three elements in the universe known as Gods, Monads and Atoms.

We may close this chapter by setting this out in paradigmatic form, taking in the various factors that we have studied up to the present:

	Parabrahman	THAT	Mûlaprakṛiti
Brahman Brahmâ			Pradhâna Prakṛiti
(Mahat or Purusha-Prakṛiti)			
	Architects (Dhyâni-Buddhas)		Builders (Dhyâni-Chohans)
	Gods (Spirit)	Monads (Soul)	Atoms (Body)

Chapter II

IN THE NATURE OF THINGS

We are prepared now to step into the realm of “pure” mathematics, that is to say, mathematics for its own sake, and not seeking any practical or utilitarian application. The modern way of thinking is to view mathematics as a tool of science or industry; in fact numbers are not held to have any significance in themselves other than as a means to an end. The curious properties of numbers have long been recognized, but studies along this line are usually relegated to the realm of recreational mathematics.

I should like to stress the viewpoint with regard to Mathematical Symbolism that it is in no sense of the word recreational unless, indeed, it may be said to re-create in our hearts and minds an awareness of the profundity of the basic truths about Man and Nature. As we pursue this study, the various geometrical figures will be presented as a means whereby we may clarify our understanding of the teachings of the Ancient Wisdom. At this point, one might very well ask: What has Theosophy, or any other system of thought for that matter, to do with Geometry?

Let us put it in this manner: If the study of the geometrical figures to be presented here were confined to a strictly mathematical treatise, it would be a marvelous study in itself. The astonishing relationships between certain geometrical solids known as the *regular polyhedra* would excite wonder in the mind of any student; and it is to be regretted that so little attention has as yet been paid to these figures. Many students reading such a treatise would find that within their own minds, and without any suggestions from me, there would arise a feeling of awe, something akin to reverence. They might ask over and over again: Why should these things be? And lacking an answer, they would let it go at that, but might well have a vague feeling that there is more in this than appears on the surface.

Again, if such a purely mathematical treatment of the subject should fall into the hands of someone already versed in the teachings of Theosophy, he might well see for himself the relationships between these geometrical figures and the processes of world-building, the nature of Man, and his place in Nature. And he need not feel at all that his imagination is running away with him. Indulging in this kind of

thinking will place him in company with some of the greatest minds known to the human race, Plato, Pythagoras, and others.

Now it should not be thought that this is the only road to a deeper understanding of the teachings. This is an approach that appeals to a certain type of mind, a mathematically mystical mind, let us say. Other methods of approach will serve the purpose better to other minds and hearts. Pondering these differences can lead to an understanding of what H. P. Blavatsky must have meant when she said in *The Voice of the Silence*, "The path is one, the ways to reach the goal must vary with the pilgrim." For, after all is said and done, the highest aim is not to find a complexity of meaning in the mathematical symbols; the aim and purpose is to find and ally oneself with the Higher Self. Our studies must point toward this goal; without this all-important objective they would have little value.

It will be seen from what has just been said that in a higher sense the study of Mathematical Symbolism does have a practical application; nor does this conflict with the opening words of this chapter, *i.e.*, that we are now stepping into the realm of pure mathematics, with little utilitarian value in the ordinary sense of the word. If this study can help to bring to the student an awareness of the all-pervading Divine Life in which we live and move and have our being, then indeed it is an aid to his progress.

What, then, is a symbol? Is it something in which a truth is hidden so that it is not easily detected by those not entitled to it? In some instances truths have been concealed, or veiled at least, in myths and legends, and in parables, because there have always been the beginners in search of truth who cannot grasp as yet the whole meaning of the philosophy, and it must be given to them in such a manner as can be accepted. But we do a disservice to the reader if we entertain the idea that there are a chosen few who are privileged to receive the truth, while the majority, presumably because they are not yet worthy to receive, must be content with half-truths, or truths so cleverly concealed that they cannot be detected. This unfortunate manner of putting it has turned aside more than one potential student.

Therefore, let us phrase it in this manner: The truth is always available to anyone who is seriously in search of it. But at any particular time, it is available to the degree that the student himself has the faculty of taking it. It could be set forth in the fullest exposition conceivable, but if the student does not yet have the faculty of grasping it, he will not recognize it for what it is, and he will imagine that it is being hidden from him. Actually, he is hiding himself from it. When we do receive even limited teaching it is with the assurance that as our understanding grows, we shall receive it in ever fuller measure. It can never be forced upon us, but of our own wills we can go forth and receive it.

Once this is clearly borne in mind, we discover that a true symbol is the most concise manner in which a truth can be revealed. Not all truths are conveyed in words. They do not need to be. The truths existed long before speech was developed. In fact, the ultimate way in which they may be transmitted is through a type of communication that transcends words and requires in the pupil the faculty of intuitive understanding. This is what every student should seek to develop.

Now we shall come in time to regard the Dodecahedron as a symbol of manifested Nature, or Prakṛiti. This is because in its relationships to the other regular polyhedra,

it demonstrates the most concise manner in which the truths about the manifested universe can be presented. If we press the question: Why is this so? We can only say "It is in the nature of things." There is no other reply; and this applies to all the symbols that will be presented. Why are we conscious? It is in the nature of things. Why is the Boundless the source of all that is? It is in the nature of things. Why are we embarked upon an age-long pilgrimage back to the source from which we sprang? Again we must say, it is in the nature of things. Why does a moving circle generate a series of marvelously related geometric forms? Once more, it is in the nature of things. Why do these forms represent the journey of the Eternal Pilgrim back to the Home from which he issued forth? It is in the nature of things.

Having thus set the stage, I would like to quote from the opening passage of H. P. Blavatsky's Proem to her *Secret Doctrine*.

PAGES FROM A PRE-HISTORIC PERIOD

"An Archaic Manuscript — a collection of palm leaves made impermeable to water, fire, and air, by some specific unknown process — is before the writer's eye. On the first page is an immaculate white disk within a dull black ground. On the following page, the same disk, but with a central point. The first, the student knows to represent Kosmos in Eternity, before the re-awakening of still slumbering Energy, the emanation of the Word in later systems. The point in the hitherto immaculate Disk, Space and Eternity in Pralaya, denotes the dawn of differentiation. It is the Point in the Mundane Egg, the germ within the latter which will become the Universe, the ALL, the boundless, periodical Kosmos, this germ being latent and active, periodically and by turns. The one circle is divine Unity, from which all proceeds, whither all returns. Its circumference — a forcibly limited symbol, in view of the limitation of the human mind — indicates the abstract, ever incognisable PRESENCE, and its plane, the Universal Soul, although the two are one. Only the face of the Disk being white and the ground all around black, shows clearly that its plane is the only knowledge, dim and hazy though it still is, that is attainable by man. It is on this plane that the Manvantaric manifestations begin; for it is in this SOUL that slumbers, during the Pralaya, the Divine Thought, wherein lies concealed the plan of every future Cosmogony and Theogony."

Again, quoting from page 4:*

"The first illustration being a plain disk, the second one in the Archaic symbol shows a disk with a point in it—the first differentiation in the periodical manifestations of the ever-eternal nature, sexless and infinite 'Aditi in THAT' (*Rig-Veda*), the point in the disk, or potential Space within abstract Space. In its third stage the point is transformed into a diameter [Fig. 2]. It now symbolizes a divine immaculate Mother-Nature within the all-embracing absolute Infinitude. When the diameter line is crossed by a vertical one, it becomes the mundane cross [Fig. 3]."

*See Fig. 1, Fig. 2 and Fig. 3. In *The Secret Doctrine*, these figures are interspersed within the text but for the convenience of the reader, these are set forth here as separate figures. I have added the downward-pointing arrow to the cross in Fig. 3.

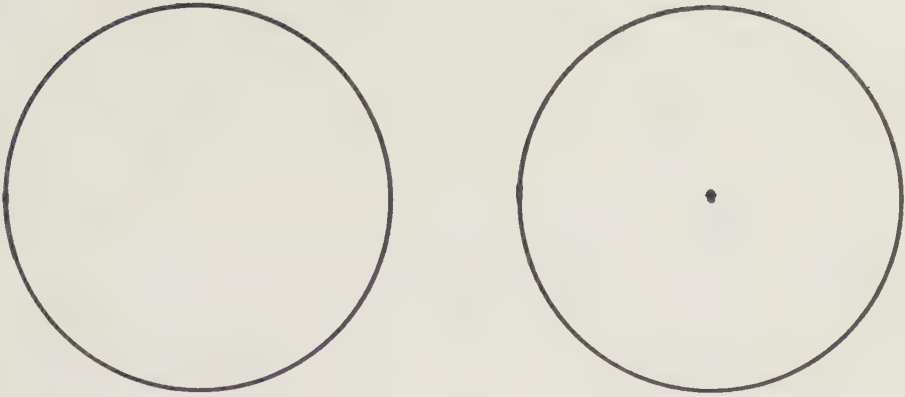


Fig. 1—The First Differentiation.

Referring to the explanation of the Three Logoi in Chapter One, we may indicate that the plain disk represents the Boundless, and as it lies upon a dark background on the original parchment as described by H. P. Blavatsky, duality is suggested, and represented in our studies by Parabrahman (outside the disk)—Mûlaprakṛiti (within the disk). The point within the circle now represents the First Logos, Brahman-Pradhâna, the point indicating differentiation, although as yet no manifestation is apparent.

When the diameter appears, we now have a representation of the Second Logos, Brahmâ-Prakṛiti or Svabhavat, semi- or quasi-manifestation (Fig. 2). The Third Logos, Mahat, is represented when the vertical line crosses the diameter. But note that this is not a static symbol. In Fig. 3, the vertical line ends in an arrow, indicating motion. The circle will be made to descend, representing the action of the Third Logos in manifestation. In the occult representation of the Cross, the horizontal diameter represents the feminine, and the vertical line the masculine aspects of Svabhavat.

On page 29 of *The Secret Doctrine*, note verse 10 of Stanza III of the *Book of Dzyan*:

“Father-Mother spin a web whose upper end is fastened to Spirit — the light of the one darkness — and the lower one to its shadowy end, matter; and this web is the universe spun out of the two substances made in one, which is Svabhavat.”

Let us now observe that the horizontal line has been lettered AB, and since it is taken to represent the feminine energy, let us see what it will accomplish. Turning to Fig. 4, we see that the circle has descended a distance of its own diameter. The stage is now set for the springing into life of the seeds of manifestation brought over from previous cycles. This is represented by the new position of the circle. It no longer intersects any portion of its old position, the latter now represented by the broken-line circle. In other words, the circle occupies an entirely new position in space.

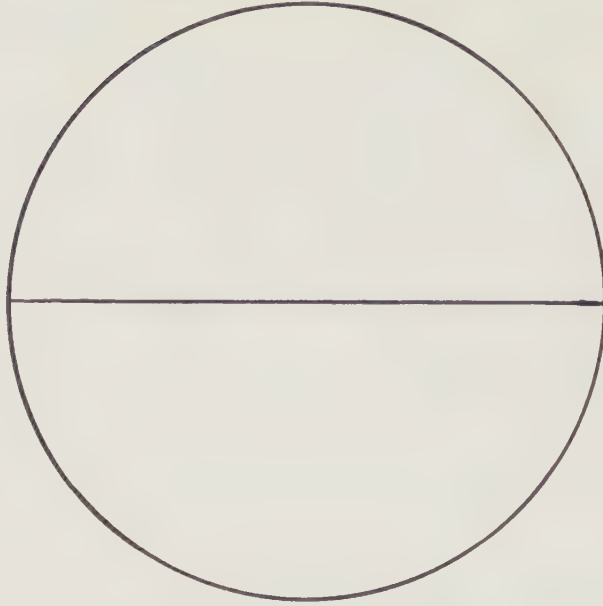


Fig. 2—The Diameter Appears.

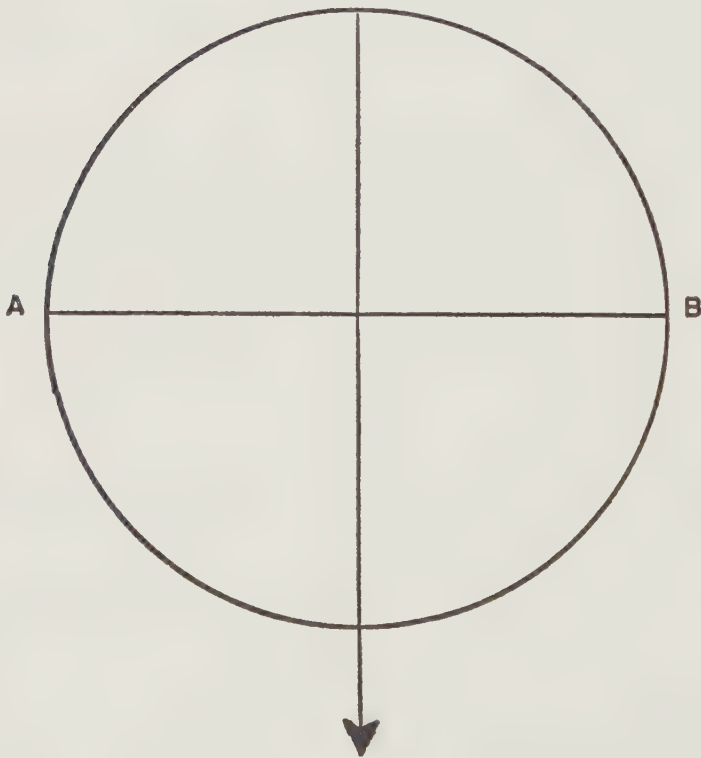


Fig. 3—The Mundane Cross,

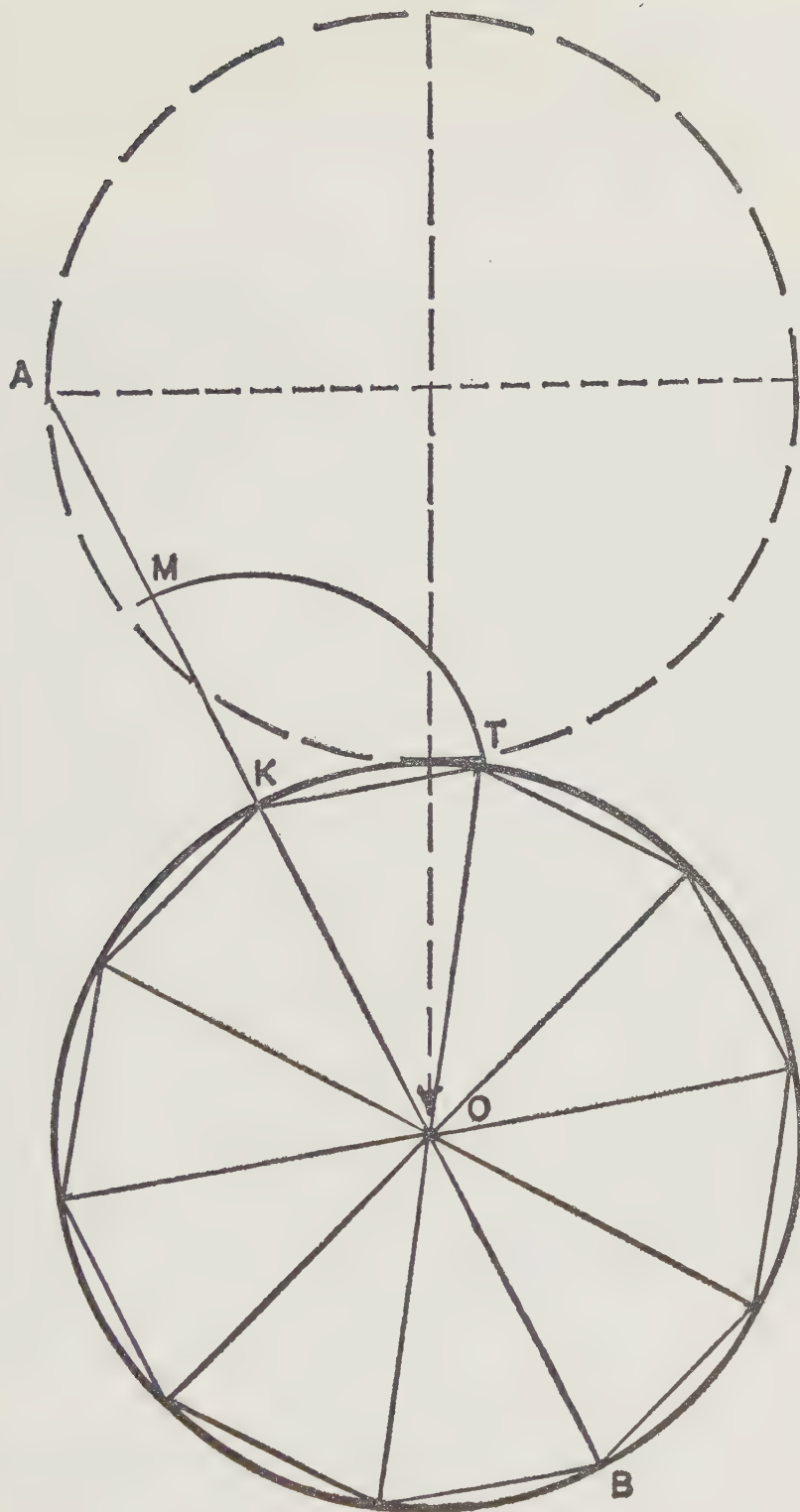


Fig. 4—"Father-Mother Spin a Web."

Point A on the original horizontal line is considered to be fixed in space, and the diameter has thus become a vector; and because it must still pass through the center of the circle, it takes its new position as shown in Fig. 4, and is lettered, as before, AB. The phenomenon we are about to perceive would have been the same if we had taken Point B as the fixed point. The result then would merely have been a reflection of what has occurred.

The lengthened line AB is cut by the circle at the point K, and a remarkable relationship is now seen between the line segments. This may be expressed thus: The shorter segment, AK, is to the longer, KB, as the segment KB is to AB. This curious property is known as the Extreme and Mean Ratio, called by the Greek Scholars the Golden Section. We may state this numerically thus: The radius of the circle is considered to be unity, or 1. Thus, the diameter will be 2. The length of the line segment AO (to the center of the circle) is equal to the square root of 5, or 2.236.*

Cutting AO at the point K has the effect of reducing AO by the length of the radius of the circle, so that AK will equal $2.236 - 1$, or 1.236. So now we have: AK equals 1.236. KB (the diameter) equals 2, and the line AB will therefore equal 3.236.

The proportion may then be stated thus:

$1.236 : 2 = 2 : 3.236$, which is the numerical way of saying that the smaller line-segment is to the larger as the larger is to the whole line.

The numbers will reduce to a more convenient form by dividing by 2, and we then have:

$$.618 : 1 = 1 : 1.618$$

These terms, .618, 1, 1.618 are only three in a series that extends endlessly in either direction, each term bearing exactly the same relationship with the one following. A few of these terms that will be familiar to students of geometry are as follows:

.382, .618, 1.00, 1.618, 2.618, and so on.

Additional material on the Golden Section, as noted, will be found in the Appendix, but it will suffice here to say that much research on the part of many scholars has been done with this remarkable property of the Extreme and Mean Ratio, and it has been found that there are many instances of design in Nature that follow this interesting proportion. So revered was it by the ancient Greeks that they used it widely in their architecture and sculpture, and this is one of the reasons that the beauty of Greek art is so well known and loved. This proportion is also used by some modern architects. We are about to discover another kind of beauty in it.

Having divided the numbers by 2, we can accomplish the same thing geometrically by dividing the line segment AK at the midpoint and taking the ratio of MK with

*For a full explanation of this, see Appendix I.

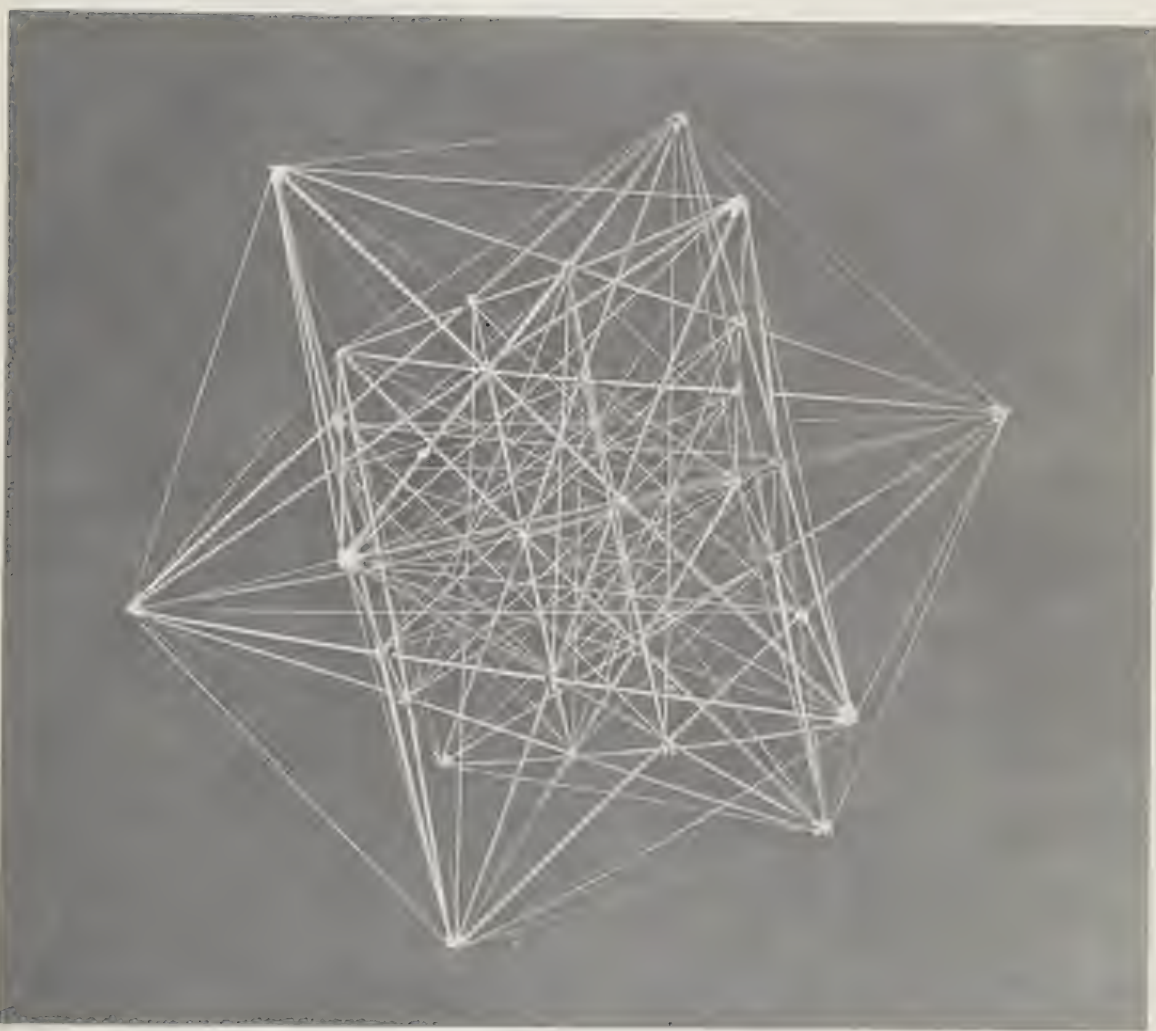


Plate III — The Lesser Maze Constructed



Plate IV – The Mystic Crucifixion

respect to the radius of the circle. Thus we have: $MK : KO$ equals $.618 : 1$. This length, MK , is seen to step exactly ten times around the circumference of the circle, and we have inscribed a regular Decagon!

This is a wonderful fact of geometry. First of all, it suggests that 10 is a natural number to be used as a base for notation. In modern concepts of notation, other bases are being used, and they have their value for the purposes for which they are intended; however, these present studies will probably convince the student that there is a naturalness about the number 10.

Now, it may be a bit confusing at times to find Theosophical students using a wide variety of numbers in explaining the doctrines. We sometimes come across expressions something like this: "The planes of consciousness may be numbered as 7, 10, or 12, according to the manner in which the teaching is being presented." I have sometimes wondered if our good listeners and readers are waiting for us to make up our minds! Well, the reason for this seeming confusion is not really so difficult to find. It all depends upon how much of the teaching is being explained at any one moment. Let us be specific in one instance.

It is sometimes convenient to allude to the threefold division of man's nature as body, soul and spirit. This threefold division is usually attributed to St. Paul. As far as this goes, it is perfectly correct and is full of profound meaning. But if we wish to elaborate, we turn to the sevenfold division of man's constitution, as explained in many of our textbooks, presenting in this manner the seven principles of Man. Then, when we wish to go still deeper into the mysteries of man's consciousness, we explain that these are the seven manifested principles, but that above these (speaking diagrammatically) there are three unmanifest principles, about which we seldom speak for the reason that it is next to impossible to describe them, however important they may be. In the first place we stumble over the inadequacy of words when we speak of unmanifest principles, or again, of unmanifest globes. If they are unmanifest, how can they have the shape of globes? Well, they don't really, but we do not have the words for them and we do the best we can with diagrams.

Then, again, when we speak of 12 as the complete number, we mean the hierarchy of 10, with the upper link which binds it to the hierarchies above, and the lower link which binds it to hierarchies below. These last two, completing the full number 12, are not really principles at all, but they are very important for our study when we take the enlarged picture of the hierarchical structure of Nature and see that there are endless planes of consciousness above and below ours. We must think of Man himself as a stream of consciousness which takes its rise in planes of existence far higher than any in which he has conscious awareness; his stream of consciousness extends beyond his own life and touches other realms. But that is another story.

Thus the circle in motion, generating a regular decagon, may be taken as a most graphic symbol of the formation of the ten planes of consciousness within the Universe.

The principles underlying these numbers appear in other forms. Perhaps of paramount importance is that of the Tetraktys. This was the symbol probably most revered by the Pythagoreans. An oath taken on the Holy Tetraktys was held to

be binding for life. This single triangle of ten dots stood for them as a symbol of creation; and for good reason, as we shall see. In its usual form it consists of ten dots arranged in the form of an equilateral triangle, thus:



It may appear sometimes in other forms.*

In Fig. 5, we discover that the triangular representation of the Tetraktys is an exceedingly important one and exhibits a very curious property. It shows quite graphically what we mean when we speak of the seven manifested planes and the three unmanifested. The three dots which are the vertices of the triangle stand apart, and only the seven dots at the center of the figure will be used in a large number of the diagrams which are to follow.

The manner in which these dots are employed in this figure has a story connected with it. It relates to the old Norse legend concerning Thor's hammer. According to the story, Thor wanted to have a hammer that could be used for wielding the thunderbolt, and he went to the smith Hafnir, who agreed to make the hammer. While Hafnir was working, the dwarf Loki, who was a troublemaker, changed himself into a gadfly and stung Hafnir on the forehead until the blood ran down into his eyes and blinded him. Hafnir raised a hand from his work to brush away the blood, and in that instant the work was stopped and Thor's Hammer was not completed, nor does the legend tell us what the hammer would have been like. But the story does hold adumbrations of a deep mystery, for in showing the Hammer in the familiar form of the Svastika, as it is customarily depicted, we do have a symbol of cosmic rotation; and it is significant that this symbol has been used by many cultures. May we not suppose that the Tetraktys furnishes the key to the mystery?

The conventional Svastika, as everyone knows, is made in the form of the Cross with the arms bent at right angles — a two-dimensional figure. The completed Thor's Hammer, however, becomes an even more meaningful symbol. This we show in Fig. 5, where the diagram, though two-dimensional, may be used to represent a three-dimensional object. Note that six of the dots stand equidistant from the central

*For instance, those familiar with the Brahmanical Tables giving the number of years in the four Yugas or great ages will recognize in numerical form the same relation: 1 - 2 - 3 - 4. Thus, the shortest is the Kali-Yuga, with 432,000 years; the next is the Dwâpara-Yuga, twice as long, with 864,000 years; then comes the Tretâ-Yuga, this having three times as many years as the Kali-Yuga or 1,296,000 years; and lastly is the Kṛita-Yuga, or Golden Age, four times as long, with 1,728,000 years. Added together, these make up the Mahâ-Yuga of 4,320,000 years, just ten times as long as the Kali-Yuga. This is held to be roughly the time taken for one half of a Root-Race to run its course. This statement is actually an over-simplification; it would apply to the Third, Fourth and Fifth Root-Races more than to the First and Second, which are much longer, or again, to the Sixth and Seventh, which are shorter.

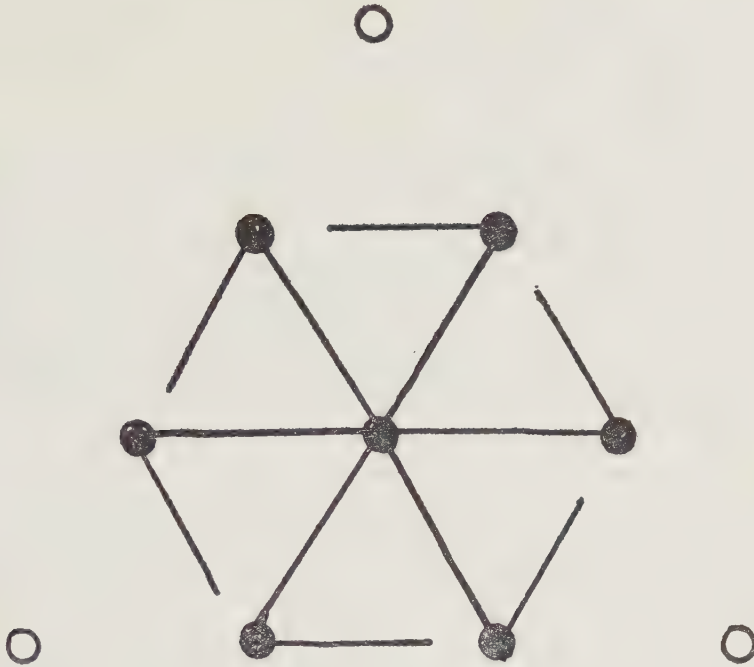


Fig. 5—Thor's Hammer.

seventh. By joining the three pairs of dots through this central seventh we have three lines, to be considered mutually at right angles to each other, and representing the three axes of rotation by virtue of their being bent.

All objects, whether they be atoms or stars, are subject to three axes of rotation. In the case of a ship, or a space vehicle, these three motions are called roll, pitch and yaw. The three motions of the Earth are: its rotation about the axis running through the north and south poles; the motion at right angles to this, which determines the inclination of the axis; and, finally, the third motion, at right angles to the second, which determines the "precession." In Appendix II we shall give a detailed account of the Precession of the Equinoxes, a teaching — or fact of astronomy, rather — with which every student of Theosophy should be familiar. If it were not for the three axes of rotation, there would be no Precession of the Equinoxes, with the wonderful correlations between the cycles and the geometrical figures shortly to be studied and the deep philosophical implications inherent in the numbers related to them.

We may introduce, at this point, one more facet of our study of the Tetraktys: If we were to take five of these three-dimensional Svastikas and place them concentrically, observing, of course, the correct angles between the radiating lines, we would find that the bent arms would of themselves form a most interesting geometrical figure, the Icosahedron. See Plates 1 and 2. This is a regular Polyhedron, having 20 triangular faces and 12 vertices. We have now only to change the positioning of the five Svastikas, and the bent arms are seen to form a second geometrical figure, the Dodecahedron. This is a regular polyhedron consisting of 12 faces, all of them being regular pentagons and having 20 vertices. A detailed study of these and other figures will be taken up in the succeeding chapters; they form the main body of our study. The

highly important point being brought out at this time is that this mystical Tetraktys is actually the *link* between the laws of mechanics and the study of Mathematical Symbolism. It serves as a magical bridge joining mystical thought with the more pragmatistical concepts of natural laws.

In concluding this chapter, we should emphasize that while each and every mathematical fact that will be brought forth can be demonstrated by standard methods of geometrical proof, such proof nevertheless merely places the stamp of approval, as it were, on the mechanics of the study. It does not really explain why these things should be. An effort to understand the "why" carries us much deeper than the laws of mathematics as such, for it forces us to develop faculties which transcend the intellect. Although we may reach to a certain kind of intuitive understanding, we cannot always formulate such comprehension in words; and once more, when we attempt to answer the great question WHY, we must be content with the simple reply: "It is in the nature of things."

SECTION TWO

Chapter III

“GOD GEOMETRIZES”

- “1. The eternal parent wrapped in her ever invisible robes had slumbered once again for seven eternities.
2. Time was not, for it lay asleep in the infinite bosom of duration.”

—*Book of Dzyan*, Stanza I, verses 1-2.

- “6. From the first-born the thread between the Silent Watcher and his Shadow becomes more strong and radiant with every change. The morning sunlight has changed into noonday glory . . .
7. This is thy present wheel, said the Flame to the Spark. Thou art myself, my image, and my shadow. I have clothed myself in thee, and thou art my Vâhana to the Day, ‘Be with us,’ when thou shalt re-become myself and others, thyself and me. Then the builders, having donned their first clothing, descend on radiant earth and reign over men — who are themselves . . .”

—*Book of Dzyan*, Stanza VII, verses 6-7.

We shall now return to the moving circle, as seen in Fig. 4, remembering that the horizontal diameter has become a vector and is cut at the point K by the circumference of the circle. One half of the line-segment AK was found to step exactly ten times around the circle, forming a regular decagon. As a symbol, this was interpreted to represent the natural coming into being of the ten planes of consciousness of the Universe.

Now, Plate 3 shows that we have joined by straight lines the alternate angles of the decagon, and by doing so, we have drawn a plane projection of the very interesting three-dimensional figure known as an Icosahedron. This is a regular polyhedron, having 20 equilateral triangular faces, 12 vertices and 30 edges. It is the first of the five regular polyhedra with which we are to become familiar.

All these figures will be illustrated as they occur throughout our studies, but it will be best at this time to define the terms that will be used.

The names of the five polyhedra are from the Greek words that describe them. Thus, the word polyhedron (*pl.* polyhedra) means many faces. To qualify as a regular polyhedron, the geometrical solid must have an even number of faces. All of

the faces must be regular polygons (from the Greek, meaning many sides). A regular polygon has all of its sides and angles equal. Furthermore, the faces must all be congruent, that is, in any one polyhedron they must all have the same shape and size. All the vertices of the polyhedron are similar polyhedral angles. This will give the figure perfect symmetry.

An Icosahedron is thus a regular polyhedron, having 20 faces, as stated, all of them congruent equilateral triangles. They meet in 12 vertices (polyhedral angles), and the figure is bounded by 30 lines, or edges.

There are only five regular polyhedra existing in nature. See Plate 4, also Plates 1 and 2. These are:

	FACES	VERTICES	EDGES
Icosahedron	20 (triangles)	12	30
Dodecahedron	12 (pentagons)	20	30
Octahedron	8 (triangles)	6	12
Hexahedron (Cube)	6 (squares)	8	12
Tetrahedron	4 (triangles)	4	6

These figures will be discussed one by one as they appear.

An Icosahedron might now be thought of as consisting of 12 points equally spaced on the surface of a sphere, which points have been connected by straight lines, each such point then radiating five lines. Thus, the 30 edges of the Icosahedron are really chords (the shortest one possible) in the sphere. Looking now once more at its projection in the circle, there will be an interesting point to mention in respect to the center of the circle. The center is really a projection of the north and south poles of the sphere, coinciding in one point. There is a very interesting bit of symbolism here, related to the relationship between the numbers 10 and 12, before mentioned. The ten points on the circumference were joined to the center of the circle and were considered to be radii; but it now appears that they are ten of the edges of the Icosahedron, five of them meeting at the north pole, and the other five meeting at the south pole of the sphere. Thus there are really 12 points in all. This is a matter worth pondering; it will be an important clue in understanding some aspects of the teachings about Hierarchies.

As a matter of fact, an Icosahedron may also be generated by a moving sphere, but no attempt has been made to elaborate this as it would be appreciated only by students who are familiar with Solid Geometry, and it might tend to confuse the issue if it were presented here.

We are going to take this study another step now and join internally by straight lines the vertices of the Icosahedron, and we shall find that if all possible chords are drawn within the body of the Icosahedron (omitting, however, the diameters of the sphere in order that the figures may be seen more readily), these internal lines meet in groups of 3, in 20 points. Thus a new figure has been formed within the Icosahedron (Plate 5). This is the Dodecahedron, above described as a regular polyhedron consisting of 12 pentagonal faces, 20 vertices, and 30 edges.

These two figures are complementary. Both are constructed of 30 edges, but whereas the Icosahedron has 20 faces and 12 vertices, the Dodecahedron has 12 faces and 20 vertices. The sum of all the plane angles in the Icosahedron is 3,600 degrees, and the sum of all the plane angles in the Dodecahedron is 6,480 degrees.

Now we have the remarkable fact that the moving circle has generated an Icosahedron enclosing a Dodecahedron. In connection with the symbolism of this, remember that Brahmâ-Prakṛiti is dual. Brahmâ may be said to be the “Silent Watcher of the Hierarchy,” and Prakṛiti, manifested Nature, the corporealized vestments, if you prefer, of the Solar Divinity called Brahmâ.

For reasons which we plan to make more evident as we go along, the Icosahedron is best taken to represent Brahmâ, and the Dodecahedron, Prakṛiti. We shall come to see that the Dodecahedron is more directly involved in the other regular polyhedra, whereas the Icosahedron is indirectly involved, and yet it may be said to give the “breath of life” to the other figures.

Thus far we have been looking at the Icosahedron as though held with one of the *vertices* in our line of vision, and the Dodecahedron positioned with one of the *faces* directly in our line of vision. It is important to view these figures also in the reverse manner, that is to say, with the Icosahedron positioned with a *face* directly in our line of vision; the Dodecahedron *within* it will then have one of its *vertices* in our line of sight. In many respects this will be a more favorable view because the outline of the Icosahedron will have changed from the ten-sided to the six-sided view, and a new field of symbolism will then become apparent. Plate 6 will make this clear. Here we have the Tetraktys, and the seven dots at the center, which we hold to represent the seven manifested planes, will now form the basis for a drawing of the Icosahedron surrounding the Dodecahedron. The three dots at the angles of the Tetraktys still remain the symbol of the unmanifested planes. Here the meaning of the Tetraktys is greatly expanded. We see it as a symbol of the Solar System, at least as far as we have developed the theme up to this point. To the best of our ability we should attempt to see these figures as solids rather than as flat pictures.

Just as the Dodecahedron was formed by joining internally the vertices of the Icosahedron, so it will now be possible to make another Icosahedron within the Dodecahedron, and then another Dodecahedron may be formed from the smaller Icosahedron; and thus we find that we may make an endless series of Icosahedron-Dodecahedron, never reaching the center. This is shown in Fig. 6. Conversely, the edges of the Icosahedron may be *extended* until they meet in 20 points in space, and these points may then be joined, making a new Dodecahedron; and the edges of this figure may also be extended until they in turn meet in 12 points, which, again, may be joined, making a new Icosahedron, and so on ad infinitum. Thus, the Icosahedron enclosing a Dodecahedron, which was originally formed by the moving circle, is found to be but one term in an infinite series of these regular polyhedra, extending outwards and inwards, ad infinitum. What a magnificent symbol this if of the concept that this Universe is but one term in an infinite series of universes, extending in either direction, inwards and outwards, through all conceivable levels of consciousness.

This remarkable geometrical process throws a brilliant light on another Theosophical concept: the relationship between the Microcosm, the “little universe” which is

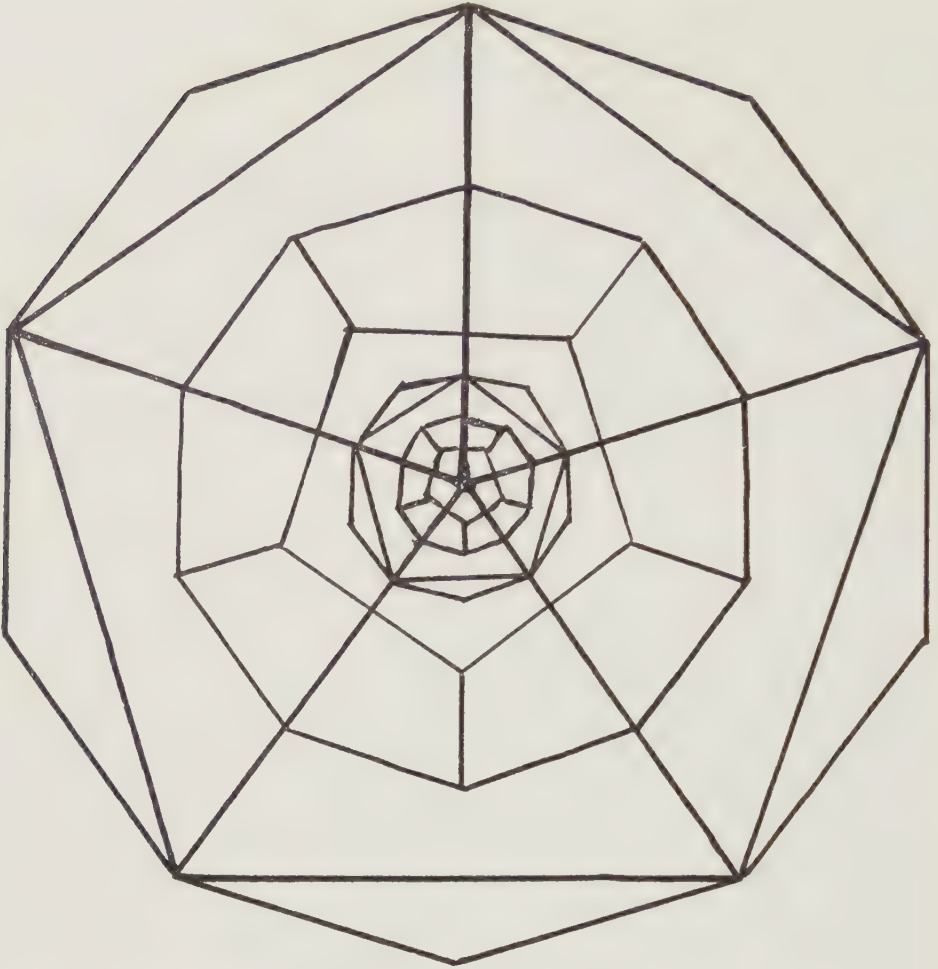


Fig. 6 — An Infinite Series

Man, and the Macrocosm, the “greater universe” about him. “Nothing is great, nothing is small, in the Divine Economy.”

We are now ready for what is perhaps the most beautiful and significant aspect of this whole study. We are going to see a symbol made before our eyes: the manner in which the spiritual-divine fire of Brahmâ blends with Prakṛiti to give birth to the spark of Divine Consciousness which is the core of the core of Man himself.

Heretofore we have joined internally the points of the Icosahedron to form a Dodecahedron; and the points of the Dodecahedron were joined internally to form an Icosahedron. Now, we are going to join each point of the Icosahedron (of which there are 12) with certain of the points of the Dodecahedron. The 12 lines so formed will converge in 6 points within the Dodecahedron (See Plate 7). These points are actually the vertices of a new figure, an Octahedron. The Octahedron, as before stated, is a regular polyhedron having 8 triangular faces, 6 vertices, and 12 edges.

It will be observed that only 12 of the vertices of the Dodecahedron were employed in constructing the Octahedron. We shall soon see that the other points of the Dodecahedron will be accounted for; but we must take the study one step at a time.

The symbolism shown in the Octahedron formed by the union of the Icosahedron and the Dodecahedron probes into some of the most recondite of the teachings about Man's consciousness. Man is verily a child of the Gods and Divine Nature!

We must realize that when we speak of Brahmâ as the Hierarch of our Solar System, this Divine Consciousness is in reality a very complex entity. We can approach an understanding of its nature if we imagine it to be a great light emanating certain rays, or portions of itself. We speak of these as the Logoi of Brahmâ, and we number them as being twelve, in keeping with the more advanced teachings. The twelve points of the Icosahedron may properly be taken to represent these twelve Logoi, radiating their own twelve energies to form the highly complex entity that we call Man. This process is represented in the joining of the points of the Icosahedron with those of the Dodecahedron, forming the Octahedron, which is therefore quite aptly taken to represent the Monadic Essence of Man. The symbolism of the Octahedron will become even more important as we proceed.

Seeing the Octahedron as the main actor in the cosmic drama about to be unfolded, we are going to consider how we can portray the process of manifestation of the Monadic Essence which it represents. The Octahedron as formed represents the condition of the Monad before its own manifestation takes place; and we are to understand that from the Monad itself are produced the various sheaths of consciousness in which it is to clothe itself. We learn that these sheaths are of themselves bi-polar; that is to say, they have their own energetic and their own material or corpuscular aspects. We can employ the terms more widely used and say that each such sheath of consciousness is at once Spirit and Matter.

So let us represent this in keeping with our geometrical study by making of each face of the Octahedron the base of a small triangular pyramid, or Tetrahedron. It will be remembered that the Tetrahedron is one of the regular polyhedra consisting of four equilateral triangular faces and four vertices; it has six edges (Plates 1 and 2).

When eight such Tetrahedra are constructed on the faces of the Octahedron, we find that they form two large interlacing Tetrahedra as in Plate 1. This gives us the same symbol with which we are already familiar: the well-known interlacing triangles; but in this three-dimensional form it is far more graphic. Thus the interlacing Tetrahedra represent Spirit and Matter, the bipolar sheaths of consciousness in which the Monad clothes itself.

It is a remarkable geometrical fact that these Tetrahedra are of such a size that their vertices just touch the eight points of the Dodecahedron which are not occupied by the golden lines emanating from the points of the Icosahedron. This places Man within the Solar System, showing his inseparable link with his environment. He is part and parcel of it. He is the “Jewel in the Lotus.”

Now the Cube or Hexahedron, representing fully imbodyed Man, is not an arbitrary symbol, as will be made clear by the next stage in our study. If we join by straight

lines the vertices of the interlacing Tetrahedra, we shall find we have constructed a Cube which encloses the interlacing Tetrahedra. The edges of these Tetrahedra are seen to be the diagonals on the faces of the Cube, while the vertices of the Octahedron are coincident with the midpoints of the faces of the Cube. Furthermore, the Cube with its 12 edges fits perfectly within the Dodecahedron with its 12 faces. Turning to Plate 1 again, we see that each face of the Dodecahedron is crossed by a line; and upon closer observation it will be seen that these lines form the Cube. (See also Plate I.)

Thus the Cube may be taken to represent fully manifested Man within the Solar System, or within Prakṛiti. The implications of this study touch on some of the deepest mysteries of human consciousness.

A very interesting point with regard to the Cube is that the sum of all its plane angles is 2,160 degrees. Students will be quick to recognize the importance of this number. Twice 2,160 is 4,320, a key number in calculating the durations of the Root-Races, and in a wider field, the Rounds of the Earth Chain. Furthermore, it takes 2,160 years for the Equinoctial Point to advance through one Sign of the Zodiac. (See Appendix II.) This is only a hint of another aspect of the study which will be taken up in due course of time.

It might be mentioned here that, having put all the regular polyhedra together, the Icosahedron surrounding the Dodecahedron, the two combining to form the Octahedron, which in its own turn generates the interlacing Tetrahedra and the Cube, we have constructed what is known as the Lesser Maze.

This procedure is shown step by step in Plate I. The Octahedron is first shown in yellow lines, the Tetrahedra in green lines, and the Cube in Red. These are enclosed within the Dodecahedron shown in blue lines. Plate II shows all of this enclosed within the Icosahedron.

If we now add all of the plane angles in the Lesser Maze we have the following:

Icosahedron.....	3,600	degrees	
Dodecahedron.....	6,480	"	
Octahedron.....	1,440	"	
Cube.....	2,160	"	
1st Tetrahedron.....	720	"	
2nd Tetrahedron.....	720	"	
	<hr/>		
	15,120	"	which is also the number of years required for the Equinoctial point to pass through 7 signs of the Zodiac.

Plate III shows the Lesser Maze as constructed of wires and threads. The outermost figure in white threads is the Icosahedron; the Dodecahedron is constructed of wires painted blue; the Octahedron of yellow threads, surrounded by the interlacing Tetrahedra in green threads; and the Cube within the Dodecahedron is constructed in red threads.

Before closing this chapter, we should bring out the important concept of the Icosahedron being formed by joining with straight lines the 12 points equally spaced about the surface of a sphere. In like manner, it must be said that the Dodecahedron is formed by joining with straight lines 20 points spaced symmetrically about the surface of a smaller concentric sphere, and that the Octahedron is formed by joining 6 points on the surface of a concentric sphere, smaller yet. It is to be noted, however, that the Cube and the Interlacing Tetrahedra share certain points with the Dodecahedron. Because the points of these two last-named figures coincide with points on the Dodecahedron, it is obvious that their spheres will coincide, appearing as one sphere. This means that in the Lesser Maze we have three concentric spheres, the largest enclosing the Icosahedron, the intermediate enclosing the Dodecahedron with the Cube and the Interlacing Tetrahedra, and the last, and smallest, enclosing the Octahedron. This concept is going to be of great importance in the study to be taken up in a subsequent chapter.

Let us point out once more that there could be a second Icosahedron formed by joining internally the vertices of the Dodecahedron. One of the marvels of the interrelationships of these figures is that this internal Icosahedron is so placed by nature, that its 12 vertices just touch the edges of the Octahedron at the points of the Golden Section of these edges! A marvelous bit of symbolism, truly. It points to the fact that it is in the inmost spark of Divinity that man carries within himself a link with other universes, other hierarchies that regard him as their own Silent Watcher.

Chapter IV

THE MAGIC OF NUMBERS

We have stressed in an earlier chapter the fact that the curious properties of numbers are not to be considered merely a fertile field for mathematical recreations and jugglery. The present chapter will further emphasize this by exploring some of the significant number relationships in occult studies. We are now ready to present a more complete table of the numerical elements of the five regular polyhedra and relate them to significant number ratios in the revolutions of the planets of the Solar System and to the grand cycles in the history of the Root-Races on this earth.

First of all, let us inquire into the reason why there are five and no more than five of these interesting geometrical solids existing in nature. Let us turn to Plate 4 and observe the order of these Polyhedra at the head of this Table: First, there is the Icosahedron, then the Octahedron, next the Tetrahedron, then the Hexahedron or Cube, and lastly, the Dodecahedron. Note in these figures a peculiarity of the numbers 3, 4 and 5. Starting from the center and working toward the left: The Tetrahedron has 3 triangular faces about each of its vertices. Next, the Octahedron has 4 triangular faces about each of its vertices. Lastly, the Icosahedron has 5 triangular faces about each of its vertices. If we were to try to construct a geometrical figure with 6 triangular faces about a vertex, we would find it impossible because it would result in a flat surface. Now let us work from the center again, and this time to the right: The Tetrahedron has 3 *triangular* faces about each of its vertices; the Cube has 3 *square* (four-sided) faces about each of its vertices; and lastly, the Dodecahedron has 3 *pentagonal* (five-sided) faces about each of its vertices. The number of lines bounding the faces have increased by 3, 4 and 5. Again, if we were to try to construct a figure by placing 3 hexagonal faces about a vertex, we would once more have a flat surface. This is the simplest method of demonstrating that there can be no more than five regular polyhedra.

It may be further noted from this table that just as the Icosahedron and the Dodecahedron are complementary, each having 30 edges, with the Icosahedron having 20 faces and 12 vertices, and the Dodecahedron having 12 faces and 20 vertices, so the Octahedron and the Cube are complementary. Each has 12 edges; and whereas the Octahedron has 8 faces and 6 vertices, the Cube (Hexahedron) has 6 faces and 8 vertices.

At first there appears to be no complement to the Tetrahedron, because it has 4 faces and 4 vertices. Actually, as demonstrated before, it is its own complement. It interlaces with itself, forming the interlacing Tetrahedra around the Octahedron.

Referring again to Plate 4, let us note that in line 4 is given the length of the edge of each polyhedron. As the Cube represents fully developed Man in his relationship to the Universe, we are going to use the length of the edge of the Cube as the unit from which the edges of the other regular polyhedra will be derived. Note the importance of the numbers of the Golden Section in relation to the edges of the Icosahedron and the Dodecahedron. Let us take the lines in the order of their lengths; we shall find that they provide the first 4 terms of the numbers given in the infinite series of terms exhibiting the proportions of the Golden Section:

Inner Icosahedron	Dodecahedron	Cube	Outer Icosahedron
.382	.618	1.00	1.618

The length of the edge of the Tetrahedron is 1.414, or the square root of 2, since it is the diagonal on the face of the Cube. The edge of the Octahedron is just one half the length of the edge of the Tetrahedron, which, therefore, equals .707.

We are now ready to embark upon one very important aspect of our study, which is to be found in the occult properties of numbers. We should say at the outset that this bears little if any resemblance to numerology as a form of fortune telling or character analysis. If we keep in mind the fact that this is a serious study, containing within itself certain keys whereby we may become more cognizant of the laws of human and cosmic life, we can see at once that there is no room in it for superstition. All aspects of this study must rest upon the solid foundation of esoteric teaching, or its value becomes nil.

It is necessary in some instances to run the risk of seeming to be arbitrary in the selection of certain numbers for specific purposes of our study. A typical example of this is the statement to the effect that in occult reckoning 72 years is the ideal life span for a human being. I cite this instance at the outset, because if I can make my position clear now, the rest of the study will be easier to follow.

A number of absurd inferences might be drawn from such a statement as the above, and we shall defeat our purposes if we let these stand in our way. For instance, here are some things that we do not mean: We do not mean to imply that all people should die at the age of 72. There are so many factors which determine the length of life to be enjoyed by any one individual that we cannot readily set a limit on the desirable life of man. Nor do we imply that a person who dies before the age of 72 has necessarily died before his time, or that a person living beyond 72 is living on borrowed time.

What exactly do we mean, then, and how do we arrive at the figure 72? A suitable framework for our answer might be constructed in the following manner: The study of Mathematical Symbolism reveals a very definite pattern. The remarkable correlations between the geometrical forms, especially when interpreted in the manner that we have explained, enable us to extend our vision, as it were, into aspects of consciousness which are not ordinarily discernible. The process by which this is accomplished is not easily explained. However, it does come about through study and concentration.

To be more explicit: There are a large number of instances in which design in Nature follows the laws of mathematical harmony. The spirals of some sea shells are seen to be logarithmic spirals, or what are also called equiangular spirals, because at every point of the curve the angle between the curve itself and the line from the eye of the spiral is constant. The mathematical properties of the spiral are well known, and it may well be taken as a pattern for the formation of the sea shell. There are many varieties of sea creatures having conical shells, and whereas the spirals may differ widely as among the various species, nevertheless each species exhibits its own pattern, with clearly defined characteristics. Yet if you take any individual specimen and plot its own spiral, you are likely to find that it will approximate very closely the pattern upon which it is built, even though certain deviations will be observed. This is only natural; it does not detract in any way from the significance of the observed pattern.

The mathematically minded student will find a fuller explanation in the Law of Probabilities. An important aspect of this law exhibits itself in this manner: It describes the behavior of large quantities of things, but cannot predict the behavior of any given individual in the group. For instance, it can predict with considerable accuracy the amount of noise reckoned in decibels that will be produced by a crowd of people at a football game, but it cannot predict that a certain individual will shout at any particular time. Even though there may be doubt about the amount of noise that any single individual is going to make, there is no doubt that there will be plenty of noise in the stadium. That is the pattern of an afternoon at a football game.

In a later chapter, we shall consider some of the teachings about the Rounds and Races. Here again we may be said to observe the law of probabilities in action, because we are dealing with very large groups of entities to which we refer as the hosts of monads which inhabit the Earth Chain; and whereas it would be impossible to take any one individual and state clearly just where he stands in the great process, yet, in considering the pattern followed by the group as a whole, we can state with certainty the laws governing the great processes of the Rounds and Races.

In natural design, the harmonious proportion of the Golden Section is of paramount importance. Not only are its properties to be observed in some of the above-mentioned spirals, but there are other remarkable manners in which this proportion occurs in nature. There are many flowers in the daisy family, and they seem to exhibit a definite plan in the placement of the florets at the center of the flower, which later are replaced by the ripened seeds. If we take the largest member of the daisy family, the sunflower, because it is the easiest to observe, we see that the florets are so arranged that they form crisscrossing spirals; and the number of spirals turning to the left, divided by the number of spirals to the right, will give the number .618, already familiar to us as the proportion of the Golden Section. This is so generally true that we are quite justified in stating that this is a pattern on which the flowers are formed. It would nevertheless be found upon close examination of any one particular flower that there are some imperfections in one or more of the spirals. No great weight would be attached to this however, and we would not abandon the importance of the pattern on this account.

All five-petalled flowers exhibit strongly the proportions of the Golden Section, for, after all, are they not varieties of the five-pointed star, whose lines always cross at the

points of the Divine Ratio? As we observed in a previous chapter, it is just in the nature of things. Yet see how much variety there may be found among a number of five-petalled flowers!

Furthermore, if any five-pointed star, as in Fig. 7, in Chapter X, if we consider it to be constructed of five isosceles triangles built upon a central inverted pentagon, we note that the vertex of each of these triangles contains 36 degrees, and each of the base angles contains 72 degrees. This triangle is geometrically similar to the triangles forming the regular decagon that was generated by the moving circle (Fig. 4). So it may rightly be said, regardless of individual minor differences, that the five-petalled flower is built upon this all-important triangle, wherein the base is to the side as .618 is to 1, while the vertex angles are 36 degrees and the base angles 72 degrees. Thus we see the basic proportions which symbolize the building of a universe repeated in miniature in the formation of a simple wayside flower.

Now the angles as well as the lines in the Lesser Maze are exceedingly interesting also, as this complex figure very adequately exhibits a pattern. We cited the case of the Cube, having as the sum of its plane angles 2,160 degrees. This, we pointed out, is the same as the number of years required for the equinoctial point on the Earth's orbit (that is to say, the place seemingly occupied by the Sun at the exact moment of the Spring Equinox) to move backwards among the constellations of the Zodiac, through an angular distance of 30 degrees, or one twelfth of the circle of the Precession of the Equinoxes. We also pointed out that in the completed Lesser Maze the sum of all the plane angles is 15,120 degrees, or the same as the number of years required for the equinoctial point to slip backwards through an angular distance of 210 degrees, or 7 signs of the Zodiac.

Now, this does not just happen; it reveals a pattern to us, and such an important one that we cannot dismiss it with the word "coincidence." Instead, we shall seize the opportunity before us and use the keys provided by a study of these regular polyhedra, and we shall come to some rather startling results.

It must be acknowledged that, just as in the cases of the design in flowers and sea shells, there is deviation in individual instances, which, however, does not negate the observed pattern, so we shall find that the numbers arrived at by modern astronomy for the Precession of the Equinoxes approach very close to, but do not exactly coincide with, the numbers suggested by Mathematical Symbolism. Rather than cause concern, this should be something that we would expect. After all, Nature is "regularly irregular," and what a dreary world we would live in if all flowers were identical in size and shape, if all mountains had identical heights and slopes, and if we lived and breathed in strict uniformity. It is variety resulting in divergence from the underlying pattern which makes the universe interesting; and what is more important, it attests to a living universe.

Along this same line, it would be well to mention that the division of a circle into 360 degrees (credited to the Chaldeans) was probably no accident. The remarkable relationships between the geometrical figures under study would not have been changed, but the numbers expressing these relationships would not have been so convenient, nor would the pattern have been so readily observed.

The number 360 ties in very neatly with the number of days in the year. Here again we have an instance of an observable divergence from the pattern. We are justified in seeing 360 days as the pattern or ideal number for the length of the year, even though we know that the year contains almost $365\frac{1}{4}$ days. If we can accept this fact, and take it into account, recognizing the pattern for what it is, we will be in a position a little later to discover the pattern for the lengths of years of some of the other planets. However, one step at a time.

Now, coming back to the number 72 as representing the number of years in the ideal or pattern for the life of man: We find an interesting correlation between man and nature which will bear this out. Furthermore, the average man in good health has a pulse beat of 72 per minute. In the average human being in average health, and under average conditions, the rate of breathing is such that he draws 18 breaths per minute. It follows from this that in 4 minutes, or the time required for the Earth to turn 1 degree on its axis, a man has breathed 72 times. On the grander scale, using the ideal numbers for the Precession of the Equinoxes, when a man has lived 72 years, the Precessional Cycle has advanced 1 degree!

This number 72 will serve to introduce to us a large family of occult numbers, and in time we shall come to recognize them as friends as they appear time and again. Some of them that we should learn to recognize right away are the all-important ones which are related to the cycles of the Zodiac, as for instance 2,160, as the number of years connected with 1 sign of the Zodiac, and 25,920, as the number associated with the complete Precessional Cycle.

Another number with which we should become familiar at this time is 60. This number is prominent in the regular polyhedra because there are 60 degrees in each angle of an equilateral triangle. In the Lesser Maze there are no fewer than 36 equilateral triangles, giving a total of 108 angles, of 60 degrees each.

The Hexagon, composed of 6 equilateral triangles, has been shown to provide the outline within which all of the regular polyhedra may be drawn. The hexagonal shape of the cells in the honeycomb, or again of the snowflakes, is so well known that we need not dwell upon this subject here. Again, many flowers exhibit a sixfold pattern, in contrast to the fivefold as explained before. One Sign of the Zodiac occupies 30 degrees, hence the angle subtended by two signs will be 60 degrees. Since 2,160 years is associated with each sign of the Zodiac, twice that number, or 4,320, is of prime importance in the calculations of the cycles relating to the Rounds and Races, the Yugas, and so on.

Thus there are five important numbers with which we shall deal at this time. These are: 60, 72, 360, 2,160 and 25,920.

In approaching the matter of the planetary cycles in their relation to the geometrical figures, let us first consider how the important cycles are reckoned. We learn by a study of the Brahmanical Tables relating to the evolution of the Solar System, the Earth, and the races of Humanity on our own Globe, that each cycle is preceded by a period of preparation, known as the Dawn; and following the cycle, there is a period known as the Twilight, during which the characteristics of the cycle just

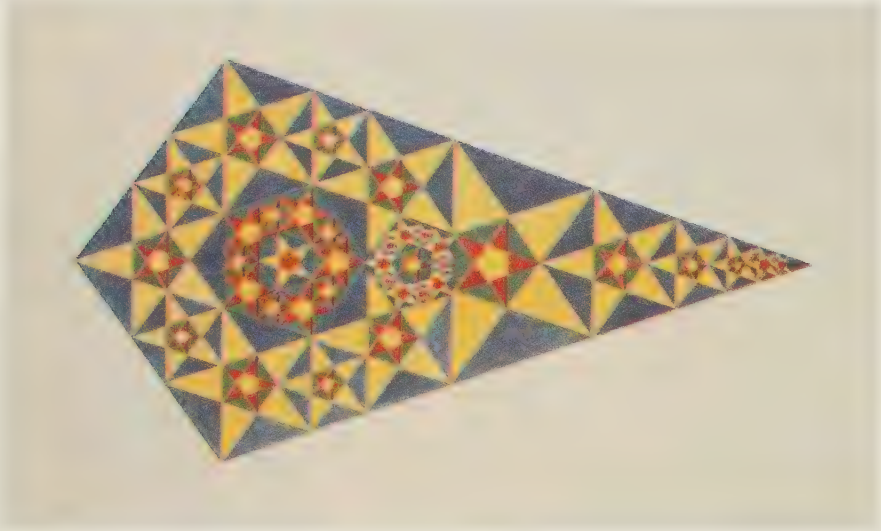
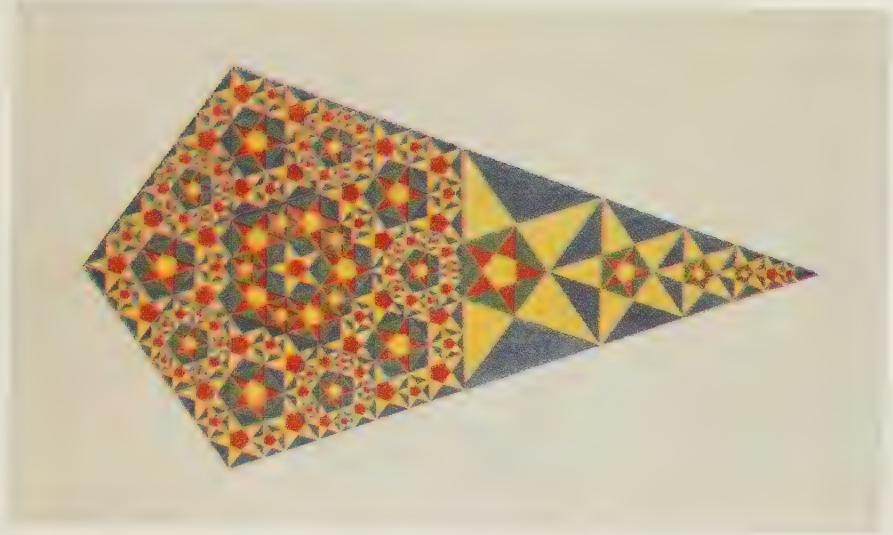


Plate V — Stars and more Stars

ended are receding, to be superseded by the characteristics of the new cycle. The Dawn and the Twilight are each considered to be equal in length to 1/10 of the cycle itself, so that we may begin to build up the numbers with which we are already familiar in the following manner:

The importance of the number 10, as observed in the moving circle as well as in the Tetraktys, gives us a very good starting point. Furthermore, the prominence of the Golden Section in nature in general as well as in these studies specifically, prompts us to use this proportion as the working tool for building the cycles from the number 10.

Because the 5-pointed star exhibits so well the proportions of the Golden Section, we are going to use the number 5 to activate the process of cycle-building with the number 10 as the starting number. We shall include the Dawns and the Twilights in our calculations:

	CYCLES		IMPORTANT NUMBERS
5 x 10	5 Dawn		
	50		
	5 Twilight		

	60	-----	60
5 x 60	30 Dawn		
	300		
	30 Twilight		

	360	-----	360
5 x 360	180 Dawn		
	1,800		
	180 Twilight		

	2,160	-----	2,160
10 x 2,160	2,160 Dawn		
	21,600		
	2,160 Twilight		

	25,920	-----	25,920

The ramifications of the arrangements of these numbers are endless. For instance, we can take any one of the important numbers in the column to the right and add to them the Dawns and Twilights, and we have more of these interesting numbers, thus:

6 Dawn		
60		
6 Twilight		
72	-----	72
36 Dawn		
360		
36 Twilight		
432	-----	432
216 Dawn		
2,160		
216 Twilight		
2,592	-----	2,592
2,592 Dawn		
25,920		
2,592 Twilight		
31,104	-----	31,104

Many students will recognize this last number, 31,104, as the basis for the large number, 311,040,000,000,000, the number of years in the Life of Brahmâ, which represents the duration of the Solar System as given in the ancient Brahmanical Tables, dating back many centuries before Christ.

We are in a better position now to make a study of the last line of the Table of the elements of the Regular Polyhedra. This gives the sums of the plane angles of the various figures; and we shall now list them in the order of their magnitudes:

Tetrahedron	720 degrees
Octahedron	1,440 "
Cube	2,160 "
Icosahedron	3,600 "
Dodecahedron	6,480 "

Total	14,400 "

The first thing that may be noticed is that they are all multiples of 720, the number of degrees in the Tetrahedron. They increase in the ratio of 1, 2, 3, 5, and 9, with a total of 20×720 , or 14,400 degrees.

By this time we have become familiar with the number 72, and also with the important part played by the numbers 3, 4 and 5. We may now observe that

$$3 + 4 + 5 = 12, \quad \text{and} \quad 3 \times 4 \times 5 = 60.$$

Thus, 72 is the product of $(3 + 4 + 5)$ and $(3 \times 4 \times 5)$.

The numbers representing the sums of the angles of the regular polyhedra may be expressed in this manner:

Tetrahedron	1 x (3 + 4 + 5) times	(3 x 4 x 5)
Octahedron	2 x (3 + 4 + 5) "	(3 x 4 x 5)
Cube	3 x (3 + 4 + 5) "	(3 x 4 x 5)
Icosahedron	5 x (3 + 4 + 5) "	(3 x 4 x 5)
Dodecahedron	9 x (3 + 4 + 5) "	(3 x 4 x 5)

There are certain characteristics shared by all of these occult numbers which make them easily recognizable. One is that they are all divisible by 9. This characteristic brings them all within a certain family group, we might say; and while a few of them stand out as being of special interest, it might be said, broadly speaking, that all numbers that are multiples of 9 are related to these occult numbers, however distant their connection might be.

The numbers that we built up using the pattern observed in the formation of the cycles as given in the Brahmanical Tables happen to be the most important ones, some of which are identical to those in the table of the angles of the regular polyhedra. All of these numbers have many factors, the most important ones being 3, 4, 5, 6, 9, 10 and 12. There are also larger factors which are multiples of these, and they might be thought of as the building blocks out of which the occult numbers are constructed.

There is one number that is conspicuous because of its absence. This is the number 7, which, curiously enough, has more prominence in our theosophical studies than any other. From our earliest recollections of theosophical study, we have been taught about the seven Principles of Man, the seven Sacred Planets, the seven Globes of the Earth Chain, the seven Planes of Consciousness. Why, then, does not the number 7 appear as an important factor in these occult numbers? Well, the number 7 is there, but it is obscure, to be sure. Most important, it appears in the sum of all the angles in the completed Lesser Maze (which must contain two Tetrahedra interlaced). The number of degrees in this figure is 15,120, or the number of years related to 7 Signs of the Zodiac, whereas the Cube, which represents fully embodied Man, has 2,160 degrees, or the same as the number of years in the Messianic Cycle, associated with 1 Sign of the Zodiac.

References to the Zodiac are necessarily sketchy at this time. We give a fuller explanation of it in Appendix II. It might be mentioned here that the term Messianic Cycle refers to the period of 2,160 years during which the spiritual influence of a Teacher associated with his own particular Sign of the Zodiac is felt, because such a Teacher guides the spiritual welfare of Humanity during that cycle. At the commencement of another cycle, associated with another Sign of the Zodiac, there will be the appearance of a new Messiah, or Spiritual Teacher. The appearance of these Teachers is timed to the cycles of the Zodiac. As will be explained in a subsequent chapter when we are discussing the sixth and seventh Jewels of Wisdom, the teachings about the Hierarchy of Compassion and its work form some of the loftiest aspects of the Secret Doctrine.

One significant symbol connected with the nature of the spiritual Teacher may be appropriately mentioned. Turning to Plate IV, we see that the Cube has been

unfolded, and now takes the form of the Cross. As the interlaced Tetrahedra enclosing the Octahedron were seen to generate the Cube, they are shown in their correct position in this figure. Here we have an esoteric interpretation of the Crucifixion as a symbol of Initiation. Rather than representing the physical death by crucifixion, it indicates that Man, as an embodied stream of consciousness, can and does at the appropriate times, undergo the mystical Crucifixion, a conquering of the gross "lower" self, and, making of himself a vehicle of a solar divinity, ultimately arises from the "tomb" of matter, a fully enlightened Teacher, a Savior of Mankind. The particular type of Savior, known technically as an Avatâra, appears once in every Messianic Cycle of 2,160 years, according to the Esoteric Tradition; and it is of the utmost significance that the Cross, no less than the Cube, contains within itself 2,160 degrees.

Tempting as it is at this time to embark upon a fuller explanation of the appearance of an Avatâra, this must be left to that portion of this book wherein we shall deal more fully with the nature of the Hierarchy of Compassion and the various types of great Teachers.

Probably the most important key to the system of Occult Numbers lies in the time-periods of the planets. We can tell from any book on astronomy that these time-periods are a direct function of the distances of the planets from the Sun. A student of the Ancient Wisdom, gradually becoming familiar with the occult pattern, will note that the majority of the planets seem to exhibit a rather loose adherence to this pattern. If the Solar System were to adhere strictly to the pattern that seems to be in accord with what we have been studying, the distances of the planets would all have to be slightly different from what they actually are, and the orbits would have to be perfect circles instead of being elliptical as, indeed, they are. The odds in favor of the orbit of any planet being a perfect circle are so slight that it might be considered to be impossible. By the same token, the likelihood of the placements of the orbits in respect to their distances from the Sun, so that their time-periods would be exact multiples of one another, is again so remote that we may well consider that it would be impossible. Nevertheless, the pattern is easily discernible; and we are going to imagine that the Solar System does present the ideal picture. If this seems too arbitrarily conceived, we may take comfort in the thought that the ideal Solar System is not so very different from the Solar System as it actually is. It all goes back to the Law of Probabilities, on which we touched earlier. To the Theosophical student, the divergence from the ideal pattern is not only to be expected; it shows that fundamentally the Universe is alive. Such a statement is likely to horrify the scientist of the present day, but we need not apologize for the teachings on that account.

Seeing, then, that the lengths of the years of the planets approximate reasonably well with certain of the recognizable occult numbers, let us now make a table showing the length of years in terms of Earth days of certain of the planets known to Theosophical students as the Sacred Planets, and adjust their periods to the occult numbers related to them:

Mercury.....	90	days
Venus.....	216	"
Earth.....	360	"
Mars.....	720	"
Jupiter.....	4,320	"
Saturn.....	10,800	"

Some exceedingly interesting relationships become apparent from this table. We find, for instance, that in such an ideal situation, Mercury would revolve around the Sun 4 times in every one of Earth's years. Venus would revolve 20 times around the Sun during each of Jupiter's years. Once in every 60-year-period the planets would all be in conjunction, or in syzygy, which means that they would all lie along a straight line with respect to the Sun.

In this, we have the real key to the Occult Numbers. They are all built upon the relationships between the time-periods of the planets. As a starting point, take the years of Jupiter and Saturn. Twelve Earth years make 1 year of Jupiter, and 30 Earth years make 1 year of Saturn. $12 \times 30 = 360$. Five years of Jupiter equal 2 years of Saturn. One year of Jupiter equals 20 years of Venus.

And so we could continue, finding these interesting relationships. Actually, in this ideal Solar System, we would find that these planetary time-periods are all directly related to the sun-spot cycle. Specifically, there would be one such sun-spot cycle for each year of Jupiter.

We shall now construct a table showing the numbers of revolutions of the planets during the important cyclical periods that we found previously, to wit: 60, 72, 360, 2,160 and 25,920 years respectively, and we shall see the continual recurrence of our important numbers as well as some others which are related to them.

	60	72	360	2,160	25,920
Mercury	240	288	1,440	8,640	103,680
Venus	100	120	600	3,600	43,200
Earth	60	72	360	2,160	25,920
Mars	30	36	180	1,080	12,960
Jupiter	5	6	30	180	2,160
Saturn	2	2.4	12	72	864

In any one of these columns we may detect a number of very important ratios. Of these we shall select the most meaningful and will show how the planetary time-periods relate to the regular polyhedra, for they show the same numbers as the faces, lines and vertices.

Mercury : Earth	4 : 1	Tetrahedron	(Faces)
Mars : Jupiter	6 : 1	Cube	"
Mercury : Mars	8 : 1	Octahedron	"
Earth : Jupiter	12 : 1	Dodecahedron	"
Venus : Jupiter	20 : 1	Icosahedron	"
Mercury : Earth	4 : 1	Tetrahedron	(Vertices)
Mercury : Mars	8 : 1	Cube	"
Mars : Jupiter	6 : 1	Octahedron	"
Venus : Jupiter	20 : 1	Dodecahedron	"
Earth : Jupiter	12 : 1	Icosahedron	"
Mars : Jupiter	6 : 1	Tetrahedron	(Edges)
Earth : Jupiter	12 : 1	Cube and	
		Octahedron	"
Earth : Saturn	30 : 1	Icosahedron and	
		Dodecahedron	"

The number 7 may indeed be found after its own manner in this ideal or pattern Solar System. Just as Jupiter, taking its cycle from the Sun, seems to regulate the cycles of the other Sacred Planets, so it also seems to regulate in a different manner the cycles of Uranus and Neptune which, from the standpoint of the Ancient Wisdom, are in a somewhat different category from those known as the Sacred Planets, to wit: Mercury, Venus, Mars, Jupiter and Saturn. Just now, let it be mentioned that 1 year of Uranus contains just 7 years of Jupiter, and 1 year of Neptune contains 14 years of Jupiter.

At our present level of learning and understanding, these ideas may be thought of as providing some of the letters in the occult alphabet. As yet we have not developed the faculty of putting these letters together to form words and sentences which would give us that control over Man and Nature that typifies the genuine Adept; nevertheless, it may well be a step in the right direction. Undoubtedly it is only after initiation that one learns how to make these teachings work for him in the sense of giving him the power and the right to control Nature's finer forces.

SECTION THREE

Chapter V

HERE AND NOW

The very recondite aspects of the Esoteric Philosophy can be approached only after a sufficient foundation of teaching has been laid down, otherwise they would be meaningless. The first chapter of this book served in part as such a foundation, and with the little that has been already covered, we are prepared to take at least the first steps forward into the unspeakably grand teachings about the nature of the Universe and of Man, which, as has been pointed out, concern chiefly his relation to the Solar System.

We must necessarily pause on the threshold of this further study in order to clarify the picture in some important respects. First of all, it must be made clear that in relating the regular polyhedra to Man's nature and to his place in the Universe, we were dealing with Man as a special case only; but it must be borne in mind that a genuine symbol has universal application. This in fact is the test of the genuineness of any symbol. Can it be applied universally? If it can, then it is a reliable tool, and one of very great value. In selecting such a special case, it was only natural to take that of Man himself because that is the instance that is the most likely to be understood.

The situation is not altogether unlike that of the famous geometrical Proposition that states that the square of the hypotenuse of the right triangle is equal to the sum of the squares on the other sides: $c^2 = a^2 + b^2$. This is known by virtually every schoolboy. However he does not always realize that this proposition covering the right triangle is only a special case of a general proposition that covers all triangles.

The general proposition states that: In any triangle the square on a side opposite an acute angle (less than 90 degrees) is equal to the sum of the squares on the other two sides, diminished by twice the product of one of those sides by the projection of the other side upon it. Briefly: $c^2 = a^2 + b^2 - 2ab \cos C$ —twice the product of side a and the projection of side b upon side a .

There is no need to present the proof of this here. We need only mention that as the acute angle increases and approaches 90 degrees, the projection of one of the sides upon the other diminishes until the acute angle becomes a right angle, in which case the projection vanishes and there is nothing to subtract from the squares on the sides of the triangle. This makes the special case the simplest one of all, and yet it fits perfectly into the general rule.

This illustration is presented in an effort to bring home to the mind of the student that Man is a special or particular case of a general rule of life in the Universe; and it may well be that like the case of the right triangle in geometry, his case is easier to grasp because certain factors that would make the study of other forms of consciousness more difficult for us to follow, have diminished to the vanishing point and therefore do not enter into the picture where we are concerned. Nevertheless, with increased understanding, the time may come when it will be necessary to learn all of the factors which go to make up the *general* picture, and then we shall see exactly where Man fits in. Probably the greatest realization that can come to the student is an actual awareness — not a theoretical grasp, but an awareness that becomes part of his own consciousness — of his identity with Nature.

We are going to make an effort to understand more fully the general picture in what is to follow in this study. It is a remarkable thing that the more we can understand of the particular case, the better equipped are we to grasp the general picture; and, conversely, the better grasp we have of the general picture, the more real does the particular case become to us.

We shall now attempt to show by three illustrations how relative is our own position in the scheme of things. In the first illustration, I shall discuss Zero in its relationship to positive and negative numbers; then the ever-present moment of NOW in its relationship to past and future time; and, finally, for the mathematically minded, some concepts of the curvature of space.

Let us now consider Zero in our system of notation. We tend to imagine that we begin to count at Zero, and from that point we suppose that we can count indefinitely; but we soon learn that negative numbers are also very real. Zero appears to be a sort of line of demarcation between the positive and the negative numbers. However, there is nothing fixed and final about Zero. It is really a mathematical concept. A man, for instance, in a roomful of people, may have nothing in his wallet, and from that standpoint he may represent Zero. However, he may be in a room containing a hundred people and he might be the oldest person in the room. From the standpoint of age he would by no means represent Zero.

So we may speak of Zero as an illusion, a *Mâyâ*, as the theosophical student would say. And there are other *mâyâs*. The moment called NOW is such an illusion. We may think of it as the line of demarcation between past and future — or could we say negative and positive time?

To demonstrate how illusory is the moment of NOW, we have only to look up at the heavens. We do not see the stars as they are now. We see them as they have been in various times in the past. The more distant the star, the more remote is the time in the past when the star was as it now appears to our eyes. Some of the most distant galaxies that have been photographed appear to us as they were many millions of years ago. In fact, not only are they changed from what they appear to be, but they have long since moved from the places that they appear to occupy. This is one reason why space and time are considered to be inseparable.

We may go even a step farther and speak of *three* inseparables: Space, Time and Motion; and we shall have a beautiful symbol of this in Fig. 5 which shows the three-dimensional Svastika at the center of the Tetraktys. The three arms of the Svastika would then represent Space, Time and Motion.

A broader application of this same principle may be found in Einstein's theory of Relativity, upon which we may touch very briefly here. It is presented as the Special Theory and also as the General Theory of Relativity. The Special Theory deals with uniform motion (which means constant velocity) in space. To state the concept simply: In uncurved space an object in motion will continue with unchanged direction and velocity unless acted upon by a force. A force acting upon it will cause it to accelerate (speed up) or decelerate (slow down), and may also change its direction.

In the statement of the General Theory, an object free to move in curved space will accelerate at a rate which is a function of the curvature in which it finds itself, unless acted upon by a force. A force will cause it to change its *rate* of acceleration. We may further expand the idea in our own terms by stating that when a freely moving body does not accelerate, it is only that the curvature of space is nil, as the terms Special and General Theories imply. The former is but a special case of the general structure of space.

Following along the lines of thought that we have expressed above, we may see that uncurved space is like the Zero in notation, or the moment of NOW in time. It then stands as the line of demarcation between positively curved space and negatively curved space.

It is easy to become confused about the expression "the curvature of space," because the word "curvature" immediately brings to mind a geometrical conception. This would be wrong, because space itself does not have geometrical properties. Language is not always specific, as for instance, we speak of high temperatures, a high voice, and a high degree of excitement, and in none of these expressions is the concept of altitude considered at all. So I will give an analogy which admittedly will serve as no more than a pointer toward an understanding of what is meant by a curving or a warping of space within the vicinity of a massive body such as a star.

We may speak of a man as having a warped mind, without attaching physical properties to his mind. The presence of certain physical objects can trigger undesirable reflexes which indicate a warped condition of his mind. Making allowance for the crudity of the analogy, it serves to bring out the meaning of an expression like the warping or curvature of space within the vicinity of a physical body.

We read much of the "space-time continuum," and time is usually considered to be a fourth dimension. Now, space as we know it has only three dimensions, and the so-called "dimension of time" should not be considered to be a geometrical property of space. Time, in this sense is really a function of motion, and varies with the velocity of a moving object, as does also its mass. It would be impossible to give space here to a discussion of the Relativity theory. There are books available which give ample explanations of what is meant, and these may be studied by those interested.

Along the lines of Theosophical teaching, time is an illusion, which seems to be real enough, to be sure. The ultimate reality is Duration, and the concept of time is brought about by our own consciousness as we observe events going on around us.

In like manner, the space of science, which we may call physical space is in itself an illusion, produced by our own consciousness. That is not to say that it does not exist, but rather that we do not perceive it for what it truly is.

Because these ideas are extremely abstruse, it might be well to summarize them as follows:

Human consciousness is derived from Universal Consciousness called The Boundless.

Space is also derived from the Boundless, which we may term SPACE, as including more than one kind of space. Some thinkers who have written about hyper-space have come a little closer to the concept of the Ancient Wisdom that there are many levels of space within SPACE, or the Boundless. Thus, we speak of the spaces of SPACE.

Time is derived from Duration, which is only another aspect of the Boundless. Thus, from the Boundless, we have Duration, SPACE and Consciousness, from which are again derived, Time-space-motion, which Theosophy also defines as Cosmic Life.

In the light of these considerations, let us return to the concept of curved space.

If we are to consider uncurved space as being a special case only, and that from our standpoint (which is similar to that we held when we considered the moment of NOW as the line of demarcation between past and future time), we may then say that uncurved space seems to be so to us only because of where we stand. It is only because of our position that we see positively curved space on the one hand, and negatively curved space on the other. Thus, what we call uncurved space might well appear to be positively curved from another standpoint, or, again, negatively curved space from yet another. What we call strongly curved space might seem to be uncurved from a totally different standpoint; and we are led to consider the possibility of these different standpoints as being at least as "real" as our own.

All that has gone before has been with the purpose of bringing out the idea that this physical universe is, from the standpoint of the Ancient Wisdom, just such a line of demarcation — or cross-section if you like — within the real Universe which extends infinitely on both sides of the cross-section.

This leads us to the teaching of the existence of innumerable planes of consciousness. These exist endlessly in both directions, above and below the physical universe. The words "above" and "below" are completely inadequate for describing them. One tends to form an erroneous picture in one's mind of a many-storied building. This is why we have gone to some length to present the concept of uncurved space, or again of Zero, as being lines of demarcation in a system which is only relative after all; they owe their importance to the standpoint from which they are viewed.

The teachings of the Ancient Wisdom have not been taken very seriously by many people who consider them too far-fetched and savoring too much of mere speculation. There is one thing, however, that should encourage the theosophical student. This is that there have grown in the minds of some advanced mathematicians many new concepts which are far removed from our daily experience. These concepts, difficult of comprehension by the layman, are nevertheless accorded a place of respect in the minds of the masses; the difficulty that we have in grasping them has not subjected them to ridicule. This is because the trend of modern thinking is in the direction of science; and when these abstruse concepts are shown to work, it does not worry people that they are not able to understand them.

This should give some support to the theosophical student, and he need not feel diffident about explaining his difficult concepts. They are right in line with modern thought, and he may take comfort in knowing that if he cannot make his ideas understood right away, at least he is in good company!

The point that I am trying to get across right now is that the phenomenal universe holds a position analogous to that held by Zero, or the ever-present NOW, or again, for the mathematician, uncurved space. Since it is largely a matter of viewpoint, and therefore relative, we might further say that physical man occupies a similarly relative position in the grand scheme of Nature. The planes of consciousness above and below this physical universe are related to the physical plane in the same manner as numbers are related to Zero, or that Time is related to the moment of NOW. Hence the enormous difficulty in grasping what these inner planes are really like.

In mathematics we understand clearly the relationship between numbers and zero. Our understanding is somewhat less when we try to probe into the relationship between time and the eternal NOW. On the relationship between curved space and uncurved space, our ideas are more hazy still, for the reason that we apparently have no direct experience with curved space. However, the fact of the matter is that any object, if allowed to fall freely, moves in curved space. Thus, when a man jumps from an airplane and falls freely for a number of seconds before his chute opens, he is falling in curved space, although he does not stop to think about it. In fact, he does not stop at all, which proves the point!

Now, just as the moment of NOW is a paradox, in the sense that it is so fleeting that it apparently has no duration, yet is nevertheless always with us, the Eternal Now, so it is with human consciousness. It is the eternal part of us that is ever with us, but it is also as fleeting as the moment of NOW. That is because we are forever changing. If it were not so, we would cease to exist: If we remained as we were at some time in the past, we would not be in the present! The Eternal Pilgrim endures for aye, although "his shadows live and vanish." Thus an entity passes through innumerable finite changes, but there is no such thing as a finite entity. Consciousness is infinite.

One final point may be made. As we explained, although our notions about curved space are very hazy, yet it is easy to move within it by allowing ourselves to fall freely. In somewhat the same way, although our notions about the inner worlds are also extremely hazy, yet it is easy to move within them by merely allowing ourselves to "fall freely," as we do when asleep, or more completely so in Death. We do this because we free ourselves from the restrictions of the waking consciousness.

All this is really by way of introduction to the deeper lessons which lie ahead.

Chapter VI

KNOTS OF CONSCIOUSNESS

One theme that appears to be common to all religious systems and is seen in all the mythologies of the world is that of the Underworld or Hell, by whatever name it may have been called, with its opposite, Heaven, a place of felicity, bliss and reward. In contrast to this, some "enlightened intellectuals" of the present day scoff at such notions. They will tell you that these imaginary places are merely extensions of human fears and desires. We punish our children, they will tell you, and in like manner, our imaginary God will punish us. Similarly, we all have our unrealized hopes. It is only natural, they tell us, that in our notion of Heaven we see only a place of unlimited gratification of desires.

These "enlightened individuals" are right to a degree only; they shun the popular notions of Heaven and Hell, such ideas providing little that would satisfy anyone who thinks deeply. On the other hand, those who adhere to the orthodox view, while mistaken in their understanding, have nevertheless a faint memory of ancient knowledge of worlds other than our own. There seems to be a sort of racial memory of a time when knowledge of these things was more widespread. Such racial memory being extremely dim, and the general trend of human thought being in the direction of personal salvation and the fear of retribution, it is only natural that the current ideas of Heaven and Hell should have become what they are. Couple these human traits with ignorance of the Ancient Wisdom, and the result is what might be expected: certain ideas, false as they are, have become so deeply rooted in the thought-life of the world that it is almost impossible to eradicate them.

Fortunately there have always appeared throughout the centuries a few courageous minds who have challenged ignorance and superstition. Although during their lifetimes they were often the centers of storms of controversy, they are remembered for their honesty and their daring. They have refused to be bound by the restrictions of orthodoxy, cherishing their spiritual freedom as their most priceless possession.

The Ancient Wisdom has never played the role of appeaser. It has never bent its teachings to please the multitudes, nor has it ever acknowledged the supremacy of ignorance. It is unaffected by the fact that its devotees are few in number, and to them it has always given generously. Truth may be a hard taskmaster, but the rewards of service are great indeed.

We are making a closer approach to the study of the planes of consciousness and to the teachings about the Globe Chains; and we are going to begin our study on

familiar grounds by looking at the scientific viewpoint as to the possibility of life on other planets. At the time of this writing, two space vehicles have made the "fly-by" near Venus, and an instrumented package was landed upon its surface. Moreover, there was a "fly-by" near the planet Mars, and photographs were taken and transmitted electronically to Earth, revealing the astounding fact that the surface of Mars is cratered, much as is the surface of the Moon. One of the major objectives of these experiments was to determine the surface temperatures of Venus and Mars, with a view to establishing whether or not life, as we know it, is possible on these planets. The results corroborated what had been suspected from the rather incomplete evidence that we had had up to that time. It has been found that the surface temperature on Venus is generally somewhere between five and six hundred degrees. This is the temperature at which lead melts, so it is inconceivable that water could exist there unless in the form of vapor, and life as we know it could not possibly exist on this planet.

Now, the theosophical student has to face some facts. Prior to this time we have not found it to be too difficult to accept the teachings about the Rounds and Races; we have accepted without question the teaching that Venus is in its Seventh Round, and that Mercury is just commencing its Seventh. In the light of these recent scientific findings, where does the Theosophist stand?

There is no need for the theosophical student to feel that he must alter his teachings in order to make them fit into modern scientific ideas. Instead, he must make sure that he understands the teachings. He must welcome any and all true scientific investigation; and while he will sometimes find that the results of modern research will prove to be a challenge to him, if he has a love for Truth in his heart and mind he will welcome this challenge. First of all, he must admit that his occult knowledge has been rather scant, and then, in an attempt to answer the questions that will inevitably come up, he must dare to take a forward step in an understanding of his own teachings. Thus, rather than being shaken by modern scientific findings, he uses them to discover more of the inner meaning behind the truths that he cherishes.

Thus, it will be no surprise to him to learn that in all probability, were he able to travel by man-made space craft to all of the planets of the Solar System, he would find them to be apparently barren. Reserving a fuller explanation of our teachings for a later time, we are going to take a plunge into a modern concept and see if we can understand it fully; and then go on from that point. In this way, we shall be the better equipped to give a presentation of our teachings that will appeal to the thinking minds who would not be willing to set aside the latest findings resulting from present-day research.

To this end, let us imagine a rope stretched between two posts. We may imagine this rope to be 20 ft. long, for the sake of convenience, and let us suppose that a knot has been tied in the rope fairly close to one end. We can use this as an illustration of several important facts as determined by modern science.

Let us list these, with a brief explanation of each:

1. It is estimated that of the one hundred billions of stars in our Galaxy, only relatively few have planets revolving around them similar to those that make up our Solar System. Even so, these latter are to be counted in the millions. Thus we may

consider the rope to represent the total number of stars in our Galaxy, while the amount of rope taken up in the knot would represent those very few that have their own families of planets.

2. The rope might now represent the total number of *planets* in the Galaxy. The knot would then represent those very few by comparison that would be capable of supporting life as we know it.

3. Referring to our Earth, the rope itself could represent the length of time that it has been in existence. The knot in the rope would then represent the length of time that life as we know it has been manifest.

4. If the rope is now taken to represent the duration of life on the Earth, the knot would represent the length of time that Man has been upon the Earth.

5. Finally, if the rope is taken to represent the length of time that Man has been upon the Earth, the knot would represent the length of time that has been spent in a concerted effort to acquire knowledge along modern scientific lines and with advanced technology.

We may now add three more interpretations to this rope analogy which will explain why life is possible on this Earth.

Light: Let us suppose that the rope itself represents the entire radiation spectrum, which includes Cosmic rays, X-rays, Ultra-violet, Light, Heat, Micro-waves, Radio waves, and others less well known. The radiation spectrum is very extensive, and only a very small portion of it is visible to us as light. That small portion would be represented to us as the very small amount of rope taken up in the knot.

It is a very remarkable thing that it is just that small portion of the radiation spectrum which we call light that is particularly related to life. It is directly involved in the process of photosynthesis whereby plants use the solar energy in order to combine the simple elements, Carbon, Hydrogen and Oxygen within the leaves, and make the starches and sugars that are basic ingredients of the foods we eat. Nitrogen is added, mainly from the soil, and we then have the proteins. There are, of course, important minerals to be added; but it is these four important substances that form the basis not only of our foods, but of literally hundreds of other substances which we have learned to construct out of molecules built out of Carbon, Hydrogen, Oxygen and Nitrogen, ranging from fuels and textiles to medicines and even deadly poisons. The wonder of it is that the sunlight which is the power which runs the chlorophyll in the leaves is of itself generated within the sun by reason of the nuclear transformations whereby Carbon is successively changed into Oxygen, Nitrogen, and back to Carbon, because of combining with Hydrogen. Each such successive change is accompanied by the release of energy, hence the sunlight which maintains life on Earth. As stated before, the sunlight occupies a very small portion of the radiation spectrum.

Heat: In the vast ranges of heat, from the millions of degrees that are believed to maintain at the center of the sun and other stars, and which we can duplicate in our laboratories, to the intense cold of outer space, which, again, we can duplicate in our laboratories, there is only one extremely small range of temperatures which is favorable to the support of life. Man is a very frail creature and he must find the means to keep himself warm in winter and cool in summer. Even the extremes of temperature that he is likely to meet on earth occupy a minuscule portion of the full

“heat spectrum,” in the greater part of which, life as we know it could not survive. This very small portion of the heat spectrum we may again represent as the knot in the rope.

Position within the Solar System: If we are to imagine that the end of the rope nearest the knot is at the center of the sun, and that the length of the outer end represents the distance to our farthest known planet, Pluto, we may then estimate that the knot occupies a position representing the distance of the Earth from the Sun; and we should find that it is at that distance only wherein a planet could conceivably maintain an environment that is favorable to life. The chemical constituents of the atmosphere seem to be directly related to the nature of the nebula from which the Sun and the Planets were originally formed; and it would appear that the atmospheres of the other planets could not be otherwise than what they are. Only an atmosphere containing free oxygen such as that surrounding the Earth could conceivably support life, depending as it does upon those four basic elements referred to above, Carbon, Oxygen, Hydrogen and Nitrogen. These elements undoubtedly exist on the other planets but not in the same availability as they do on Earth. The primary requirement is that the Oxygen must be available in free form, as it is in our atmosphere, whereas on the other planets it exists in chemical combinations that would make it inaccessible to living beings breathing as we do.

It will be worth our while before proceeding further to take time to consider just what we mean when we speak of the various planes of consciousness. We probably understand but slightly the significance of the names of the cosmical planes when they are listed as Physical, Astral, Intellectual, Archetypal, and so on. So I would like to present a fact of everyday experience which will show how complex is even this *physical* plane, which can be subdivided into sub-planes. The picture thus gained will then be expanded to show how the same principle works on a larger scale to include the entire Earth as a living entity spanning several planes of consciousness.

Modern Science has given us the clue in its inquiry into the various forms of energy working in and through this physical universe. We should be careful to note as we present these several forms of energy that at least from the scientific standpoint of investigation, all of these energies have to do with the physical universe alone and are not to be confused with the more subtle levels of consciousness. In this respect, they might be said to be the sub-sub-planes of one aspect of this physical plane.

Let us now enumerate some forms of energy :

- Gravitation
- Radiant Energy
- Electrical Energy
- Magnetic Energy
- Atomic Energy
- Chemical Energy
- Mechanical Energy
- Sound

Other forms of energy may occur to the mind of the student. Be that as it may, there is one thing that is immediately apparent to us. Gravitation, although surely a form of energy, stands apart from the others in several important respects. Whereas all other forms of energy become manifest as a result of things *happening*, Gravitation appears to exist simply because things *are*. For instance, sound is produced by vibrations set up in the air as the result of vocal cords in action, or a moving cone in a loud speaker, or, again, air may be set in motion in an organ pipe. Heat may be caused by friction, or by resistance to an electrical current flowing in a wire. X-rays are generated by a flow of electrically charged particles hitting a target in a specially constructed vacuum tube. All of these examples involve things in action.

To all appearances, Gravitation as attraction is exerted between two massive objects whether they are moving or not. The attraction is there just because the two attracting bodies exist; and any motion they may have relative to one another is going to be governed by that attraction. The attraction is still there even were the objects not free to move at all.

Furthermore, in almost all of the other forms of energy, when something is performing work, energy is expended. It may be changed into heat, or motion, or into any other form of energy, according to the apparatus being used. Thus, the energy in a clock spring is changed into mechanical motion, and the wheels move. The spring expands its energy, and in the course of time it becomes unwound and the clock will stop. A weight-driven clock does indeed convert the energy of gravitation into the mechanical motion of the wheels, but the expenditure of the energy does not reduce the strength of the gravitational field in which the weight is moving. Or again, the planets revolve around the sun due primarily to the sun's gravitational energy, but the energy apparently is never used up; and if we were to suppose that the mass of the sun were to remain indefinitely constant, the planets would continue to revolve around it forever.

In these remarks, I have been careful to use the word "apparently" because, according to the teachings of the Ancient Wisdom, gravitation is as yet very imperfectly understood. In fact, it is only one half understood, for the teaching is that the force of repulsion is as real as the force of attraction.

In this regard, let us consider some other forms of energy. We all know the simple rule which states that like poles repel while unlike poles attract. If we take two small bar magnets, we can demonstrate this very easily. Hold the north pole of one of the magnets near the south pole of the other and there is immediate attraction. Conversely, hold either the north pole of one to the north pole of the other, or the south pole of one to the south pole of the other, and the force of repulsion is immediately felt.

Scientists speak of the magnetic field surrounding certain metals and alloys. In some important respects this is quite similar to the gravitational field. The chief difference is that the magnetic field is bi-polar, whereas the gravitational field, as far as our experience tells us, has but one pole or sign. Also it may be noted that the strength of the magnetic field surrounding a magnet is much greater than that of the gravitational field, and that the strength of the field drops off much more rapidly than does the gravitational field, and we say that the gradient is much steeper.

Again, only certain substances are affected by a magnetic field, whereas there is no known substance that is not affected by the gravitational field.

Consider also the electro-static field, which may be demonstrated by rubbing a comb briskly with a silk scarf. For a short time it will be electrically charged and will attract small bits of paper or in fact any very light object. Experiments with pith balls demonstrate the bi-polarity of the electro-static field. It is interesting to note that objects do not have to be magnetic in order to be affected by the electro-static field.

If we consider the concept of the curvature of space as being a phenomenon of space, and that space is strongly curved in the vicinity of a massive body like the earth, we then see that the so-called force of attraction is the tendency of a body to move toward the source of the curvature. Thus, the two bodies are attracted to one another with an energy proportional to their masses, or, should we say, with an energy that is proportional to the curvature that they set up. The physical motion of the objects toward one another might be interpreted as Nature's attempt to straighten out or undo the curvature of space that exists between them.*

Going back to the phenomenon of magnetic attraction and repulsion: When unlike poles approach one another, the space between them might be thought of as becoming curved, although in a somewhat different manner from the gravitational curvature; and the result is attraction with the resultant motion of the magnets toward one another. Here again we might think that this motion is Nature's effort to straighten out this curvature. If this line of reasoning is correct, we might say, somewhat in the manner in which we speak when we say that Nature abhors a vacuum, Nature abhors a curvature in space and is forever trying to straighten it out, while at the same time maintaining the curvature in the vicinity of any massive body, and a different quality of curvature in the vicinity of a magnet, and yet another quality of curvature in the vicinity of an electrostatically charged body.

Extending this line of reasoning to the phenomenon of repulsion, we would then say that when two like poles are brought together, the tendency would be toward an increased curvature in the vicinity of the magnets, and Nature reacts by moving the objects away from one another. We might then summarize this idea by stating that motion is Nature's effort to restore a state of balance in space. This state can never be achieved, however, for if it could, the universe would then have run down and all energies neutralized.

One more point of difference between Gravitation and the other forms of energy listed above is that while all forms of energy may be used, all except gravity can be controlled. An astounding amount of technology has been developed through our ability to control all of the forms of energy that are available to us, with one notable exception: Gravitation. We can use it, to be sure, but we have absolutely no control over it. We can neither strengthen nor weaken a gravitational field; much less can we change its polarity. We have no way of demonstrating gravitational repulsion in

*So rapidly are modern concepts developing in the direction of the Ancient Wisdom, that it is worth mentioning that the reverse picture is gaining ground, to wit, that rather than matter *causing* a curvature in space, it is the *result* of the curvature. In other words, matter is a condition of space, and is a derivative of the curvature. The Ancient Wisdom sees space as pure consciousness and all so-called matter as a function of consciousness.

our laboratories, although it is apparent all around us in the phenomenon of the expanding universe — or should we say the expansion of space?

Now all of this is going to lead into our study of the planes of consciousness because we are now to consider one very important matter. We spoke of the curvature of magnetism as being of a different *quality* from the curvature of gravitation, and that of the electrostatic field as being of a different quality still. The picture becomes full of meaning when we consider that the operations of these fields are entirely independent of one another. Scientific instruments depending upon the energy of a magnetic field will work equally well within the strong gravitational field of the Earth, or in an orbiting satellite where the instrument is in a weightless condition. Again, pith balls behave equally well in an electrostatic field, whether that field is set up in the vicinity of a magnet or not. It makes no difference.

This fact is really the crux of our inquiry and points to the fact that within our own physical plane there are sub-planes in which the action and reaction are peculiar to that sub-plane and apparently independent of action in any other sub-plane. Whereas any of our experiments can be removed from a magnetic or a static field, it is impossible to remove them from a gravitational field; for even when weightless in an orbiting satellite, they are weightless only in respect to the Earth's gravitation and are still under the influence of the Sun's gravitational field, which you might call the field of the Solar System as a whole, if you like.

This might lead one to wonder if there are other fields of force as yet to be discovered. Is it possible that there is a field surrounding a beam of light, for instance, that as yet we do not have the means to detect? And if such a field were discovered, would it have properties all its own, quite independent of the magnetic or the static field before mentioned? Who can tell what break-throughs are in store for us in the future!

It is time for us to consider now, that just as in our own physical world we have independently functional fields of force, so in the universe as a whole there may be independently functioning fields of force on a vastly larger scale. This concept is quite in line with the Theosophical teachings; and it is hoped that this introduction will serve to place the teachings on a basis that is more readily acceptable by thoughtful minds. For to many these teachings appear to be rather speculative; if we can show that the teachings of the Ancient Wisdom are based upon observation of Nature's laws, it is to be hoped that many minds will be attracted to them, finding in them just the explanations for which they have been searching.

We must not be timid about extending our inquiries beyond the strictly scientific aspects of the study. There is a tendency in modern thinking to give first place to science. We shall fall short of our goal if we limit ourselves, however, to one line of inquiry. We must approach the study of the planes of consciousness by considering for a moment how the laws of attraction and repulsion work in our own lives.

What has gone before has been an explanation of these laws as they operate automatically. That is, their behavior can be exactly predicted, given a known set of circumstances. But some of our most important teachings deal primarily with living beings of many kinds; and one discovers immediately that the behavior of living beings is not predictable except perhaps in the most general terms. Nevertheless

we observe the phenomenon of attraction and repulsion as being very basic indeed in our lives. People are attracted to one another for many reasons. For instance, there is physical attraction, more widely felt, perhaps, than any other kind. Then there is attraction that one brilliant mind may have for another. Again, there is attraction based upon more spiritual qualities, and so on.

We experience repulsion in the avoidance of situations that are harmful to us. Sometimes we are repelled by individuals without really knowing why. And yet a strange paradox is that hatred is not necessarily a form of repulsion. Many people who hate, return again and again to the objects of their hatred for the sake of continuing the fight.

These last observations have a strong bearing upon our future studies, because we must necessarily carry them beyond a consideration of physical laws and phenomena. We must delve into the mysteries of consciousness in its widest diversity and understand that each level of consciousness must have its appropriate vehicle and seek its most appropriate environment. And since consciousness knows no limitations, the environments themselves must be endless in type.

This thought is at the heart of the teachings about the planes of consciousness. And we are directly concerned with them: for when this present life is over, what next? Even if we were to adopt the orthodox idea of a heaven to which we shall go, we must necessarily see that this idea depicts another plane of consciousness. If we were to adopt the idea of the angels and the archangels, then we would have to recognize them to be entities of a different type from ourselves, with a different degree of consciousness than our own.

Is it not strange that some minds which find it difficult to accept the teachings of Theosophy concerning the many planes of consciousness and the different kinds of entities inhabiting them, accept without a murmur the Christian belief in the angels living in their own bright abode? It shows that basically the idea is not unacceptable. It does point up the need for us to explain clearly just what the teachings are, and to show that the concepts of the Ancient Wisdom do appeal to our finest sensibilities. And therein lies their most practical value. They call forth just those qualities of the mind and heart that are most needed today in order for us to lead sane and well balanced lives.

Now, it would appear that I have gone to great lengths to prove that life is impossible on other planets. I have done this for a reason. If our teachings are to be taken seriously, we must be thoroughly conversant with modern thinking, and must meet intelligent minds on their terms, before we can establish our own. Once we show that we understand them, we stand a better chance of making ourselves understood.

So we are ready now to approach this problem from a theosophical standpoint. Let us begin by asking a few pertinent questions. Why is it that in the three lines of reasoning, using the stretched rope as an illustration, the knots in all cases coincided with one another? Had this been a matter of chance, would not the odds against this convenient arrangement have been insuperable? Does not the fact that there exists such a planet as our Earth make it at least possible if not probable that there could be planets elsewhere in our galaxy which could provide an environment suitable to life at least approximating life as we know it? Actually, this idea is held by many of the foremost scientists of the present time. It is estimated that in all probability there

are millions of such planets existing within our galaxy, but that although the number may appear to be large, it really represents a very small fraction of the number of planets that must be counted by the hundreds of billions.

Let us ask some further questions: Why was the knot tied just where it was? Could it not have been tied elsewhere on the rope? If it had been, could it have been used as effectively as an illustration of the probability of life elsewhere in the universe? If a knot could have been tied elsewhere, could there then not be many knots on the rope?

If it took a little effort and perhaps some daring on our part to follow through on the scientific lines of reasoning, let us now use an equal amount of daring and depart from what amounts to an orthodoxy in the scientific viewpoint in its explanations, as far as it knows how to give them, as to the origin of life on the Earth, and the part that man has played on the stage of life.

Let us first then imagine as many knots tied in the rope as we have planets in the Solar System. We have seen how the knot relating to the Earth applies in our illustration. What about the others? We might easily be persuaded that if any such knot representing Venus, let us say, is to be taken as indicating life on that planet, then it must follow that the other factors conducive to a favorable environment must converge as they do on Earth. Since there is nothing that appears to our eyes that would support this, we must search for such a converging of factors that would be outside the range of our vision — not in terms of distance, to be sure, but outside our range of vision in the sense that radio waves are outside the range of our hearing. Our ears are sensitive to sound waves transmitted by the air. Radio waves are transmitted independently of the air. Since we must consider factors in relation to Venus or any other planet that are outside the range of our senses, *then we must concede that the Venus that we see is not the real planet at all.* It merely stands for the planet that we as theosophical students refer to when we speak of its being in the seventh Round. for instance. The planet that is meant by this expression, of course, finds itself in conditions entirely suited to its needs; so that it can provide for its inhabitants exactly the environment that they require. Similarly, the Mars that we see is the visible representative of the real planet that we do not see, but which is referred to when we learn that it is in its obscurity period between the third and fourth Rounds. It is much like saying that the physical body of any one of us is not the real person. It is but the representative, or the vehicle, of those invisible factors which go to make up the individual.

What, then, would the real Venus, or the real Mars, be like? Are there any teachings in Theosophy which give an adequate picture of the real nature of the planets? Indeed there are, and it is the purpose of this portion of the book to prepare the student for an explanation of these teachings and to share, as far as it is possible to do so, the relationship that the planets bear to the Solar System as a whole.

We must begin by considering whether or not it is possible for entities to exist in conditions other than those with which we are familiar. For instance, does an entity require a physical body at all times? This is probably the most important question we could ask at this point, for on its answer will depend all other aspects of this study. If we entertain the purely materialistic viewpoint that there is nothing that survives death, there is then no point in continuing the study. If we do accept the idea that there

is something which survives the process of physical death, then our question has been answered. Of course it is possible to live in a condition in which the physical body is not needed. But some sort of vehicle will certainly be needed, and we must consider that man is a very complex entity indeed, and that even during physical imbodiment he is clothed with many sheaths, as it were, many vehicles of varying materiality — or ethereality, depending on how one wishes to view them. Thus, the physical body really stands as the visible representative of the man himself, in much the same way that we considered the planets that we see in the sky as the visible representatives of the real planets. The analogy is a good one.

When a man says “my body,” he implies that he is something other than the body, and that he inhabits it and uses it. When he speaks of “my mind” he does so in the same manner, meaning that the mind is a more refined instrument in and through which he manifests. When he says “my spirit,” again he refers to something that is still more subtle, and which is a still more refined instrument or vehicle through which he is manifesting. Thus the man is really seen to be a complex of many vehicles, and that he is not only their sum total but something else which transcends them all.

It will perhaps facilitate the understanding of this principle as applied to a world if we remember the matter of the various fields of force that we have studied. We spoke of the gravitational field, the magnetic field, and the electro-static field, each one with its own properties, and each of them acting independently of the others. We would not be far amiss if we were to consider that a planet consists of a number of fields of force, each one with its own laws, and each one apparently independent of the others. This independence is not absolute, for the individuality of the planet must be reckoned with. It is much like the seeming independence of action in the factors that go to make up a human being. Yet they are all related to one another by the fact that the individual works through them all; they are held together under the sway of his own vitality and are not disassociated until the moment of death, when the real man is liberated.

And so we come to a very interesting concept of the Ancient Wisdom. The death of an individual does not imply the death of the world in which he lived, as it continues to provide an environment for the hosts of entities still left behind. And just as the physical aspect of the Earth provided him with the environment he needed during his sojourn here, so other “fields of force” will provide the environments he needs during his journey through the higher parts of the planet itself.

We are plunging into a rather startling teaching, startling that is, to one not trained to think along these lines. In the first place the theosophical student regards the Earth, as he does all of the planets, and indeed the Solar System as a whole, as living entities. The thought that man represents the highest stage of evolution that is possible is untenable to the theosophically trained mind. Upon reflection we see that if there are higher stages of life than that enjoyed by man, they must appear in such manner as will be suitable not only for themselves, but so as to fit in with the cosmic scheme. For nothing exists unto itself alone. Everything, be it an atom or a star, contributes something to the whole. The Theosophist sees the stars themselves as shining “bodies” of energy that enshrine the lofty cosmic consciousnesses that we can best refer to as the Gods. To a lesser degree the planets are also cosmic intelligences, although subservient to their greater divinity, the Sun. And just as we are composed of atoms, all of them working together to maintain and sustain the bodies that we inhabit, so it is that

all of us are atoms in the more complex vehicles through which the entity we call the Earth manifests. Thus we gain a deeper insight right away into the true nature of a planet. We are here on Earth because we belong here: we are denizens of the Earth because we are part of its own constitution.

So let us give our rope-analogy a different application. Let us suppose that the full length of the rope represents the total universe in all of its possible levels of energy-matter, or, to put it in other words, in all of its levels of consciousness. Then the knot would represent the physical universe alone. In like manner, we may take the rope to represent the entire stream of consciousness that is a human being. The knot would then represent the physical man. As a matter of fact, it is only another form of presenting man as a special case in a general rule of life — a principle we have already discussed but which we are now relating to the universe in a more direct way.

Why, then, must there be only one knot? Why could there not be as many as we like to put into the rope? Would this not make a better analogy of the nature of man, since each factor in his make-up has a life all its own, in other words is a knot of consciousness in its own right? And if we can do this on the microcosmic scale, why not on the macrocosmic, considering that each such knot represents a level of consciousness, or a field of force, thus providing many environments in the total universe, suited to numberless types or classes of entities.

We are now ready to take up some strictly Theosophical teachings under the general heading of the Seven Jewels of Wisdom, after which we shall be better prepared to inquire into the secret structure of the Solar System as a whole, and the Earth in particular.

PART TWO

THE DOCTRINE OF THE SPHERES

PART TWO—THE DOCTRINE OF THE SPHERES

Part Two of this book will be somewhat different in character from the first part, as it will deal more specifically with certain Theosophical teachings about the Solar System and of Man in his relationship thereto. Man's own consciousness must be studied quite exhaustively in order to understand that he is the "microcosm" as related to the "macrocosm."

At times the scientific approach will be found useful, but due attention will be paid to the philosophical and the mystical approaches, which in the final analysis are the more important because they reach into the very heart of the teachings. The intent of this study is to present as clear a picture as possible from the theosophical viewpoint, and from the scientific wherever it will be found to contribute points of value, and then to show how all of this can be expressed in terms of Mathematical Symbolism.

SECTION ONE

Chapter VII

THE SEVEN JEWELS OF WISDOM

The Crown of Wisdom is set with seven priceless jewels. Their radiance blends into one light of such brilliance that it may be perceived anywhere and everywhere. It is the light of truth as old as the universe and as enduring as Time itself.

These seven Jewels of Wisdom have been formulated in modern language and such a formulation or exposition of the ideas contained therein comprises that body of teaching today called Theosophy. To attempt to limit these teachings to the modern time, however, and to relate them to the work of any individual mind, however gifted, would inevitably result in the loss of an opportunity to see things as they are. If we can approach these studies in the spirit that is absolutely necessary for their right understanding, which means a recognition of their universality, then we may place ourselves in the way of an ever-increasing sense of fulfillment, a growing awareness of the reality of the Heart of the Universe. Although utterly beyond all human comprehension, nevertheless the Boundless is approachable because in his essence Man is the Boundless; and because of that, he has the faculty of understanding at least a portion of the Truth.

It is impossible to understand any one of the Seven Jewels if it is taken alone. Each one must be studied in its relationship to all the others. For this reason it is more or less arbitrary as to which one will be discussed first, and in which order they will be taken up. Actually each one of them is so profound that it is difficult to say

which one of them is the most important. However, for the sake of the readability of this book, and in the natural desire to build up to a climax, they will be developed as though they follow one upon another in degree of importance. In this, there is no better order than that given by G. de Purucker in his *Fundamentals of the Esoteric Philosophy*. The following table will give them first in English, then with their Sanskrit equivalents:

Reimbodiment.....	Punarjanman
Karma.....	Karman
Hierarchies.....	Lokas and Talas
Self-becoming.....	Svabhâva
Evolution and Involution.....	Pravṛitti and Nivṛitti
The Two Paths.....	Amrita-Yâna and Pratyeka-Yâna
Self Knowledge.....	Âtma-Vidyâ

Reimbodiment

This teaching states that, as an operation of the Universal Law of Cycles, all things re embody after their own manner and according to their own kind. Thus, it is held that the universes come and go, appear, disappear, and reappear. No less so is it with the atoms. And all the many hosts of living entities which people the universe on all planes of existence follow the same general law of periodicity.

Another way of viewing this first Jewel of Wisdom might be to speak of it as the Continuance of Life; and in this manner we would include the many ramifications of the general principle of the self-renewal of life. Reimbodiment as experienced by Man and at least some of the animals is in the form of Reincarnation, which literally means re-in-flesh-ment. Obviously an entity not inhabiting a body of flesh cannot reincarnate. But it will follow the principle of the continuance of life after its own fashion. Thus an oak tree exhibits facets of this general principle in producing hundreds of thousands, if not millions, of acorns during its life-span. Obviously, this is not reincarnation, but it is palingenesis. Nor is this process peculiar to trees. All members of the plant and animal as well as of the human kingdom carry on the process of palingenesis in the act of reproducing their kind. However, there is no entity within the tree that reincarnates, as there is in the "higher" forms of life.

Karma

This word is from the Sanskrit root *kṛi*, to act. Basically the word means action and reaction, or as stated in scientific phraseology: For every action there is an equal and opposite reaction.

Actually, the teaching is not as simple as all that, because we find that none of us is an entirely independent being. We cannot think, speak or act without affecting others; and we are continually affected by the thoughts, speech and actions of others. Thus, the lines of karmic action are unbelievably complex; it is sometimes as difficult for us to say just why a certain event befalls an individual as it is difficult to say just why a certain small ripple appears upon the surface of the ocean. We know that, could we follow all of the influences of the wind, the motion of the earth, the gravitational pull of the moon and the sun, we might conceivably work out all of the causes that led to the appearance of the ripple in question. This would probably be beyond

the scope of even our most complicated electronic brains. Nevertheless we know that everything has a cause, whether or not we have the capacity to perceive it.

This is true in our human lives. Many times we are confused and wonder just why such and such an event happens. It would be beyond our faculties to trace all the causes underlying everything that happens to us, but we may be sure nonetheless that nothing happens in our lives without a reason back of it. Moreover, the reasons do not always appear to be of our making, but nevertheless we are here, and were we not, these events could not affect us. When we think along these lines, the apparent injustices of life take on a new meaning. Justice, as such, is a human concept, of great value to us in our human way of life; but a much wider understanding of justice is needed if we are to comprehend the workings of the karma of human life. We are taught that the Heart of the Universe is Harmony, Compassion and Justice itself, and our limited ability to perceive this does not affect it in any way.

Bringing the teaching of karma a little more closely to ourselves, we must not think of it as some kind of Law outside ourselves, impinging upon us from above. Actually, karma is ourselves. We are our own karma. We are the result of all that we have been in the past, throughout a long series of earth-lives, and we are, by the same token, the cause of what we shall be in the next moment, and in all moments yet to follow. While sometimes we seem to be adversely (and sometimes favorably) influenced by outside causes, which we may refer to as the collective karma of the human race, nevertheless the far greater responsibility for what we are lies right at our own door. The means to self-improvement are always at hand. Of vastly greater importance to us is what we think and feel, and *how we react* to the world-karma, than anything that can come to us as the result of the collective karma of the human race. There are many things that we cannot control in life, but as long as we are in the driver's seat so far as our own personal lives are concerned, we are in control of our destinies. Yet it is true that in all our actions we share in the general karma of the world, and we must never lose sight of the vast responsibility that is attendant upon our every thought, word and act.

There are karmic ties which bind us to many planes of consciousness other than our own. We might construct the picture in this manner: Each one of us has his individual karma; and as a member of the family he shares in the family karma; and as the family is a unit in the community, he shares in the karma of the city in which he lives. Thus, also, he shares in the national karma, the global karma; and, since this Earth is the Globe D of the Earth Chain, he must necessarily share in the karma of the Chain as a whole. How else could he be a part of the Rounds and Races? Further, through the Globe Chain karma he also shares in the karma of the Solar System as a whole; and so on and on beyond the possibility of following through to the end of the picture.

When we understand the enormous intricacy of the karmic threads binding us to the whole of the human race, we begin to understand one aspect at least of the Doctrine of Universal Brotherhood. This aspect should make us reflect long and carefully on the course our lives are taking. Could we see the picture in its fullness, we would realize the urgency of the problem of self-improvement.

Another manner in which we can view the matter of karma is to realize that each one has his physical karma, his emotional karma, his intellectual, his spiritual,

and even his divine karma; and right here and now each one shares in the karma of every element in his nature. Knowing so little of this makes us blind to our higher possibilities. Yet we can consciously partake of the karma of our Higher Selves, because it is actually a part of our own being.

When we view it in this manner, we see that our various elements or principles are all linked together with karmic lines of destiny; and when we realize that in his highest Self, Man partakes of Universal Consciousness, this is yet another avenue of thought whereby we may come to understand a higher aspect of the doctrine of Universal Brotherhood. It is probable that if we could understand Universal Brotherhood in all its ramifications, we would have a grasp of all the technical teachings of the Ancient Wisdom.

Hierarchies

This Jewel is an explanation of the very structure and fabric of the Universe. It states unequivocally that the Universe is alive throughout. There is no such thing as a mathematical point utterly devoid of energy anywhere within the limitless Universe. Existence itself implies activity and motion; and the Theosophical teaching is that even so-called empty space is teeming with energy. In fact, let us go a step further and say that Space is pure Consciousness. This is not scientifically sound, by modern standards of thought, but it holds true to the Esoteric Tradition.

Within the boundless fields of space, which means within the endless ranges of consciousness, there exist numberless environments, or "planes of consciousness" which provide the fields of experience for unnumbered hosts of entities which find in these environments just the means they seek for the fullest expression of their natures. Theosophy shows that we humans, along with the members of the other Kingdoms on the Earth, are merely representatives of life in the Universe. We must not forget the all-important maxim: "As above, so below."

The teaching takes on a more definite pattern when we see that these planes of consciousness are not really separated from one another, as though the entities living on one had no karmic connection at all with the entities inhabiting another. Actually the picture runs thus: Each of the planes of consciousness emanates from the one (or ones) above it; and exactly the same pattern applies to the complex make-up of any entity. The lower or vehicular aspects of any entity emanate from the higher elements in its own constitution.

Turning to the sevenfold division of Man's nature, familiar to all students, we may say that Buddhi emanates from Âtman, Manas from Âtma-Buddhi, and so on to the vital-astral-physical vehicle which emanates from all of the higher elements. Actually, as stated before, this is an over-simplification, as there is much more to the story; but the above will serve for the present, where it is most important to give an overview of the seven Jewels of Wisdom. More details will be brought out in succeeding chapters.

Now there are three Postulates that should be stated at this time:

- (1) As above, so is it below.
- (2) Every entity is composed of hosts of lesser entities, which in their vast aggregate build and maintain the various sheaths of consciousness in which the entity manifests.
- (3) Every entity is one of a host of like entities, forming the vehicle of a greater entity.

These three postulates form the structure and meaning of this Jewel of Wisdom that goes under the name of Hierarchies. The indwelling entity in its highest parts is the Hierarch of the Hierarchy, the Hyparxis, the fire of cosmic consciousness that every entity is, however it may be concealed. And this leads directly into the next Jewel of Wisdom.

Svabhâva

It may seem at first that, if all entities are essentially sparks of consciousness originating in the Boundless, there must be a certain homogeneity about them; that, other than a difference in degree of manifestation, there is no real difference between the essential self of one entity and the essential selves of all other entities. From one standpoint this is correct, just as it is one Sun that is reflected in many ponds, lakes and oceans. Nevertheless there are no two bodies of water that are alike in all respects. No two drops of water are identical, there being room in the Universe for limitless complexity. Thus it is that whereas all entities spring from one Source in the last analysis, nevertheless there are no two entities exactly alike in every detail throughout all the Spaces of Space. If there were two entities identical in all respects, they would be one entity; they could not be two. From this essential difference comes the teaching of *Svabhâva* or Self-becoming. (Sanskrit: *Sva*—self, and *bhâva*—becoming, from the root *bhû*, to become.)

It is the expression of the *Svabhâva* that makes one class of entities different from another; thus, a peach is different from an apple, or an orange; or, again, a dog is different from a horse, or a lion, or an eagle. Moreover, within any one class of beings, the difference between the individuals in that class is again the expression of the *Svabhâva* of each such individual. That is why it is so difficult for anyone to attempt to change his pattern of living. Each one lives according to his *Svabhâva*. We should and can learn to live more effectively, and should always seek a greater measure of self-improvement, always directed to the end that we shall be the more able to express the finer qualities in our natures. But no one need feel ashamed of his *Svabhâva*, or concerned because his nature is basically different from that of another. The important question is: Are we using our highest faculties? Are we really living? Now, the process by which we are learning to do just that is explained in the next or fifth Jewel of Wisdom.

Evolution

Evolution is the process of bringing to the fore in ever fuller measure the hidden glories of the Divine Consciousness which is the real *Svabhâva* of each individual. The word itself means "turning outwards" or "bringing forth from within" all that which is latent and as yet undeveloped. This of course means the higher faculties, those factors in our constitution which are closer to the Boundless from which we all emanated. For, as we pursue the course of evolution, we shall bring forth in ever greater measure those faculties that shall make us truly human. When we shall have succeeded in this, we shall then be ready for the next step, which will be an advance along the evolutionary pathway or Ladder of Life.

A simple statement of Evolution such as the above leaves out much that makes this doctrine one of the most interesting in the whole of the Occult Philosophy. It does not take in the details of the astonishing changes in outward form and appearance of the early races of mankind predating anything that Science has as yet uncovered.

Nor has it dealt with the origin and growth of the Earth as a Globe Chain. Some of these fascinating teachings will be dealt with in succeeding chapters. For the moment it is important to establish just what theosophical students mean by the word Evolution. For them it has a specific meaning which differs in some important respects from the scientific viewpoint. Theosophically speaking, evolution is the bringing into manifestation the various latent powers and faculties of the individual. Even the numerous changes in body structure are concomitant with the ever-growing needs of the entity seeking an ever fuller manifestation of its own Svabhâva.

It must be stated that this is really a dual doctrine, for with Evolution goes Involution; briefly: During the process of Earth building, and at cyclic times throughout the history of life on the Earth, there are periodic "Downward Arcs" and "Upward Arcs." Pending further explanations, it may be stated that the Downward Arc consists primarily of the Evolution of Matter as the result of Spirit becoming increasingly involved in Form. It is this process that produced the manifested universe as a whole, or a Globe Chain in particular, as well as the bodies of all its inhabitants. We speak of this aspect of the Doctrine as the Involution of Spirit and the Evolution of Matter.

Conversely, an Upward Arc is identified as a time of evolving Spirit which had become completely involved in Matter. Matter then becomes increasingly "involved" in the process; for the evolution of Spirit does not imply an escape from Matter; the two must be eternally linked. It does mean a refining and an etherealizing of Matter, with a decreasing emphasis on Form. We speak of this aspect of the Doctrine as the Evolution of Spirit and the Involution of Matter.

It might be well to call attention here to an example of the drawbacks one encounters in the use of English terms to identify and explain these teachings. The word "involved" has, in ordinary use, certain implications which may mislead the student. A subject under discussion is said to be involved when it is complicated, has many ramifications and is difficult to understand. Again, when we say that a certain number of men are involved in some misdemeanor, we imply not only that they took part in it, but that they share the responsibility for the act. The word "involution" also has specific meanings that are not applicable to our study. Even the words "evolved" and "evolution," because of modern scientific theories, may be subject to misinterpretations in studying the occult doctrine. This cites just one instance of the enormous difficulty one meets in rendering certain ideas of the Ancient Wisdom in terms with which we already familiar. This is the chief reason for our preferring the use of Sanskrit terms to express these unfamiliar concepts, since these archaic terms embody the pristine metaphysical and philosophical ideas about which Western languages know little or nothing.*

The Two Paths

Some of the loftiest concepts are embodied in the sixth and seventh Jewels of Wisdom; in this brief explanation we shall hint at some of the teachings that will be covered more fully in a future chapter.

*The student is referred to Chapters VIII through XIII of *From Atom to Cosmos* for an exposition of the teaching of Involution and Evolution in its broad outlines, inbodying as it does the subject of the process of world-building and the Rounds and Races.

For our present purposes, let us refer to something that was brought out in Chapter One. This concerns the two lines of evolution. These were spoken of as the Architects and the Builders. However high the hosts of entities comprising the Builders may evolve, and some of them are so lofty that we refer to them as the Gods for lack of a better term in the English language, they nevertheless continue to belong to that one stream of evolution *unless and until* the fire of Divine Compassion is kindled within them to the extent that they consciously aspire to turn back and help all those struggling along behind them. If they can succeed in this labor, they are then ready to join the other main stream of evolution in the Universe, and in so doing they tread the pathway not for themselves alone, but for all that lives.

A trend in modern thinking that has been in vogue for many years sees every human being as basically selfish. Those who hold this view will say that even the unselfish worker for the human race is really doing what he wants most of all to do, and in that sense he too is basically selfish.

There is a grain of half-truth in this, but the other half entirely escapes those who hold this rather cynical viewpoint. Contrary to their beliefs, there are men and women living whose sole thought is for others; they serve without thought or desire for reward or gain of any kind. Their compassion goes so far beyond the need for personal satisfactions in their work that the state of their minds and hearts is inconceivable to the average person. Such are the members of the Hierarchy of Compassion at the human level. Although relatively few in numbers, they are nevertheless members of the hierarchy referred to as the Architects, which extends upwards to the Heart of the Universe itself. Just as these men and women are distinguishable from the others of their race by the quality of their lives — and we refer to them as the Adepts of Mahâtmanas, and to their Disciples as Chelas—so it is that on the higher levels of the hierarchy, they are also distinguishable from the others. The Gods, spoken of a little earlier, are known as the Dhyâni-Chohans, a Sanskrit term which means Lords of Meditation; while the Gods of the Hierarchy of Compassion are known as the Dhyâni-Buddhas.

Referring once more to that stream of life known as the Builders, a further explanation must be made. Human selfishness is deplorable, and is the cause of the crushing load of suffering that is upon the human race at the present time. So basic is this quality of selfishness that it will be thousands of years before humanity shall have learned how to transmute selfishness into its more spiritual aspect. It may shock the student to learn that there is a spiritual kind of selfishness; this is known as the Pratyeka-path, the path of growth for oneself alone. We might call it the natural path of evolution as trodden by the hosts upon hosts of entities throughout the manifested universe that comprise the vast majority known as the Builders.

The seemingly overwhelming evidence that Nature is “red in tooth and claw” seems to negate the truth enunciated by the Ancient Wisdom that Compassion is the fundamental law of Nature’s heart. So universal is the law of the struggle for existence and the survival of the fittest, that we see it in the behavior of the plants, the insects, the animals of all sorts, as well as among human beings albeit in a somewhat more refined manner. In the last named it shows itself with deadly intent in the conflict between humans earning their daily bread and striving to find a place for themselves in this competitive world; and among the nations themselves it results in

mass slaughter. One can almost understand the cynical attitude of some modern thinkers who say that war is necessary for human progress. The theosophical student does not hold this view, nor does he sympathize with those who hold it; but he can understand the reason why they hold it. If it were not for other basic factors in human life, the Adepts themselves might give up in despair.

Why do not they give up? Why do they not feel that the struggle is hopeless against the seemingly overwhelming odds? Because they have a completely different vantage-point from ours. We have not the faculties necessary to see things as they do. They behold human suffering, to be sure, and they suffer with humanity, but they also see what the human race as a whole fails to see. Because of the wider scope of their vision and their experience, the Hierarchy of Compassion is a very real thing to them. They are a part of it, and therefore they know that in the higher levels of this Hierarchy there are lofty entities (we referred to them as the Dhyâni-Buddhas) who actually do guide the course of the spiritual development of the human race. They cannot relieve mankind of the consequences of its mistakes, but they can and do keep the door open for the entrance of all who genuinely desire to serve as they serve; and, according to his own capabilities and degree of training, each one is given a chance to serve. As long as he serves, he is ever sustained by the strength and wisdom of others who have served longer, and if he is strong enough to make the grade, he takes his place in the Hierarchy. This is the grand hope that is held out to all. No one will be denied the opportunity to join if he has the genuinely unselfish aspiration to be as they are, and if he has the strength to pursue the Pathway of Compassion. Thus it is that we have the two Paths, the Pretyeka Path, whereon tread those who evolve for themselves alone, and the Amrita Path, trodden by those exalted ones who live for the human race, and whose lives are a blessing to the world.

In a future chapter, this theme will be elaborated as it becomes necessary to explain the nature of the various types of Great Teachers. We shall then learn what constitutes a Buddha of Compassion, those highest members of the Hierarchy of Compassion who remain on the human level. None exists higher than these.

Âtma-Vidyâ

This seventh Jewel of Wisdom is probably the most recondite. If it should appear that less is said or written about this teaching, it is not because there is little to say. It is because the teaching is so deep and far-reaching that it probes into the very mysteries of life itself.

Whereas the first six Jewels of Wisdom might be related to the second Fundamental Proposition, as set forth in *The Secret Doctrine*, it would seem that this seventh, Âtma-Vidyâ, or Self-Knowledge, is better related to the Third Proposition, and perhaps it should be quoted once more at this time:

“The fundamental identity of all Souls with the Universal Over-Soul, the latter being itself an aspect of the Unknown Root; and the obligatory pilgrimage for every Soul — a spark of the former — through the Cycle of Incarnation (or ‘Necessity’) in accordance with the Cyclic and Karmic law, during the whole term. In other words, no purely spiritual Buddhi (divine Soul) can have an independent (conscious) existence before the spark which issued from the pure Essence of the Universal Sixth principle — or the OVER-SOUL — has (a) passed through every elemental form of the

phenomenal world of that Manvantara, and (b) acquired individuality, first by natural impulse, and then by self-induced and self-devised efforts (checked by its Karma), thus ascending through all the degrees of intelligence, from the lowest to the highest Manas, from mineral and plant, up to the holiest archangel (Dhyâni-Buddha).”

The all-important theme here is the “fundamental identity with the OVER-SOUL.” This is the kernel of the teaching of Self Knowledge. Until that ultimate realization has been achieved, there may well have to be varying degrees of imperfect Self-knowledge, that is to say, knowledge about some aspects of oneself, those aspects being of a temporary and mâyâvic nature; but the goal is achieved only when this fundamental identity with the Boundless is realized and experienced.

Such a realization brings about more than a mere acquiescence of the oneness of all life and an acknowledgement that one is a part of it. Once a man has achieved this, he is on the threshold of the doorway that leads into higher kingdoms of nature, those other kingdoms known as the Dhyâni kingdoms. Through the realization of his oneness with the Over-soul, he can then penetrate into the secret realms of Nature, and with full consciousness and by reason of his awakened spiritual powers, he can probe into the ultimate mysteries of cosmic and human life. He is relatively omniscient.

One of the most important things for us to keep in mind is that however deep these teachings might be, and even though they deal with beings of a higher order — the Dhyâni-Chohans, the Dhyâni-Buddhas, and, coming a little closer to ourselves, the Buddhas and the Avatâras and the Mahâtmans of varying degrees — we must not fall into the natural tendency of thinking of these things as being very remote and of little immediate importance to us. Perhaps the most important phase of occult study comes with the realization that, as in treading any pathway, our eyes do look ahead by all means, but our feet are on the path right where we stand. And the path trodden by those who have gone on ahead is no different from the path on which we stand today. They were once where we are now, and one day we shall be where they stand. It is only a matter of taking the necessary steps.

So Âtma-Vidyâ, Self-Knowledge, is obtainable to a degree for us, even today. And each step along the road of self-directed evolution will bring with it a fuller degree of self-knowledge. We are on the pathway right now, but only we can take the steps.

Chapter VIII

CHAOS, THEOS AND COSMOS

Anyone attempting to present the more recondite aspects of the Ancient Wisdom must be aware that as soon as he makes it evident to his readers that he takes certain matters seriously which would not apparently stand up under scientific scrutiny, he thereby lays himself open to ridicule. This is nothing new, and it is something that must be anticipated. If he fears ridicule, then he is not yet ready to devote himself to this work. When he is ready, he will come to realize that far stronger than disbelief and mockery on the part of others, is his own awareness of a sense of gratitude to those who have helped him to understand the teachings. He deems it a privilege beyond words to find himself in a position to pass these teachings along; and in adding what he can to the vast body of teachings that are available, he feels that he is taking an active part in a work far bigger than himself.

The fact that many of the ideas now to be presented are viewed by many as relics of a superstitious age is not of great importance. We can have no quarrel with genuine scientific research and discovery, and we acknowledge the part such work has played in eradicating many erroneous beliefs; but there is no justification whatsoever for assuming a thing to be untrue for no better reason than that it lies outside the province of modern science.

In our approach to the study of the planes of consciousness and the worlds functioning therein, we can do no better than continue to regard these planes as fields of force. In this manner we shall avoid the mistake too often made of thinking of them as flat surfaces, one above another. And in keeping with the method in wide use in theosophical books, we are going to consider that there are seven such fields of force of varying grades of spirituality on the one hand, or of materiality on the other, depending upon the viewpoint we take. The numbers 7, 10 and 12 are closely related, as has been brought out before, and their relationship will be further understood as we go along.

What then, are we trying to convey when we speak of these fields of force? The Ancient Wisdom views the Galactic Universe in its totality as a *living cosmic being*, an entity of such mighty power that nothing short of a universe could possibly represent it. This galaxy of which our solar system is a part is the outer manifestation, the wondrous garment of the Cosmic Divinity.

The vitality of this highly complex entity is not a simple thing to define. It functions in seven different aspects, and, adhering to the manner in which we are explaining these

things, this cosmic vitality appears to us as the seven cosmic "fields of force," each one establishing its own sphere of activity according to its own nature. These spheres of activity, and the energies functioning within them, are what we are accustomed to call the "planes of consciousness."

The old maxim, "As above, so is it below," provides a most useful key which we must continually apply in order to build up the required picture. And since the Solar System is a part of the Galaxy and must contain within itself, in type at least, everything that the Galaxy itself has, so it follows that within the Solar System itself there are seven "fields of force" — on a somewhat less grandiose scale to be sure, but nevertheless they are the very structure of the Solar System itself in all its levels of consciousness. As it is not likely that our studies will carry us beyond the Solar System, except perhaps in the most general terms, it is in this sense that we shall be considering the cosmic fields of force, or the cosmic planes of consciousness.

All of the entities within the Solar System, regardless of their kind, are subservient to the Cosmic Vitality. The situation finds its parallel in the case of a human being. Each one of us is composed of myriads of subservient entities, better known among which are the cells of our bodies, which of course includes the blood cells. Every one of these is a living organism, highly complex in itself; yet they all function within the dominance of the vitality of the man while he is alive. At death, these living cells are no longer under this dominance, and we say that the body is in dissolution. So it is with the Solar System. All entities within it, regardless of the fact that they are individuals in their own right, are nonetheless subservient to the Cosmic Vitality in which they live, move and have their being; and were the entity that embodies itself as the Sun and his family of Planets to become "excarbate," and the cosmic vitality were thereby to be withdrawn, all entities within the solar system would cease to function in concert, but would scatter, each one going into a condition that would be governed by its own nature.

Up to the present time we have been referring to the various fields of force, etc. in the most general terms; it is time now to be more specific as to these teachings. These matters will be studied under three headings, to wit: 1, Gods, Monads and Atoms; 2, the Tattvas and Bhûtas; and 3, the Lokas and Talas. These are technical terms, not familiar to all students, and they will be studied as among the most important teachings concerning the nature of the Universe and of Man. It might very easily seem that these are merely several ways of speaking about the same things, but they most emphatically are not. They contain the teachings about three distinct factors, all of which are necessary to the structure and functioning of the universe; and to the end that we might establish a good working foundation on which to build, we might again refer to Fig. 5, which shows the three-dimensional Svastika with its three axes occupying the seven dots at the center of the Tetraktys. Remember the story of Thor's Hammer in its more complete form. In our present frame of reference, we might think of these three arms as representing Gods, Monads and Atoms.

It must be understood that there are two lines of evolution. This was brought out in the first chapter of this book, but the explanation at that time was necessarily brief and incomplete. It should now be understood that the terms Gods, Monads and Atoms refer to the consciousness or what we call the "right-hand" side of the universe. The matter side, or the "left-hand" side, is then referred to as comprising

Chaos, Theos and Cosmos. There is a direct relationship between, in the first instance, Chaos and Gods; in the second instance, between Theos and Monads; and lastly, between Cosmos and Atoms.

In order to clarify this aspect of the teachings, let us quote from G. de Purucker's *Fundamentals of the Esoteric Philosophy*, pages 315-316:

"... let us write down a symbolic outline of the two lines of growth or development of the two fundamental kosmical hierarchies.

On the left or matter side:

CHAOS
THEOS
KOSMOS

On the right or divine side, the light-side:

GODS
MONADS
ATOMS

corresponding each to each; and psychologically, so far as man is concerned, 1, the divine; 2, the spiritual or human; and 3, Kosmic-astral.

Chaos is a Greek word, and is usually thought to mean a sort of helter-skelter treasury of original principles and seeds of beings. Well, so it verily is, in one profound sense: only it is most decidedly and emphatically not "helter-skelter." It is the Kosmic storehouse of all the latent or resting seeds of beings and things from former manvantaras. Of course it is this, simply because it contains everything. It means space, not the highest Space, not the Parabrahman-Mûlaprakriti, the Boundless—not that. But the space of any particular hierarchy descending into manifestation, *i.e.*, what space for it is at that particular period of its beginning of development. Remember the principle of relativity. There are no utter absolutes anywhere and never have been and never will be. The directive principles in Chaos are the gods of the corresponding column.

Theos is a Greek word meaning *god*. Corresponding to it are the monads.

Kosmos is a Greek word meaning *arrangement*. *Kosmos* was also used for a woman's paraphernalia, decoration, and all that kind of thing: cosmetics and robes and jewelry. It meant that which was arranged and kept along the lines and rules of harmony—*i.e.*, the arrangement of the universe; and corresponding to it in the other column are the Atoms. Note the three correspondences: Chaos, Gods or divine beings, the kosmic Architects; then Theos, for the builders, the Kosmocrotors, corresponding to the Monads, the spirit-beings; then Kosmos, the universe, arranged as we see it; and the Atoms, or Vital-Astral seeds, on the divine side.

We do not speak here of chemical atoms, please understand. These belong to the Kosmos. As used in this outline, Gods, Monads, and Atoms, we mean 1, the divine; 2, the spiritual-human; and 3, those ultimate particles of substance which inflame, which inspire, which vitalize, the material kosmos. Each to each: the Gods work in the Chaos; the Monads work in and through the Theos, the Theoi, the Builders; and the Atoms as the semi-conscious, ultimate entities of matter, work through the Kosmos or the manifested universe, as prepared according to what is popularly called natural law, in other words the essential and inherent operations of Nature, deriving from the Gods and Monads.

Such an Atom, according to these parallel columns (which are H. P. Blavatsky's, of course) signifies the ultimate particle of matter, which ultimate particle is its (matter's) seventh principle, its highest principle; and for that reason the sun is called an Atom, because it is the seventh or highest degree of matter or prakṛiti on this plane. Prakṛiti means nature or the developing power, that which has brought forth manifestation. There are seven Kosmical Prakṛitis, and we are in the first or lowest; the seventh as you count downwards, the first if you count upwards. Each of these again has seven sub-planes. The sun as an entity is the highest entity of the kosmical system, the solar system. But what we see is merely its vehicle, its seventh or lowest or material Element or Principle, counting downwards . . ."

The important point to understand from the above is that there are two kinds of evolution, the left-hand or matter side, and the right-hand or divine side of the Universe. Each of these is threefold, Chaos, Theos and Kosmos on the one hand, and Gods, Monads and Atoms on the other.

At an earlier time we had spoken of the Architects and the Builders, referring to them as the two lines of evolution. It should be explained further that this is a bifurcation within that line of Cosmical Evolution identified as being on the "right-hand" or consciousness side of Nature. Since the Gods *are* the Architects, and the Monads *are* the Builders, the comparison between the Architects and the Builders was not and is not to be construed in the same manner as is the comparison between the spirit-side and the matter-side of Nature, or the "right-hand" side and the "left-hand" side.

It might be as well at this point to explain why there are these three aspects of the study, related to one another by all means, but nevertheless to be considered as separate lines of study. Well, it is something like the study of Astronomy. We may pursue the study along several lines, all of them related to astronomy, and yet each one providing its own special interests. Thus, the stars may be studied first of all in respect to their chemical and physical properties. In this, we learn something about the materials of which the stars are composed; and this leads us into an inquiry into the original formation of a star, the source of its energy, and its probable duration. A second approach would deal with a star's place in the Galaxy, its relationship to the stars around it, its motion not only as a part of the Galaxy, thereby sharing in the rotation of the galactic system as a whole, but its own proper motion, which, again, leads into a consideration of the gravitational forces that it exerts upon other stars, and to which it is also subjected by other stars. In other words we might say that this second study of a star would deal with its position within and its relationship to Space.

Then the third study of the star would be along strictly theosophical lines, in which it is regarded as a living entity in its own right, yet sharing in the life and destiny of the greater entity of which it is a part. This would be the greatest study of all. And of course these three lines of study would find their parallels in the study of a human being. One might approach the study of a human being from a physiological standpoint, in which we inquire into the chemical constituents of the human body, and the marvelous processes that go on within it during the life of the individual. A second approach to the study of the man would be his relationship to his environment, especially perhaps in his relationship to his fellow humans.

The third and most important approach, and the one that would have the greatest interest for us would be that which sees him as a cosmic pilgrim, treading the long wearisome road back to the Divine Source from which he originally sprang. This is the study in which we are now engaged.

It is to be expected that the teaching concerning Gods, Monads and Atoms will find its counterpart in Man; and in the chapters to follow, this will be demonstrated. Before moving on to a more detailed study, however, it would be good to establish a pattern on which this study is to be built. To this end, let us turn once more to Fig. 5 which shows the three-axis Svastika, or the complete form of Thor's Hammer. This occupies the seven dots at the center of the sacred symbol known as the Tetraktys, composed of 10 dots. It was explained earlier that the three dots at the angles of the

Tetraktys represent what we customarily call the three 'unmanifested' planes, while the seven dots at the center (outlining the Svastika) represent the seven relatively manifested planes. This symbolism served a preliminary usefulness.

One problem that anyone is likely to meet in unfolding a subject such as this is the necessity of making incomplete statements which may be right as far as they go, but which must await the time when a proper foundation has been laid before a more complete picture can be presented. So I would like to suggest now that the three dots at the apexes of the Tetraktys represent the consciousness side of Nature, and the three axes at the center, the matter side. This will give a picture of the teaching that it would not have been possible to present earlier. It does not make the former interpretation wrong, for the reason that the term "unmanifest" does not mean nonexistent.

Let us, then, consider a somewhat different and expanded interpretation: Let the three outer dots represent Gods, Monads and Atoms, and the three axes of the Thor's Hammer represent the three environments through which they work: Chaos, Theos and Kosmos.

The next few chapters will deal successively with: 1, Gods, or the Architects; 2, Monads, or the Builders; and 3, Atoms—the amazing adventure of the Life-Atoms as the materials with which the Builders fashion the ever-living garment of Divinity known as the Universe.

SECTION TWO

Chapter IX

THE THREE LOGOI

The act of removing one's shoes before entering the temple, as is the custom among some peoples, is symbolic of the casting aside, temporarily at least, of the troublesome personal thoughts, problems, irritations and weaknesses that seem to be a part of daily existence. Hampered as we often are by these things, there is little room in our hearts and minds for contemplation on the God within.

Since we now prepare to tread holy ground, let us free ourselves from all encumbrances and reach out toward that which is most desirable to the human spirit: the experiencing of the Vision Sublime. And even though this may not be attained all at once, we can at least partake of the feast that is spread before us in the form of the teachings of the Ancient Wisdom. The nourishment that the inner self will receive is that which shall make it grow in stature and will give it the strength to claim its divine birthright, an awareness of the Inner God. "The Kingdom of Heaven is taken by strength."

We must call upon the courage necessary to set aside the criterion of modern days whereby a man is judged to be a good man if he adheres to the "one-God-religion" as opposed to polytheism or pantheism. If it is too difficult for some to shed the beliefs that are the outgrowth of centuries of subsistence on half-truths, then let them at least strip their God of all those human qualities that are a negation of Godhood, and let them see God as the Heart of the Universe, the fountain-source of all that is, the Boundless Itself, about which all speculation is ultimately fruitless. Because speculation takes the form of pictures of our own devising, and these serve only to separate us from it. It is right for us, however, to open our minds and approach in silence toward the unutterable, and to experience it by finding it within ourselves.

The ideas that we have now to consider have been preserved not only in spirit but in their technical meanings as well in the philosophies of the East, and it is the purpose here to draw upon this source for the explanations which are to follow; and if the student can transfer the spirit of these teachings to his western beliefs, he has much to gain thereby.

In this portion of the book which will deal particularly with Gods, Monads and Atoms, we shall spend some time in the discussion of each of these topics, but we shall become immediately aware that they cannot really be treated as though they were individual studies, for so closely do all aspects of life work together that it is virtually impossible to treat them as separate subjects. While they do actually represent

three streams of consciousness, if we may so phrase it, we shall see more and more clearly in the pursuit of our studies that a knowledge of any one of these requires a general knowledge of them all. The case is similar to the study of the Seven Jewels of Wisdom, as was previously brought out. Thus, in studying the Gods, references must be made to some teachings which will be further explained when we study Monads, and again, the Atoms. So the patience of the reader is implored if at times we seem to refer to matters not yet taken up in detail. Gradually the whole picture will come into focus. In fact, after this section has been studied it would be well to go over it again, and points that might now seem to be obscure will have much more meaning in the light of the more complete survey.

First of all, we shall explain more about the Logoi that were the subject of the opening chapters of this book. They were there referred to as 1, The Unmanifested; 2, The Partially Manifested; and 3, The Fully Manifested Universe. In tabulating these, we presented them as follows:

First Logos

Brahman-Pradhâna — The Unmanifested

Second Logos

Brahmâ-Prakṛiti — The Partially Manifested

Third Logos

Mahat or Purusha-Prakṛiti — The Manifested Universe

The Second Logos is conceived to have emanated or unrolled from the First; and likewise the Third Logos is conceived as having unrolled from the Second. Thus the whole Universe was held within Parabrahman and came into manifestation by a process of unrolling, much as we might think of a scroll as being unrolled. That which is exposed to view is manifest; that which is as yet rolled up within the coils of the scroll is the unmanifest. But it is all there from the beginning.

Another manner in which the Universe was viewed by the eastern philosophers was in the sense of a Great Breath: the appearance of each universe was the "outbreathing," while the withdrawal into unmanifestation at the conclusion of the great cycle of activity was spoken of as the "inbreathing." The word Brahman is from the Sanskrit root *bṛih* meaning to expand, or to breathe.

The three steps from the First Logos to the Third were represented in Chapter II in symbolic form by the moving circle. The first position represented the Unmanifest; the circle while moving represented the partially manifest; and the circle in the new position (after it has moved a distance of its own diameter, and having thereby generated the geometrical figures that were studied in Part One) represented manifest Nature in all its parts.

At that time it was also explained that there are two lines of evolution, which were referred to as the Architects and the Builders. The term Architects was meant to convey the idea that they are the higher beings that lay down the plans which are to be carried out by the Builders, using a third, albeit dormant stream of consciousness, to wit, the materials furnished by Nature, and thus building with these materials all the galaxies, the worlds, and the unthinkable great numbers of entities that inhabit these worlds.

Thus, these three streams of consciousness may be paraphrased:

Gods.....	The Architects
Monads.....	The Builders
Atoms.....	The materials to be used by the Builders under the direction of the Architects.

Now these present chapters, dealing as they do with Gods, will take up the study of that stream of life which we are calling the Architects; and we are to understand that this is but another term for the Hierarchy of Compassion. On the sublime teachings about the Hierarchy of Compassion rest the hopes of mankind, because once we grasp this picture we come to understand that the many systems of philosophy and religion and true science that have given support to the human race throughout the centuries are not man-made, but take their rise in universal processes that are directed toward the spiritual welfare of all beings; and human concerns on this Earth are only a part of the great work. But the fact that they are indeed a part of it is what gives substance to the Ancient Wisdom. Never was the human race abandoned — never was it left alone to struggle on with false hopes and unrealizable goals. Knowledge has always been available to those who really want it; and since we have succeeded in grasping the picture that the Ancient Wisdom provides, we may see at a glance that the value of the teachings is of the greatest ethical importance.

Highly technical studies will certainly be undertaken, even though the question has often been raised as to the value of bothering our heads about such matters as Globe Chains, Rounds and Races, and the like, when our hands are more than full trying to straighten out the mess that we find right here in our own lives. The Theosophist would answer such objections by saying that had these teachings been rightly understood, this mess would never have been allowed to come about in the first place. If we could only realize that human misery is the direct result of selfishness, ignorance and indifference, and that the effects of these go far beyond the sufferings of mind and body, tragic as these often are! They penetrate deeply into the spirit of man, with a consequent loss of evolutionary growth.

The human race is today far behind what it should be, for long ago we should have outgrown many of the lower human traits which hold us back. We are still wallowing in the mire of selfishness and greed, whereas by now we should have begun the ascent up the hill which leads to spiritual knowledge. The greatest loss of all is that, by and large, we are not even aware of what is possible for us to achieve. The Hierarchy of Compassion must long for mankind to become spiritually awakened.

Understanding the teachings about Man and his relationship to the Universe brings this awakening nearer to us, and we realize that with knowledge comes responsibility. We dare not throw away our opportunities for service, because we know the awful price the human race is paying even now for the mistakes of the past, and that the price becomes heavier with each day that passes. Only when we understand these things with such clarity that the impact upon our minds is almost overpowering can we find the way to ally ourselves with the forces of Light — which are the very nature of those beings that we are to study under the general title of the Hierarchy of Compassion.

For the specific purposes of this study, we are going to transliterate the names of the three Logoi into the terms found in the philosophy of Mahâyâna Buddhism, which philosophical school, we are told, has adhered most closely to the traditions of the Esoteric Philosophy. We shall endeavor to give a brief account of each of these terms, showing how each is related to man's own nature. In this way we shall be laying the foundation on which we can later build.

<i>Universal</i>	<i>Human</i>
Amitâbha	Âtman
Alaya	Buddhi
Avalokiteśvara	Manas

Only an exhaustive study can convey any real meaning of the nature of the three Logoi. Such explanation as we can give here can be no more than pointers in the right direction. In fact, it seems almost an impertinence to attempt to describe that which defies description. But the student is entitled to such definitions as can be given, and so we must postulate that as there are Gods in the Universe, so there are their counterparts in Man himself. Nor should we consider Man to be unique in this. He is but one example among many which are, after all, the numberless hosts of beings that dwell on all the planes of nature.

It has been customary in theosophical literature to present the seven principles of Man in the form of a higher triad consisting of Âtman, Buddhi and Manas, and then a lower quaternary consisting of Kâma, Prâṇa, Lînga-śarîra and Sthûla-śarîra. These seven principles with their English names are dealt with more in detail in later chapters under the heading of *Monads*. It will suffice at this point merely to say that the various elements of man's being are drawn from the appropriate elements within the universe. Taking the higher triad first of all, and seeking the source of the God within Man, his Âtman, we must necessarily look toward the Divine in Nature, called, in the Mahâyâna School, Amitâbha. Similarly, Man's spiritual intelligence — the Master within — is derived from the Spiritual Intelligence in the Universe, which we call Alaya, which, again, might be called pure spirit. Then Man's mind, the man himself in his higher parts, finds its roots in Avalokiteśvara, "the Lord who is seen everywhere."

It would be well to present the derivations of these terms at this time that we may better understand the spiritual significance of these teachings.

Amitâbha. A compound of *a* — not; *mita*, the past participle of the verb-root *mâ*, to measure; and *âbhâ* — splendor. In other words, the word means "unmeasurable splendor" or "boundless light." Its counterpart in Man, his own "Boundless Light" is Âtman, the Self in Man which is a ray of Parabrahman. Parabrahman and Amitâbha are almost synonymous, but the word Amitâbha relates to certain teachings with regard to the Buddhas which will form a very important part of this study.

Alaya. A compound formed of *a* — not; and *laya*, from the verb-root *lî*, meaning to dissolve. In other words, Alaya is the spiritual source of all that is. Its counterpart in Man is Buddhi, the Spiritual Intelligence. Buddhi is from the verb-root *budh*, to know, or to enlighten. Thus the Buddhi in Man is that part which brings enlightenment to the whole being, once it is brought into manifestation, as is done in initiation. A Buddha is one who is enlightened in the spiritual sense. All of his faculties are illuminated by the Buddhic splendor within himself.

Avalokiteśvara. The word is related to *Īśvara*, which is from the root *īś*, to rule. Thus *Īśvara* means a ruler or lord. *Ava-lokita* means, literally, "downwards seen." The meaning of *Avalokiteśvara* is actually, *Īśvara* seen everywhere, or the manifested Divine Presence. Remember that the Third Logos is the Manifested Logos. It is the Divine Life seen in all of the manifestations of Nature. Its manifestation in the human being is his higher *Manas*, when illumined by *Ātma-Buddhi*. The three together are the Human First, Second and Third Logoi.

The student is again cautioned against thinking that mere definitions will serve to give the essence of the teaching. They cannot possibly do so because they are necessarily fragmentary in character. Anyone desiring to receive more light on the teaching is urged to study G. de Purucker's *Studies in Occult Philosophy*, pages 309-312, as well as many related passages in the same book.

It is with a mixture of joy and sadness that one studies these teachings. Joy because these truths are like a fabulous treasure that is ours for the taking. Sadness because we are so blind that we will not reach out and seize the prize that is within our grasp. There is no power in the universe that can hold man back except man himself. And how tragic it is for the human race that man has within himself the Divine Essence and yet is so dimly aware of it! Each day the news headlines tell us of new crises that threaten to engulf us in global war. Are the people to be blamed who think that religion and philosophy are impracticable when all that they can see is the mountain of trouble that looms ahead?

For those who seek some assurance that there is practical value in the teachings of the Ancient Wisdom, the best answer that we can give is, first of all, to cite the cases of all the genuinely great men who have ever lived. There has never been a dearth of greatness in the world. It shows itself in many ways; in art, music, poetry, statesmanship, inventive genius, and so on. All these qualities of the human spirit speak of the reality of the Divine life that is the core of every human being who has ever lived, or who ever will live in the ages to come. However depraved some lives may be, there is something greater by far than depravity. It is the will to live; it is the urge toward better things.

Let us go even farther and follow in thought the progress of a human being whose heart and mind have caught the fire of enthusiasm that is one attribute of the spirit within him. In order to make this more meaningful, let us suppose that the teachings of Theosophy have been brought to his attention. He studies them; he sees their value not only for himself here and now, but potentially for every human being on this earth. He learns that whether he knows it or not, he is under the guidance and influence of the great universal processes that are explained in the teachings. They are already a power in all men's lives, simply because Man is Man.

Gradually his interest in the teachings becomes something more; it has developed into the motivation which impels him to put his best efforts into whatever work his hands find to do. He will seek out others of similar interests, and if he is not already aware of it, he will hear about the Theosophical Movement, which is but a name for a spiritual work that is ageless and universal. One segment of this work is directed toward the spiritual welfare of the denizens of this earth. He learns too that all the great world religions, philosophies and sciences owe their origin to this same spiritual effort, and that in joining such a group, he may know that he is taking part in a work that is far greater than himself.

He may well be dismayed when he learns that the histories of all such groups of people have been stormy, and that in many instances they failed altogether. He may feel a sense of profound disillusionment; this is a test of his devotion to Truth that knows no equal. If he can weather the trial, he emerges with a new kind of maturity. He recognizes that the fallibility of human nature has in the past, and will in the future, bring about many crises, but at the same time he will recognize that the Theosophical Movement, sometimes called the Lodge of Light, as such, is beyond the reach of failure. For it the word failure has no meaning, because it does not concern itself with small events—and, taking the wider view, any organized group of people is an event. Some events are more important than others, to be sure, and the importance of a band of people working unselfishly for the good of humanity is not to be discounted. However, once the basic teachings are understood, he realizes that through the process of reincarnation, his own karma will bring him back time and time again to the work he loves.

It is only natural, then, that his knowledge of the substance and character of the Theosophical Movement increases with his own growth, and he gradually becomes aware of some things that had been previously hidden from him. Having read in many of the theosophical books about the existence of the Elder Brothers of the race, the Mahâtmanas, and having perhaps made a study of the book, *The Mahatma Letters to A. P. Sinnett*, to him these exalted human beings take on a semblance of reality. At first there is the natural tendency to idealize them, but he sheds this tendency as he grows, for they are slowly becoming more real to him. He feels their vitality in their writings, and he becomes aware that as he absorbs their teachings and makes them a part of himself and a guide to his living, he also knows that for him there is eventually the possibility of working with them consciously. It may not come in this life, but even that is not too important. He knows that the only road for him to tread is that of self-discovery and self-mastery. He learns that ultimately there is no teacher for him that can compare with his own inner teacher. His contact with outer teachers, if he is fortunate enough to find them, is temporary; but his contact with his inner teacher, once he has made the discovery, endures throughout the long cycles of rebirth that lie ahead of him, and if ever that contact is broken it will be through his own fault.

So this is the practical application of the teachings about Man's nature. Discovering one's own inner teacher may be expressed in technical terms as we have already done. It is finding the Buddhic light within, that portion of himself that is of the essence of Alaya. He finds this possible to accomplish because he is living in the higher Manas, the real man, that which is of the essence of Avalokiteśvara. There is nothing that can be of greater practical value for him than this teaching, so simply expressed, for it holds within itself the key to all of his future progress. He learns that the Adepts themselves are such by reason of having accomplished this very thing. An Adept is a human being who lives in the higher Manas which is illumined by the light of the Buddhic Principle. And when this illumination is complete, so that the Buddhi-Manas is the vessel or channel through which flows the radiance of Âtman, then the man has become a Buddha, an Awakened One.

He learns that he can take the first steps without waiting any longer; he has but to place himself in an attitude of reverence before his own inner teacher. He constitutes himself a disciple of his own Buddhic Splendor, which becomes more and more real to him. He learns that through this association, knowledge comes to him from within.

And the greatest discovery of all that awaits him is that *within himself* there is already the link which binds him to the thing that he seeks, the spiritual work which today goes by the name of the Theosophical Movement. It has gone by many names in former centuries, but its nature and its work go on unchanged.

Once he finds that he is a part of it, he learns that this link can never be severed; death affects it not at all. And the time comes when he discovers that he is not alone in this knowledge. He finds that there are many beginners like himself, and that there are also many who are older in experience than he and that they stand ready to aid him and to teach him.

The full glory of this work unfolds before him when he discovers that, just as he has his teachers, so they have their own teachers who look, in their turn, to others still more advanced, and so on endlessly beyond his ken to the very Heart of the Universe. This Golden Chain of teachers, as it has been called, is known as the Guruparamparâ, a Sanskrit word meaning *guru* — teacher, and *paramparâ* — one following another. Actually there are two shades of meaning to the term. The sense in which it was just used is intended to show that there is an endless series of teachers, starting with Man and reaching to the Gods themselves. There is also a more specific use of the term wherein it describes how the spiritual Head of a Mystery School is always succeeded by another teacher at his passing, and so on in spiritual succession as long as the School endures. For the purposes of our present study, the first rendition of the term will be more exact, because we are about to learn something concerning the founding of the Mystery Schools through a feat of white magic, *Kryâsakti*, to use a Sanskrit word meaning “the power of action.” H. P. Blavatsky defines this term in *The Secret Doctrine*, Vol. II, page 173:

“*Kryâsakti* — the mysterious *power of thought* which enables it to produce external, perceptible, phenomenal results by its own inherent energy. The ancients held that any idea will manifest itself *externally* if one’s attention (and Will) is deeply concentrated upon it; similarly, an intense volition will be followed by the desired result.”

Chapter X

THE COMING OF THE MYSTERY SCHOOLS

We must now go back in time to a period in human history some eighteen millions of years ago! To students of the Ancient Wisdom this will have a familiar ring, for it denotes the middle of the third Root-Race. For those not so familiar with the teachings, it should be explained that Man has been on Earth far longer than is suspected by Science. Man's evolutionary journey brings him to this earth — through a long succession of reincarnations — during certain immense periods of time which give him ample opportunity to build civilizations to great heights of glory, and then to see them crumble in keeping with cyclical law. The civilizations recorded by history are but mere pointers to the vast number of such risings and fallings of nations.

This proceeds according to a plan; and within the compass of millions of years, the civilizations which appear do so as factors in certain great time periods known as Root-Races.* Each such Root-Race is recognizable by certain characteristics. Space does not permit a detailed study of the character of the first and second Root-Races. It might be said only that they were of very long duration and that the beings belonging to these earliest races did not inhabit physical bodies that could leave any residues or fossils, so naturally there can be no record of them that would satisfy modern science.

The third Root-Race was becoming more physical in appearance (although were we able to see now one of the bodies of the humans of that time we would not believe our eyes!), but our study at this time does not concern itself with outward appearances. We have something much more interesting to learn about. There are certain facts of consciousness which will provide the thread of our narrative. Let us only say, in order to complete the picture to the present day, that we might term the third Root-Race the Lemurian, the fourth Root-Race, the Atlantean, and our present fifth Root-Race, the Aryan. We must caution the reader against forming too rigid a picture as to these

*During the course of the evolutionary history of our Earth, as well as on the other six manifested Globes of the Planetary Chain, mankind as a Life-Wave of evolving entities passes through seven evolutionary stages which are called Root-Races, a term which has become widely accepted in Theosophical literature. It should be distinctly understood, however, that the word "Race" in this compound term has no bearing whatsoever upon any ethnic group or nationality. As the cycle of any one Root-Race encompasses periods covering several million years, it is obvious that a Root-Race is composed of innumerable sub-divisions, branches or sub-races, and contains within itself the historical development of countless types of humanity, all of whom, nevertheless, exhibit certain fundamental characteristics typical of any particular Root-Race. Any ethnic, cultural, or political meaning is utterly foreign to this Theosophical term which concerns itself exclusively with the global succession of cycles which bring about the gradual development of various spiritual, intellectual and psychical traits in the complex nature of mankind as a Kingdom of Life on this Globe.

earlier races. Much unreliable material has been written about Lemuria, so-called, and about Atlantis. Lemuria is supposed to have been a continent existing where the Pacific Ocean is at the present time, and Atlantis was supposed to have been a continent which once existed where the Atlantic Ocean now is.

The earth has undergone many changes during the millions of years that have passed since these early races flourished; and it would be safer to say perhaps that Lemuria is the term to be used for the world as a whole during the long time periods of the third Root-Race, and that Atlantis was the world during the time of the fourth Root-Race. The present fifth Root-Race, as said, is known as the Âryan Race, although we seldom identify one particular continent as being necessarily the home of the Âryan Race.

The derivations of the words Lemuria, Atlantis and Âryan are curious and in general do not refer to races of people. According to Lewis Spence in his book, *The Problem of Lemuria*:

“The name ‘Lemuria’ was given to the vanished continent of the Pacific by Philip Lutley Sclater, the naturalist, in the belief that within its area the Lemurs or lemuroid type of animal was evolved. It was speedily adopted as a striking and apposite title for the continental mass which many geologists believed had formerly filled a large part of the world’s most extensive maritime basin.”

The subject of Lemuria has been highly romanticized by some writers, and a word of caution is in order here. Such theosophical teachings as have been given to us deal with the mid-point of the third or Lemurian Race, at which time the “Descent of the Mânasaputras” took place — a sublime event in human history which will be dealt with in due course.

Atlantis is so called because it is supposed to have occupied that portion of the globe now covered by the waters of the Atlantic Ocean. The word Atlantic means “of or pertaining to Atlas in Libya.” Also, according to Webster, “Atlantis, a traditional island west of the Pillars of Hercules, said to have been sunk beneath the ocean by an earthquake.”

Âryan, according to Webster’s *Dictionary*: “From the Sanskrit *Ârya* meaning noble, or member of the upper castes. 1. A member of the Caucasian race one branch of which early occupied the Iranian plateau while another branch entered India and amalgamated with the primitive Indian inhabitants. 2. A member of the people who spoke the parent language from which the Indo-European languages are derived; loosely in ethnology, an Âryan-speaking individual of the Caucasian race.”

At no time is the earth covered with people belonging exclusively to the dominant race, however, for we have with us today not only the relics of past races, but also the forerunners of races yet to come. This forms a very complicated study, and to attempt to undertake it at this time would run us far afield. We are going to confine ourselves to two marvelous events which occurred simultaneously during the third Root-Race, the effects of which are with us to this day for the reason that these events were really the beginnings of a spiritual work that was to maintain to the very end of the human cycle of races on this earth.

The teachings state that there are two races yet to follow this one. At the conclusion of the seventh Root-Race the Earth will go into a period of quiescence known as

an obscuration, and then the mighty process will begin anew. There are seven such major cycles, each one consisting of seven Root-Races. These major cycles are known as the Rounds. We are in the fourth such major cycle, or in other words we are now in the fourth Round, and we constitute the fifth or Aryan Root-Race in this Round. In all, there will be seven such Rounds in the life of this Earth. This is the briefest possible statement of the case; a further explanation of the doctrine of the Globe Chains will be found in Chapter XIV, Lokas and Talas. What is given here will serve as the background for the study presently under consideration.

In general our teachings about the growth of Humanity from the "mindless" state to that of at least partially awakened mind as we have it today are limited to the events which occurred on this Globe D alone, during this Fourth Round. The teachings concerning life on other Globes of the Chain, and life during previous Rounds and the Rounds to come have been closely guarded. However, it does not seem to be amiss to engage in some constructive thinking on this point, bearing in mind that the following ideas are my own. As I have found them to be productive, I wish to share them with the reader.

As a man was once an infant in this life, but had been an adult in his previous life, thinking and working with his adult faculties, it follows that this principle has been repeated during a succession of lives, and will continue to be repeated far into the future.

Is there any reason to think that when Mind was awakened in the Humanity of the third Root-Race, this was an entirely new experience for the Human Life Wave? It would seem to be a logical conclusion to draw from the teachings that we now have, that during the Root-Races on Globes A, B and C a similar event must have taken place, and will take place, with perhaps fuller effect, on the Globes following this one, to wit, E, F and G.

We might expand the idea further, and think that during the Third Round, similar processes of awakening of the human faculties had taken place, not only on Globe D, but on the other Globes as well, and that in future Rounds, the process will be carried still further, so that the Human Races of the far distant future will have faculties developed that will carry man far on the evolutionary pathway to the Gods.

Thus, the mere fact that the early Root-Races of this Globe D on this fourth Round were in a child-like state might fit in with the concept that during the first years of anybody's life, man is in a child-state, and must undergo anew the process of education, or the awakening of the faculties of the mind.

The First Round is not included in these considerations because we are taught that the Globe Chain was in a process of building over a period of many millions of years, and that in some very important ways, the First Round was entirely different from the succeeding Rounds. We may further think that at first the process of awakening was slight, and has gradually increased in intensity up to this present Round, and that those capable of further growth, will experience an unfoldment of faculties to a degree as yet unsuspected.

And now to return to the Third Root-Race on this Fourth Round.

Just as children must be educated, so had the human race to be educated when it had grown to the degree that education was possible. It was during this period that

two great events took place. A chapter will be devoted to the event which is known as the "Descent of the Mánasaputras." The other great event will be taken up in this present chapter. Actually, the two events are so closely related that it might be said that the one could not have taken place without the other.

Let it be understood that just as in a school, wherein the young children are being taught, there must necessarily be the teachers who have had their own schooling many years ago, so it was that during the time of those early races there were some present who had their own schooling ages before, and they stood ready to serve as the teachers of the infant race. There was nothing haphazard about the process. Their relationship to the human race at that time was a karmic bond which was so far-reaching that their work had to take this form. In the truest sense of the word, they (the forerunners of the race) called upon Divine help. Actually what occurred during those stirring times was similar to prayer—if we understand the true meaning of prayer.

Genuine prayer is meditation: the calling or invoking into oneself of a portion of Divine Consciousness. Petitionary prayer is not meant, of course. Rather it is that type of prayer wherein one opens his inner nature to the reception of the Divine Guest, if we may use a figure of speech which is very applicable. Meditation can indeed be the means of welcoming into the heart and mind of the devotee the essence of his own Higher Self, his Buddhic Splendor; and it should be done more and more completely until, as said before, the student learns to recognize his own inner Teacher.

And just as this is possible for the human individual, as a simple fact of his own consciousness, so was it also possible on a larger scale for this group of advanced human beings. This is a great and wonderful mystery. In order to explain it, we must go back still further in time. We must understand that between any two of these great cycles or Rounds, there is a link which takes the form of a group of entities—a comparatively few individuals—who remain behind waiting throughout the long ages in a condition of relative quiescence. They elect to do so in order to make it easier for the incoming wave of human entities, when they are ready to people this globe once more. Such were the highest representatives of the human race that had been here before in the previous Round; and because they were the forerunners, so to speak, they had already achieved a type of consciousness that was still in the future for humanity at large, who in a very real sense were trailing along behind insofar as their inward development and unfoldment were concerned.

Those who remained behind are known by the technical word *Sishtas*—from the verb-root *śish*, to remain. It should be added that every kingdom of nature has its *Sishtas*, although for the present we shall confine this study to the Human Kingdom.

These forerunners of the race entered into a state of meditation of a very high type, known as *Kriyāśakti* (see end of Chapter IX). By a great feat of white magic they invoked the presence of a God. There was nothing fortuitous about this. They knew full well what they were doing, because by previous training and spiritual growth they had become aware of the spiritual needs of the human race and could work consciously with Nature in order to bring about this wonderful event.

The Being that was invited to come into the arena of human life was (and is, even to this day) a God. He goes by many names. He is sometimes known as the Silent Watcher, or again he is referred to as the Great Sacrifice.

The coming of this Divine Guest brought about the founding of the first of the Mystery Schools, wherein those of the human race who were worthy of the high

privilege were welcomed and taught the mysteries of consciousness. They were trained to take their places in the ranks of the Elder Brothers and learned to dedicate themselves to a work that knows neither beginning nor end. And, we are taught, these mystery schools exist to this present day.

With this preliminary discussion we can perhaps better understand the following extract from *The Secret Doctrine*. It is one of the greatest passages in all of our Theosophical literature, and is a never-ending source of inspiration to students of the Ancient Wisdom., Within these words we can feel the call to come up higher, to know, and to share in the great work.

“This Third Race is sometimes called collectively ‘the Sons of *Passive Yoga*,’ *i.e.*, it was produced unconsciously by the second Race, which, as it was intellectually inactive, is supposed to have been constantly plunged in a kind of blank or abstract contemplation, as required by the conditions of the Yoga state. In the first or earlier portion of the existence of this third race, while it was yet in its state of purity, the ‘Sons of Wisdom,’ who, as will be seen, incarnated in this Third Race, produced by *Kriyâśakti* a progeny called ‘Sons of Ad’ or ‘of the Fire-Mist,’ the ‘Sons of Will and Yoga,’ etc. They were a conscious production, as a portion of the race was already animated with the divine spark of spiritual, superior intelligence. It was not a Race, this progeny. It was at first a wondrous Being, called the ‘Initiator,’ and after him a group of semi-divine and semi-human beings. ‘*Set apart*’ in Archaic *genesis* for certain purposes, they are those in whom are said to have incarnated the highest Dhyânis, ‘Munis and Rishis from previous Manvantaras’ — *to form the nursery for future human adepts*, on this earth and during the present cycle. These ‘Sons of Will and Yoga’ born, so to speak, in an immaculate way, remained, it is explained, entirely apart from the rest of mankind.

The ‘BEING’ just referred to, which has to remain nameless, is the *Tree* from which, in subsequent ages, all the great *historically* known Sages and Hierophants, such as the Rishi Kapila, Hermes, Enoch, Orpheus, etc., etc., have branched off. As objective *man*, he is the mysterious (to the profane — the ever invisible) yet ever present Personage about whom legends are rife in the East, especially among the Occultists and the students of the Sacred Science. It is he who changes form, yet remains ever the same. And it is he again who holds spiritual sway over the *initiated* Adepts throughout the whole world. He is, as said, the ‘Nameless One’ who has so many names, and yet whose names and whose very nature are unknown. He is *the* ‘Initiator,’ called the ‘GREAT SACRIFICE.’ For, sitting at the threshold of LIGHT, he looks into it from within the circle of Darkness, which he will not cross; nor will he quit his post till the last day of this life-cycle. Why does the solitary Watcher remain at his self-chosen post? Why does he sit by the fountain of primeval Wisdom, of which he drinks no longer, as he has naught to learn which he does not know — aye, neither on this Earth, nor in its heaven? Because the lonely, sore-footed pilgrims on their way back to their *home* are never sure to the last moment of not losing their way in this limitless desert of illusion and matter called Earth-Life. Because he would fain show the way to that region of freedom and light, from which he is a voluntary exile himself, to every prisoner who has succeeded in liberating himself from the bonds of flesh and illusion. Because, in short, he has sacrificed himself for the sake of mankind, though but a few Elect may profit by the GREAT SACRIFICE.

It is under the direct, silent guidance of this MAHÂ — (great) — GURU that all the other less divine Teachers and instructors of mankind became, from the first awakening of human consciousness, the guides of early Humanity. It is through these ‘Sons of God’ that infant humanity got its first notions of all the arts and sciences, as well as of spiritual knowledge; and it is they who have laid the first foundation-stone of those ancient civilizations that puzzle so sorely our modern generation of students and scholars.”

The Secret Doctrine, Vol. I, pp. 207-208.

And here are the incomparable words of Master K. H.:

“. . . For countless generations hath the adept builded a fane of imperishable rocks, a giant's Tower of INFINITE THOUGHT, wherein the Titan dwelt, and will yet, if need be, dwell alone, emerging from it but at the end of every cycle, to invite the elect of mankind to co-operate with him and help in his turn enlighten superstitious man. And we will go on in that periodical work of ours; we will not allow ourselves to be baffled in our philanthropic attempts until that day when the foundations of a new continent of thought are so firmly built that no amount of opposition and ignorant malice guided by the Brethren of the Shadow will be found to prevail.”

And he adds some lines from an early poem of Tennyson's called “The Mystic:”

“How could ye know him? Ye were yet within
The narrower circle; he had well nigh reached
The last, which, with a region of white flame,
Pure without heat, into a larger air
Up-burning, and an ether of black blue,
Invests and ingirds all other lives . . .”

The Mahatma Letters to A. P. Sinnett, p. 51.

It is sometimes thought that the life of a Theosophist is barren because he rejects the personal God. The fact is that his life is full to the brim with reverence and wonder, because the Being that has been so glowingly described is a reality not only to him, but in an ever-increasing degree to his Teachers, and to the Teachers of his Teachers.

We are taught that in initiation, whereas the neophyte must be left entirely alone during the critical stages wherein he finds his own inner Teacher, once the trial has passed, then the illumination which comes to him does indeed come from the Silent Watcher himself. Thus he is called the Great Initiator. It is he who guides the course of Initiation, although but few of the highest of the Adepts may contact him directly.

One of the mysteries of consciousness is that from this Wondrous Being come as branches from a tree the loftiest of the Adepts, called by H.P.B. the “Sons of Will and Yoga.” Although they are actually beings filled with Divine Compassion, demigods and Teachers in their own right, at one and the same time they have a mystical identity with this Silent Watcher. Literally, the One becomes the Many. From these lofty beings radiate still others of a somewhat less lofty type; and yet these, again, are Adepts of a very high order; and from these once more radiate others of still lesser degree, and so on throughout the Hierarchy of Compassion in so far as it affects this Earth of ours. Finally, this wondrous tree of life bears its leaves, which are we humans, linked forever deep within our own hearts and minds to this Silent Watcher. Each one of us has, as stated before, his own link with this Wondrous Being, and thus with the Hierarchy of Compassion, could we but find it.

This may appear to produce a paradoxical concept; because it is equally true that a man must grow *from within himself* into the state of chelaship or discipleship; and the chela must grow *from within himself* into the state of adeptship, and so on. Do these two aspects of the teaching conflict? No more than the two sides of a coin. Could a coin be complete without the two sides? Are the sides ever to be separated from the coin itself? Assuredly not; nor can these two aspects of spiritual growth ever be separated. With each step taken, something is added to the life of the student, and it is

added in ever greater measure as the progress proceeds. We cannot grasp it with the brain-mind entirely; to attempt to explain it in ordinarily logical terms would only prove one's inability to grasp the genuine understanding of the process of spiritual evolution.

Let us now add a bit of Mathematical Symbolism to this study. It will be based once more on the remarkable properties of the Golden Section.

A five-pointed star may be inscribed within a circle. (For the method see Appendix I.) As we remember from our previous studies, the lines of any five-pointed star are divided at the two points of the Golden Section. (Also, the five triangles of the star are similar to the segments of a regular decagon. As we explained before, the relationship between the base and the side of each of these triangles is .618 : 1.00.)

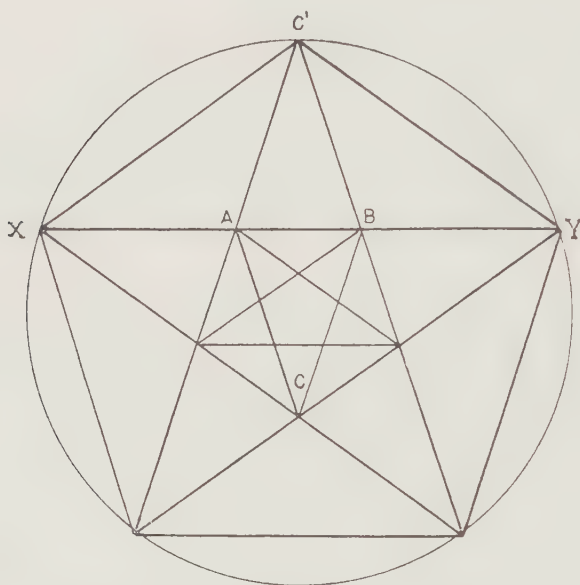


Fig. 7 — The Golden Section in a Star.

$$AB = .382$$

$$BY = .618$$

$$AY = 1.000$$

$$XY = 1.618$$

Figure 7 shows a five-pointed star within a pentagon. Within this star there is also an inverted star. Note the letters A, B, C and C'. The triangle forming a part of the inverted star and lettered ABC may now be thought of as swinging upward (the point C making an arc toward you as it does so) and coming to rest so that the apex is at C'. In this manner it has become a point of the larger star. If we may consider that all the points of the smaller star have been unfolded to form the large star, the symbol comes to life, for in this respect it represents, like the unfolding of a flower, the unfolding of the inner faculties of a human being, the bringing into manifestation all that is latent, and waiting to be brought forth.

We can carry this much farther and think of the inner inverted star as having been similarly unfolded from a star still smaller at its center, and this one from a star smaller yet; and so on without end. The significance of the symbol now seems to be the mysterious process of nature where, by unfolding, "the One becomes the Many." May not, then, the unapproachable point at the center represent the Wondrous Being from which the Hierarchy unfolds. This interpretation relates also to Fig. 6 in Chapter III, where the application is to the unfolding of universes, dealing as it does with the continual appearances of the Icosahedron and the Dodecahedron.

It is important to note that it is the relationship between the various geometrical shapes, whether plane or solid, that have the deepest significance. It might sound too arbitrary to be readily acceptable were one to say that, for instance, a five-pointed star represents either Man or the Universe. It is rather the astonishing properties and relationships of these simple figures that bring the lesson home to us.

In Fig. 8 a new concept has been added. Two of the lines of the inverted star have been extended until they touch at certain points three of the sides of the enclosing

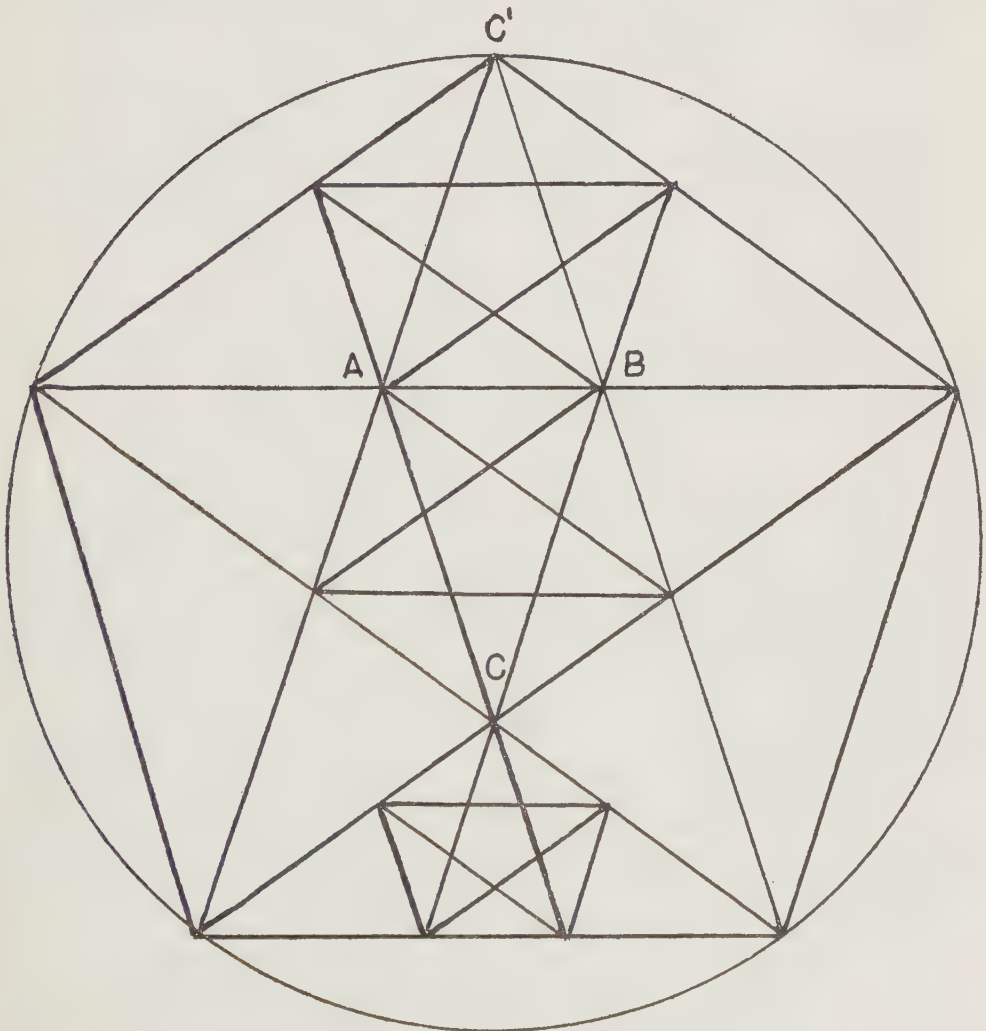


Fig. 8 — Four Stars in a Pentagon.

pentagon, *i.e.*, the base has been touched at both points of the Golden Section, and the two sides adjacent to the apex have each been touched at one of the points of the Golden Section. A further remarkable thing has taken place. The uppermost triangle ABC' is now enclosed within a pentagon; and by adding the necessary lines, it has now grown into a smaller star in its own right.

In a somewhat similar manner, the two extended lines touching the base of the pentagon now form the basis for constructing a new star which is, as it were, an outgrowth of the inverted star. This star is seen complete. And this leads us to Fig 9, wherein all the lines of the inverted star have been extended until they meet in pairs at the two points of the Golden Section on all five sides of the pentagon. This has enclosed all of the points of the star in pentagons; so that we may at once fill in the necessary lines causing each point of the original star to blossom forth as a star in its own right. Then the five smaller stars are also completed, so that we now have a figure consisting of twelve five-pointed stars. The original large star may be thought of as the omnipresent summit or hyperaxis of the hierarchy, the ten encircling stars are like the living emanations from the omnipresent Being; and finally the twelfth star, the inverted one at the center, represents the nadir of the hierarchy.

It is worth bringing out one interesting fact of the construction of these stars. The five stars at the angles of the enclosing pentagon are the direct outgrowth of the original upright star, whereas the five smaller stars which are placed at the sides of the pentagon are the direct outgrowth of the inverted star. This is highly suggestive of the two lines of evolution, an aspect of this symbolism which might have deep significance to many students.

Now look at Plate V (left). The pentagon has assumed a new shape, showing a series of stars below our original expanded figure. Note that the inverted star has likewise been expanded into a hierarchy of stars with its own upright star at the center. This is once more replete with symbolism.

The main body of this figure appears to rest upon the outstretched arms of the star below it; and if we think of this as suggestive of the legend of Atlas holding the world upon his shoulders, we discover yet more meaning in this symbol. The head of Atlas has been expanded in like manner, here representing initiated Man seeing himself as a copy of the Universe. Note how this expanded head of the man is actually one of the stars in the original diagram. The series of stars below man points to another recondite teaching of the Ancient Wisdom dealing with the various monads in man.

Finally, Plate V (right) shows the large star unfolded more fully, making a truly beautiful diagram. And we must remember that this is but one step in a process that could theoretically be carried on forever. What an interesting paradox it is that within the limited area of a pentagon may be drawn an infinite number of five-pointed stars! Quite suggestive of the fact that although this physical universe, which from one standpoint is quite limited because it *is* physical, nevertheless provides the playground of an infinite number of beings of all grades of evolution.

When writing about a subject such as this, one is reminded of the story told of Gautama the Buddha. His disciples were seated before him waiting for him to speak, but for a long time he remained silent. Finally, without a word, he pointed to a lotus blossom. One only of his pupils understood . . .

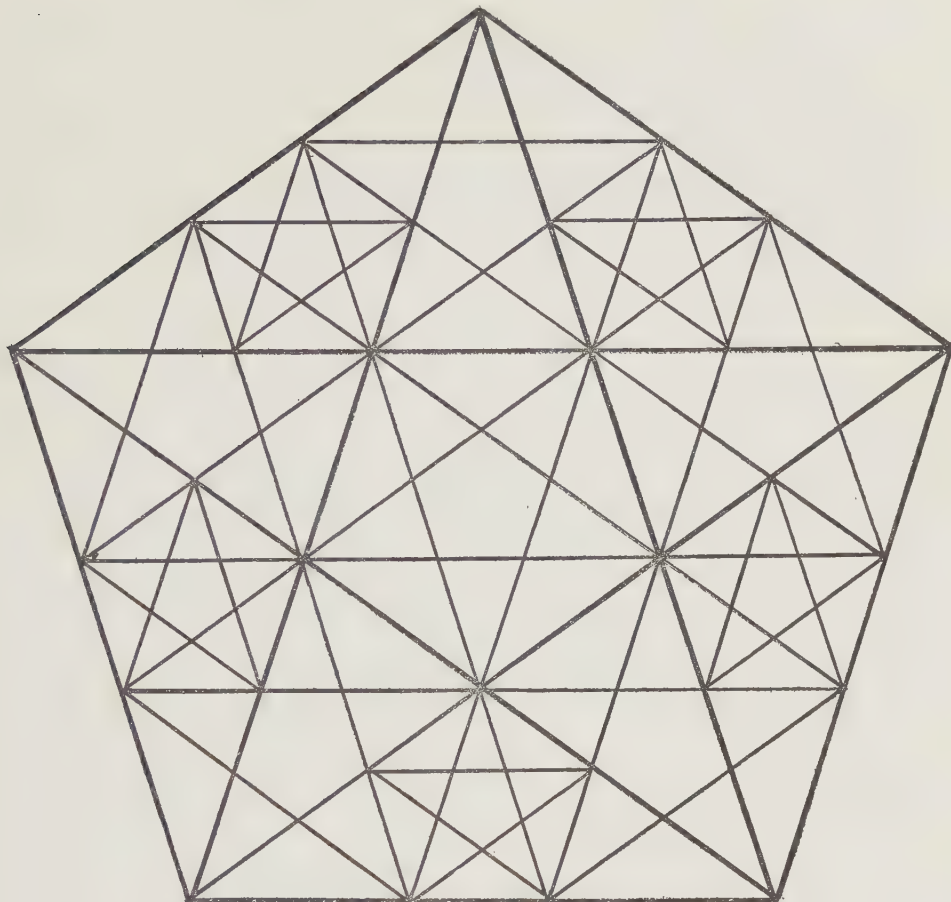


Fig. 9 — The Hierarchy is Complete.

The point of the story is, of course, that the teaching was so deep that even the Buddha found it impossible to express it in words. Only the silence could convey it. There was only one pupil who had the inner ear receptive to the message. In like manner, one could spend hours giving his own views as to the meaning of a symbol and he would convey but little of the real meaning to other students. How can I, for instance, express in words what these things have meant to me? Only by suggesting that any student who is interested take these diagrams and look at them with the teachings about the Silent Watcher in mind, thus finding the atmosphere of esoteric thought for himself.

That aspect of the teaching about the Mystery Schools which holds the greatest message for mankind is that, once established, their work goes on, sometimes openly (or relatively so) as in the cases of the Schools of Eleusis, Mithras, Samothrace, the School of Pythagoras, and others. There are other times when outwardly there seem to be no such Schools flourishing; but we have been assured by H.P.B. and her Teachers that these Schools are in existence today. This is proven by the work of the Messengers who appear from time to time. Where else could they have had their training?

The heart of the Theosophical Movement is such a Mystery School, but how many of us have come close to that heart? How can we find it? The answer goes back to what was postulated earlier in this chapter. Each and every one of us has within himself his own link with the Hierarchy of Compassion. Once that link is found, all such questions are resolved. The time can come for any student when he becomes aware that knowledge is to be had from within. When that inner source of knowledge becomes so real to him that he knows that the teachings he is receiving are genuine, then he is approaching a knowledge of the Mystery Schools, because, in fact, he already belongs.

Chapter XI

THE DESCENT OF THE MĀNASAPUTRAS

The great event which was described in the previous chapter, the invocation of the Wondrous Being, bringing about the founding of the Mystery Schools through a feat of white magic, was accomplished by the Elect of Mankind. It was the forerunner of another mighty episode which took place at about the same time in human history. Just as the Mystery Schools have persisted to this very day and will continue their work as long as Man needs them, so the event about to be described is not to be thought of as having happened some eighteen millions of years ago, then becoming lost in the mists of antiquity. The work that was started in those early times of human development during this Round was only the beginning; it is a process which has maintained up to the present time.

To many students the phrase "The Descent of the Mānasaputras" has a familiar sound, and they find endless inspiration in the thought of the work of the bringers of light to the once mindless human race.

Analogy is said to have great value in explaining these deep aspects of the teachings, and fortunately we have an analogy upon which we have called several times before because it is so serviceable. It is that of the schools. This is because teaching is the most natural thing in the universe. Many creatures of the wild teach their young how to forage for themselves or how to protect themselves; and in the human race teaching is carried to a fine art, for the reason that we have mind developed, and with this development goes the faculty of passing on the knowledge that we have acquired. The deepest aspects of teaching, wherein esoteric knowledge is transferred from teacher to pupil, is very appropriately called "passing on the light." Phrased in this manner, it more exactly expresses the process whereby mind was awakened in early humanity.

As outlined in the teachings, certain hosts of higher beings — Sons of Mind or *Mānasa-putras* they were called — filled with compassion for younger entities, those who were striving to be humanized (for the members of the third Root-Race could hardly have been called humans as yet) "descended" from their lofty spheres and 'infused' themselves into the minds and consciousness of the members of this third Root-Race. And thus came to the human race the gift of Mind. The Greek legend that tells how Prometheus stole fire from the Gods is in truth a story from the Mysteries, for it relates in story form this wonderful event of long ago.

And it is worth considering that through the process of rebirth these same human beings of those far distant times of the past now make up our own fifth Root-Race. It is we ourselves who were awakened by these Mânasaputras. We still have the light of their consciousness burning within our hearts and minds.

Just who were these lofty entities? Where did they come from? Are they still with us, or have they returned to their own higher spheres?

In order to answer these questions we must go farther back in time than we have yet gone, not only to previous Rounds, but to a period long before this world came into being at all.

We have been leading gradually into an explanation of the doctrine of the Globe Chains, not for the sake of the seasoned student by whom this doctrine is already well understood, but so that the newcomer will not be unduly confused.

The Ancient Wisdom postulates that this physical Earth is but the visible representative of a highly complex organism of a type which we have learned to call a Planetary Chain. If the entire planet should become visible to us we would see not one globe, but many globes. We cannot contact these with our senses, however, any more than we can contact with our senses those subtle radiations which we have learned to use and which are known as radio and television waves. Their existence, it is true, can be proven by the use of the right instruments; and in similar manner the existence of these inner worlds is provable by those who have developed the faculties required. To them these things are perfectly natural. As students we must study and endeavor to understand the rationale of the teachings about these invisible globes; in this way their existence becomes more and more a reality to us.

Because it is important at this time to cover but one aspect of this teaching, the final details as to the number of these globes and their presentation in diagrammatical form will be left to a future time. It will be sufficient now to explain that the major cycle before referred to as a Round actually is the passage of the many groups of entities throughout all of these globes; and in our first approach to the teachings, we generally consider these to be seven in number. Furthermore, we say that during the life-time of any planetary chain, there are seven such passages through all seven of the globes, and we call these the seven Rounds of the Chain. Each passage through any one of the Globes at any time is marked by its own cycles, which we have learned to call the Root-Races. These may be subdivided into the sub-races, national groups, and so on. Insofar as this Earth Chain is concerned, we are now on the fourth time around; and on this particular Globe of the Chain we are in the fifth Root-Race at present. We have been discussing certain great events which occurred many millions of years ago when we were members of the third Root-Race. Now we are to go much further back in time.

There is a universal law of periodicity, and this manifests itself in human life as reincarnation — a vast study in itself and one which is intimately tied in with the doctrine of the Globe Chains. We mention it here because this same universal law applies to the life of a Planetary Chain as well as to a human individual. Of course we do not say that a Planetary Chain reincarnates, because it does not build for itself a body of flesh, but it does embody itself in a *planetary* body, and in its case we say that it reimbodies, as we would say of a star, a galaxy, or even an atom.

So, since the Earth Chain has embodied itself many times, it must have been a planetary chain before this, and it must be one again; and no doubt it will repeat this process of reïmbodiment often in the future.

In the case of the human being there is usually no outward evidence at all of the existence of his own former body. We can, however, imagine such a case, and highly improbable as it no doubt would be, it will serve a useful purpose here. Let us suppose that an Egyptian who had lived many centuries ago had been mummified after his death. This mummy has been exhumed and now rests in a museum and is open to public view. Let us now suppose that among the many visitors to the museum there is the man who is the reincarnation of this former Egyptian. Whether he knows it or not, when he stands before this mummy he will be in the presence of a relic of his own former imbodiment. In the particular instance that we are imagining, this mummy would have no effect on the man who lives today, but the illustration is useful at this present time; and it might be said parenthetically that many people do carry with them certain psychological remnants of their own former imbodiments, and these can be very troublesome. A man who is plagued by a very strong remnant of his own former existence is sometimes said to have a "Dweller on the Threshold," using a phrase from Bulwer-Lytton's *Zanoni*.

According to the teachings of the Ancient Wisdom, the Moon is just such a remnant of the Earth's former imbodiment as a Globe Chain. More accurately stated, it is the remains of a Moon or Lunar Chain. Many of the planets have such remnants of their own former imbodiments, and in those cases where a planet has many moons, only one of these will be its true moon in the sense that we are using the term. The others are "captures"—which again is another story.

So we are now going to go back in thought to a time when the Lunar Chain was in its heyday, long before the Earth Chain was in existence although, indeed, the karmic threads were already being spun which would eventually be woven into the tapestry of the Earth Chain to be. In like manner are we as individuals and as a race spinning the threads and weaving the tapestries of our own future lives.

But to return to the Lunar Chain. We can imagine quite rightly that the various kingdoms of nature flourished upon it, just as they do here on this Earth, and we shall now consider the case of a human being of that time long ago. What was he?

In general he was little different from what we humans are today. He had his physical body, his astral, his vital principles, his desires, his spiritual aspirations, and his Divine Self. But what happened to him in the interim? There lies the crux of our story.

Let us speak more specifically of his makeup, just as we do today when we speak of the human constitution. In the simplest terms consistent with accuracy we may outline his human constitution thus:

Âtman—his Inner God

Buddhi—the Mânasaputra within him; his inner teacher or guide

Manas—the Man himself in his higher parts

Kâma—his Animal Monad

Prâṇa, Liṅga-śarîra and Sthûla-śarîra—his Vital-Astral-Physical Monad

All of these parts of his constitution are presented in such a manner as will best emphasize the fact that they are *living entities*. That is the only way in which they

can be regarded; and when they are so studied, we may build a truer picture of the events which transpired to make man what he is today.

We are going to consider that this type of human of the Lunar Chain has successfully run the course of evolution, and that at the conclusion of the seventh Round of the Moon Chain each of his monads was ready to graduate into the evolutionary state of the one next higher than it. Thus we are going to consider that the Animal Monad is now ready to bring forth those hidden qualities and attributes which will identify it as being a Human Monad. Similarly, the higher Human Monad of this Lunar inhabitant is now ready to identify itself as a Mânasaputric Monad. His one-time Buddhic or Mânasaputric Monad is now ready to manifest its Divinity, so that as a Monad of a still higher type it passes utterly beyond our ken.

What happens then is this: At the end of the life of the Lunar Chain, each one of these monads goes into its own Nirvânic rest. The word Nirvâṇa has been much misunderstood. It has been translated by most scholars as meaning "blown out of existence." The word does indeed consist of the preposition *nir* — out, and *vâṇa* — blown. But in the real sense of the word, this does not refer to the entity itself; it refers only to the lowest principles of the entity. For the being itself, Nirvâṇa is a state of utter blissful consciousness, a state of being in which the entity is one with the Heart of the Universe. Actually there are many grades of Nirvâṇa. Each entity will go into that type which is the expression of the highest state of consciousness to which it can attain. Also we must understand that the Nirvâṇa is finite in duration; the length of the stay in the Nirvâṇa will depend upon the evolutionary standing of the entity that is enjoying this condition. Thus, the lower or less evolved entities cannot have as lofty nor as long a Nirvânic rest as can the more evolved entities; and on this fact hinges the teaching that is now being explained.

These various monads which formed the constitution of the Lunar human being must, upon returning from their own individual Nirvânic states, recombine to form the earth human being on the new chain of Globes. The constituents of that human constitution are known as the Pitṛis of various kinds. The word *pitṛi* means "father" or "progenitor." Thus the thought is conveyed that the Lunar man was the progenitor of the human being here on Earth.

We come now to a new understanding of the reason that man's constitution has been divided into a higher triad and a lower quaternary. Because of the difference in the consciousness of these two general groupings of monads in man, the monads comprising the higher triad are known as the Solar Pitṛis, and those comprising the lower quaternary are known as the Lunar Pitṛis or the Barhishads. The word is curious. It is from the root *barhis* — "sacred grass" or "fire" (as parts of a household), and *sad* — "to sit." The inference here is that those who attended to the household duties, sitting on the mats of "sacred grass" and tending the "fire" were the builders or caretakers of the more material aspects of the home. In this case, the evolved *Animal Soul* of the Lunar Human, referred to here as the Barhishad, is the "builder" of the *Human Soul* of the man of Earth. Collectively, this means that the early human race was a race of Barhishads, the evolved animal souls of the Lunar humanity. This is the reason that the early races were 'mindless'; they were the Lunar Pitṛis who had emerged from their Nirvâṇa more rapidly than had the Solar Pitṛis.

The question might very properly be raised at this point to the effect that we are now considering the fourth Round of the Earth Chain. Had not all of the entities that flourished on the Moon Chain had enough time to emerge from their Nirvânic rests? Was there no mind awakened during the previous Rounds? It is better to anticipate this question because we can clarify the picture now. It is true that all the entities, the Solar Pitris as well as the Lunar Pitris, had emerged from their interplanetary Nirvânas long before this fourth Round. But there is a minor or at least a shorter Nirvânic rest for all of these entities between Rounds (and even between sojourns on the various Globes). The same principle holds; in general the process is similar in all the Rounds of the Earth Chain and will, one may suppose, be repeated in the fifth and sixth Rounds, although it may well be that the whole process will have been greatly accelerated by that time.

So let us leave these Barhishads for the time being to work out their lives during the first, second and early part of the third Root-Races on this Globe during this fourth Round, and let us turn our attention now to the Solar Pitris.

The higher human being is a Solar entity, a Dhyâni-Chohan in the making, pursuing a long evolutionary journey leading it from unselfconsciousness to the condition of a fully self-conscious God. There are two words which describe his condition, at the beginning and at the end of this evolutionary journey. At the beginning he is known as a *Kumâra*, a word which means "mortal with difficulty," from the compound *ku* — difficulty, and *mâra* — mortal. The meaning is also conveyed in the word "youths" who have to struggle with difficulty through the long evolutionary adventure. We are all *Kumâras* in our higher human or mânasic parts, because as humans we have but very imperfectly manifested the higher human qualities which will some day make us truly human in the fullest sense of the word. A completely human being is on the threshold of Divinity.

The word that is used for the condition of a fully evolved higher human monad is *Agnishvâtta*, from *agni* — fire, and *svatta* — the past participle of the verb *svad* — to taste. Hence, one who has tasted the fire of the spirit, or one who has achieved through evolution the fire of spiritual consciousness. As such, he is a Dhyâni-Chohan in the fullest sense. The words mean literally "Lord of Meditation."

If this Lunar man whom we are considering has successfully run the race, his higher human monad, which started out as a *Kumâra*, will have become an *Agnishvâtta Pitri*; and when this is ready to incarnate in the human being of the third Root-Race on this Earth, it does so as a *Mânasaputra*, or "Son of Mind."

Thus we find that, having successfully passed through the seven Rounds of the Moon Chain, the higher human entities are not through with incarnation, but from now on this incarnation takes the form of a great act of compassion for the entities trailing along behind them. These entities, the new human beings, were once Animal Monads on the Moon Chain. Thus it is that we humans have the *Mânasaputric Inner Teachers*. It is they who had 'tasted fire' and through evolution had brought themselves to the state of consciousness wherein they could consciously illumine the light of mind in the hitherto infant races of mankind on this Earth.

Remember that this process was carried on in each of the Rounds of this Earth Chain. We should also remember that this had previously happened on the Moon Chain, for it is part of the workings of Nature. We tend to think that Nature is red in tooth

and claw when we observe so much killing and destruction on this Earth. We may take heart, however, when we realize that although this is a characteristic of life on this Earth, which might be an exception rather than the rule, the stronger forces at work in the universe are those of compassion. Because of the very workings of the compassionate hearts of those who have gone before us on the journey, we are here as we are now, with the hope and encouragement that is ours to sustain us on the journey before us.

There is one point that is important; and while it does introduce another aspect of teaching, it must be brought out because it has a direct bearing on the events which were described in the preceding chapter.

We have been speaking of this Lunar man, portraying him as the highest type possible; but unfortunately not all of them could run the race as successfully as he. There were indeed many who did, and in providing the Pitris for the humans of this Earth Chain, they produced the highest types of humans that we have — the Mahât-mans and beyond these, the Buddhas. It is such as these who became the Sishtas that were spoken of before, who, as a brotherhood of Adepts, produced or rather invoked by an act of white magic the Wondrous Being, the Hierarch of the Hierarchy of Compassion as it applies to this Earth.

Just because there were various grades of humans on the Moon Chain, as indeed there are here, we may divide them most conveniently into three categories: the most advanced, the intermediate, and the least advanced. It follows, then, that at the end of the Lunar cycles of Rounds there were at least three classes of Agnishvâta Pitris, which were to become three classes of Mânasaputras. The highest of these came first and infilled the minds of the Elect of Mankind, its Elder Brothers, so that they could and did perform that great act of Compassion before described. Then came the descent of the second class of Mânasaputras, far more numerous. In fact it might be said that the majority of mankind were illumined by this second class; they are we, the average people, spiritually awakened to a degree, but not so fully as the Elder Brothers. Then finally there were the laggards, that third class who came much later; and because they represented the least evolved of the humans on the Lunar Chain, they could not furnish the Pitris for the development of a very high type of human on this Earth. These are the genuine savages, the Andaman Islanders, for example. The Animal Monads or Barhishads of those humans on the Moon Chain were barely able to make it into the human kingdom, and they but feebly express the light of mind.

Now, there is nothing fixed and rigid about this classification; and if this teaching were not rightly understood, it could fill the heart and mind of the student with a sense of futility in thinking of the possibility of progress for the human race. One might think, for instance: "I am only an average person. I have heard of the Great Ones, but what chance have I? I have all the cards stacked against me because of the class in which I find myself. I do not belong where they are." Such a viewpoint would be entirely forgetful of the meaning of the work of the Hierarchy of Compassion.

It was stated that the two events: the coming of the Wondrous Being, which brought about the establishing of the Mystery Schools, and the Descent of the Mânasaputras, were concomitant and were closely related. And this important fact becomes self evident. Because of the existence of the Hierarchy of Compassion, it is possible for anyone at all, if he desires to progress, not only to do so by his own

self-devised efforts, but aided by those who are older in experience. They cannot walk for him, to be sure, but they can and do aid him wherever possible. There is no aid that one can think of that is more meaningful than these very teachings which have come from them. They are given to us in the hope that they will stimulate our hearts and minds to greater effort. And we are taught that, great as are the teachings that we have at the present time, they are only the beginning. There is more to be had for the taking; and the meaning of the admonition "Ask and ye shall receive" becomes more and more forceful as we proceed.

There is no law in the Universe which obliges us to remain where we are. The law of life is progress upward, and we but follow the well-worn Path when we direct our footsteps upwards on the Hill of Enlightenment.

Chapter XII

WHEN GODS MINGLE WITH MEN

The two great events which were recorded in the two previous chapters were portrayed as being the working of a universal Hierarchy of Compassion, and it was emphasized that these were events with a continuing value for the human race. We are now prepared to study the manner in which this work is carried on today. These teachings will remain fresh in our minds as we realize more and more that they are as applicable today as they were some eighteen millions of years ago.

We have to understand that the "Descent of the Mânasaputras" was even more than an act of compassion. It was an event that was a part of human destiny. It had to be; not only would the human constitution have remained incomplete had this not happened, but it is likewise true that the destiny of the Mânasaputras would not have been fulfilled had they not sought incarnation in the minds of the human beings of that time in the far distant past.

So we might say that just as a man is incarnated within his physical body, his desires and emotions, as well as his astral, which we more conveniently call his vital-astral-physical monad, so the Mânasaputra is "imbodied" within the mind of the human being, and for the same general purpose. This purpose is twofold. It not only raises the mind of the human being to heights to which it could not otherwise attain, but it furthers the evolution of the Mânasaputra itself. It is the means whereby it attains still greater evolutionary stature. Growth is maintained throughout all parts of the human constitution. Thus it is likewise true that the man is embodied in his vital-astral-physical monad, which we may term the animal monad, for the twofold reason that by means of this embodiment he furthers his own evolution and at the same time raises the animal monad within himself, so that in time it too may manifest the now latent faculties and powers which will some day identify it as a human monad. Thus, even the repeated incarnations of a human being throughout the cycles of rebirth constitute an act of compassion from the standpoint of the animal monad. The enormous difference, however, lies in the fact that the Mânasaputras had long ago passed through the human stage as Kumâras, emerging at the end of the long cycles of the Lunar-Chain as Agnishvâttas. Their very nature is spiritual illumination, whereas we humans are struggling along in relative darkness, groping our way as it were; and we depend more than we know on the flame of spiritual consciousness that is burning within ourselves, the light of the Mânasaputras.

As a man awakens to this hidden glory, a change comes over him. The meaning of these teachings comes gradually to be a power in his life. He can never be the

same man that he was before this realization came to him. Eventually it is borne in upon his mind that he too will some day be a Mânasaputra serving to light the mind of a being who has not as yet attained to humanhood, but which is now within his own nature as his Animal Monad. He then plays two roles: As he seeks out his own inner guide and places himself in an attitude of reverence before it, as a Disciple before his Teacher, he also strives to elevate his own "lower nature" or Animal Monad. And this becomes increasingly important to him, for he now knows himself to be a Temple of the God within.

Thus, in his own life he is enacting a drama that is far reaching in its implications. He discovers that in his own small way he is setting the stage for a great event that will one day become a reality to him because it has happened to others who have gone farther on the road of spiritual attainment than he has. He discovers that it is possible for him to raise the level of his consciousness out of the animal part of himself into the truly human part. He knows that to a degree he can raise his consciousness still higher into the spiritual-divine part of himself, at least for brief periods of time.

As he learns about the world's great Teachers, he discovers the importance of this principle of the raising of his consciousness through the various levels of his being; and he strives to make it a habit to turn his consciousness upwards whenever he has the opportunity of doing so. At the same time he strives to develop a well-balanced nature so that he puts his full attention on what he is doing and gives to every task his best efforts. The instinct to do this comes from the better parts of himself, and it is always a reliable guide for him in making his self-appraisals.

Through study he learns that each Round is characterized in general by a type of consciousness, on the part of the human beings, that is directly related to monads within himself: his Animal Monad, his genuinely Human Monad, his Spiritual Monad and his Divine Monad. He learns that the type of consciousness that is characteristic of this fourth Round is what is technically called the Kâma-Mânasic, or the mind dominated by desire. He learns also that the type of consciousness which will characterize the next Round will be the higher Mânasic and, again, that the consciousness for the sixth Round will be the Buddhic. It comes to him then, that the Elder Brothers of the Race, those whom we call the Mahâtmans, are such because they have already attained to the Mânasic Consciousness. Their consciousness is similar to what human consciousness will be during the greater part of the fifth Round. Then he learns that the greatest of them all, the Buddhas, are such because the Buddhic principle is the dominant consciousness of their lives. In other words, they have the consciousness which will characterize the human race of the sixth Round.

There are several classifications of us human beings. These may be set out in tabular form for the purposes of our study:

Buddhas	Good men
Mahâtmans	Indifferent men
Chelas	Evil men
	Lost Souls

As we have found before, this tends to separate itself into a higher triad and a lower quaternary. Briefly, these latter, for the most part experience the fourth Round consciousness because they are Fourth Rounders, as we call the members of the

human race. They are in the vast majority. Those who are classified as the Evil men and the Lost Souls are they who are actually "swimming against the current." They are going backward rather than forward in evolutionary growth. This of course is contrary to nature, and their suffering as a consequence will be great indeed.

However, our attention is to be directed to the Higher Triad of this classification, which includes the Chelas, the Mahâtman and the Buddhas. The Chelas are those who are striving to experience the higher human consciousness. They are making a definite effort to achieve that consciousness which will be the lot of the human beings of the next Round. This objective may not necessarily be the motivating power in their lives, important as it is. For them the dominant motive is service to humanity under the guidance of their Teachers. They have dedicated themselves to the task of aiding in the spiritual awakening of the human race. They seek consciously to ally themselves with the Hierarchy of Compassion. As they are able to do this more and more, they awaken the higher Mânasic portion of their beings, and they learn to focus their consciousness on that level. They become the thing for which they yearn. Gradually they pass over the bridge that separates them from their former selves, and they attain Adeptship. We have been told that this is the most difficult feat that it is possible for any human being to achieve.

The awakened Adept lives in his Mânasic Monad, illumined by his Buddhic Principle or Mânasaputra. He has learned through initiation that not only does he have the radiance of the Mânasaputra within him as described earlier, but that he also has another Mânasaputra, which is *himself on the way to that state of consciousness wherein he becomes a full-blown God.*

In the course of time, when this latent Mânasaputra has become manifest, then and then only has he become a Buddha. Such are very rare indeed. And then a great mystery has unfolded for him. Not only has he the indwelling and illuminating presence of the Mânasaputra, and the Âtman, his inner God, but within what was his former higher Manas, the latent Mânasaputra has now become manifest, with its own Buddhic glory taking over his life.

The Nirvâna was referred to in the preceding chapter, and it was explained that there are many grades of Nirvâna, each such grade being experienced by the type of entity that is evolutionally ready for it. Now the great mystery in the life of a Buddha is that when Buddhahood has been achieved, then the highest parts of his constitution are ready to go into their own lofty Nirvâna. In the case of Gautama the Buddha, he reached Buddhahood at some time during his manhood. (It may not be possible to indicate during which year.) Then at the age of eighty years, his highest parts, his Âtman and Buddhi, withdrew into their own Nirvânic rest. But Gautama did not die. That portion which was left, consisting of his own spiritually awakened human self, with its own Mânasaputra now developed, remained behind for another twenty years and carried on his work of teaching. In this state he was what is known as a Bodhisattva.

One of the many paradoxes which crop up in the teaching is apparent here. We have represented the Buddha as being one individual having manifested his own inner God, and also two entities, the higher one having gone into its Nirvânic rest and the enlightened human part having remained behind as a Bodhisattva. Both ideas are correct. A paradox does not consist of two conflicting statements. It is more like

the case of the two sides of a coin, which appear to be opposite; and yet there was never a coin minted with one side only! The stage was set for this concept in describing the constitution of the hypothetical Lunar Man and the manner in which his several parts or monads went into their individual Nirvânic rests to be reassembled as it were when the time had come to fashion the complete human being on Earth.

The case is not quite comparable to that of the Buddha, of course, but the concept of the highly complex nature of a human being can now be grasped more readily. He is at once one and many. And with the evolutionary growth that takes place resulting in the constitution of a Buddha, the component parts become more individualized as each has its important part to play.

So in a certain sense, the Inner God of the Buddha has established the relation of Teacher and Pupil between itself and the Bodhisattva part. This Inner God has overshadowed the Bodhisattva — to use a term that is generally accepted, though not necessarily the best. Over-illuminated would better describe this exalted relationship. So during many years of the life of Gautama, this Inner God was manifest through him; and then it retired into Nirvâna, leaving the Bodhisattva to continue the work.

Finally at the age of 100 years, the Bodhisattva cast aside his worn-out physical and astral bodies and entered into a state of life known as the *Nirmânakâya*. The word requires some explanation. The teaching concerns the 'Tri-kâya' or the three Glorious Vestures. The derivation is *tri* — three, and *kâya* — body or vesture. These are the bodies in which dwell spiritual entities of a very lofty type. Obviously physical bodies are not meant. An understanding of these three vestures will make it possible to present even more clearly what happened in the case of Gautama the Buddha.

First, and from one standpoint the highest of these vestures, is the *Dharmakâya*, from *dharma* — law, and *kâya* — body. A Nirvâni, a lofty spiritual entity which has entered fully into the Nirvâna, is said to have donned the Dharmakâya robe or vesture. In this vesture he remains for aeons in a state of pure cosmic consciousness, ineffable bliss; all else is without meaning.

The second vesture, the *Sambhogakâya* (*sambhoga* — delightful participation, and *kâya* — body) is a somewhat less complete Nirvânic state. It is that condition in which a God or a Buddha may enjoy the fruits of the Nirvânic bliss without losing his identity. He has no further earthly concerns for the duration of the Nirvâna, but he has not lost touch completely with himself as has the one who has entered into the Dharmakâya state.

The third robe or vesture is the *Nirmânakâya*, the farthest removed from Nirvâna, but from one standpoint the loftiest of the robes, for the reason that it is donned by the Buddha of Compassion who refuses to enter the Nirvâna, who remains behind in order to sacrifice himself for the sake of the human race, which would be truly lost were it not for the great compassion of these loftiest of the Buddhas.

So in more definite terms, this is what happened in the case of Gautama the Buddha: when he had reached the age of eighty, as said before, the Inner God entered into the Nirvâna. It donned the Dharmakâya Robe. Its karmic time had come to do so. The Spiritual Ego donned the Sambhogakâya Robe and entered into a relatively complete Nirvâna; and the portion which was left became a Bodhisattva. As such, he

taught for another twenty years, and when he cast off his body, he assumed the Nirmâṇakâya Robe, as stated. This was a sacrifice in that he was actually ready for the Nirvâṇa, having now attained to the state of Buddhahood in his own right. Instead of entering the Nirvâṇa, however, he elected to remain *in* the world, though in a sense not *of* it. On casting off his physical and astral bodies, he remained fully complete in all other respects and became one of the Guardians of the human race. He is the Chief of the Brotherhood of the Adepts, and is their Teacher, known probably to only the highest of them, though his influence is felt by all.

From time to time he performs a great wonder; this was done quite soon after his passing as Gautama the Bodhisattva. He caused the appearance of the Avatâra Śaṃkarâchârya. In describing this we shall gain an understanding of the nature of an Avatâra and will come to understand likewise that the Nirmâṇakâya has taken upon himself the task of causing the appearance of Avatâras from time to time — one of the most recent being the instance of Jesus the Christ.

When the time came for the appearance of Śaṃkarâchârya, a human body was in the process of being built in the usual manner. The human entity that would have inhabited that body was temporarily set aside; for the body was to be used for a special and holy purpose. No harm was done to this incarnating entity, however. His devachanic rest lasted a few years longer perhaps; and, as a matter of fact, he was greatly benefited by the use that was made of the body that in the normal course of events would have been used by him.

The Nirmâṇakâya entered a portion of himself into this body which was in the process of building. This was not a complete incarnation as it is in the usual case; only a portion of the vital essence quickened and informed this boy's body. And so the child was born and grew to manhood. At the appropriate time of his life, an initiation took place in which the body lay entranced, while the Nirmâṇakâya entered into the inner realms of the Solar System and made contact with a Divinity that was karmically ready to enter the arena of human life for the furtherance of the work of compassion. When this contact had been established, the Nirmâṇakâya was infilled with the radiance of the Divine Consciousness of the God that entered into this karmic work, the body awakened, and the initiate rose as an illumined one, an Avatâra.

This has been called a feat of White Magic for the reason that this particular combination of this body, this Nirmâṇakâya and this particular God had never before been accomplished and would never again be brought together in this same manner. It was accomplished for a particular purpose, and was one instance in a long series of such appearances. The story of Jesus the Avatâra is interwoven with many hints of these esoteric concepts. This is the sense in which he may have been called the only Son of God. His appearance was the only one of its kind; it would never be repeated in exactly the same manner.

We must now carry our study out of the human arena into that of the cosmos itself, for what happens among us humans is only the counterpart of cosmic processes. Thus, just as there are human or Mânushya-Buddhas, so there are Cosmic or Dhyâni-Buddhas. And just as there are human Bodhisattvas, so there are Cosmic or Dhyâni-Bodhisattvas. And by inference we might conclude that the process of producing an

Avatâra by a feat of white magic, in the manner just explained, is but the human counterpart of mighty cosmic processes.

There is, indeed, a Golden Chain extending upwards from pupil to Teacher, then to higher Teachers, and so on to the very heart of the Universe itself. This is the sacred Guruparamparâ which extends from human Bodhisattva to human Buddha, to Celestial or Dhyâni-Bodhisattva, to Dhyâni-Buddha, and beyond. Thus, we can only imagine the state of consciousness of Gautama, who was illumined not only by the Buddha within himself; but through that Buddha, he was illumined by the Celestial Buddha, through the Celestial or Dhyâni-Bodhisattva. And the supreme wonder is that the Dhyâni-Buddha is that Wondrous Being, described by H. P. Blavatsky in the passage quoted in a previous chapter. Actually, every initiate, when he is ready for the initiation, is put in touch with that Wondrous Being through the intermediary of the Nirmânakâyas themselves. The very contemplation of these themes brings us nearer to that which knows no equal, the Divine Consciousness at the heart of every one of us, and which itself is the inner link with the Silent Watcher of Humanity.

SECTION THREE

Chapter XIII

PRINCIPLES AND ELEMENTS

The Universe is so complex that one feels a sense of bewilderment when he essays to expand the teachings about the fundamental constituents of the many planes of being. The best that one can do is to outline the teachings in the broadest possible manner and hope that the time will come when further details may be filled in. We cannot hope to do otherwise.

When we echo the words, "All things are composite," just what do we mean? In the simplest terms, do we not refer to the fact that everything is compounded of a certain number of elements, and that all compounds can be reduced to their most elemental substances? Science itself teaches that all known chemical compounds may be so reduced to their simple chemical elements which combine to make the substances what they are. However, this concept goes far beyond a consideration of material things alone. When we study either the Universe or Man, we are dealing with non-material factors which, to be sure, seek material expression; but that physical expression is but one factor among many of equal if not greater importance. Clearly we must come to realize that there are very potent elemental substances of which either a universe or an individual human being is composed, and it is with these that this chapter will deal.

In some ways it is more advantageous to go from the general to the particular, that is, from the Macrocosm to the Microcosm. However, since the teaching about the seven principles of man is quite well known to theosophical students, it would be better to approach the study from the human, and then go on to the universal.

We shall first of all enumerate these Seven Principles, with their Sanskrit as well as their English names:

- Âtman.....*The SELF*, the light of the Divine shining in all men.
Buddhi.....*Spiritual Intelligence*. When manifested, this is the Inner Teacher.
Manas.....*Mind*. When illumined by Buddhi, this is the Higher Self. A perfected human being would have the Manas fully developed, and it would enshrine the full light of Âtma-Buddhi.
Kâma.....*Desire*. Manas enslaved by Kâma is the Lower Self. In the perfected human being, Kâma is controlled by Buddhi-Manas.
Prâna.....*Vitality*. The Life-principle. This cannot be considered to be isolated from any of the other principles. All have their own vitality, but when enumerated as one of the seven principles, Prâna is more properly considered in its relationship to the remaining two, the Astral and the Physical.
Linga-Śarîra.....*The Astral Body*. The pattern around and on which is built the physical body.
Sthûla-Śarîra.....*The Physical Body*. The body of flesh, and the outermost expression of the human being.

This classification of the seven principles of man is generally considered as a higher triad consisting of Âtman, Buddhi and Manas, and a lower quaternary, consisting of Kâma, Prâna, Lînga-Śarîra and Sîhûla-Śarîra. This division is used largely in order to clarify the teachings concerning the process of Death, which may be briefly summarized thus: starting with the lowest on our list, the various principles are cast off one by one until the entire Lower Quaternary has been cast off. During this process the entity experiences the Kâma-loka or separation of the ties that bind him to the Earth. When this separation is completed, the Higher Manas is then indrawn and withdrawn into Buddhi, in which condition the incarnate human being enjoys possibly many thousands of years in a state of blissful dreaming known as the Devachan.* If the life just lived has been rich in spiritual aspiration and in practical work in the cause of relieving the human race from its enormous burden of suffering, there is much material of which the devachanic bliss may be fashioned. However, if the motif of the life just lived has been one of selfishness, and if the unfortunate human being has been governed by greed, lust and cruelty, there is nothing that would hold him in the devachanic state, and after a painful period in the Kâma-loka (a Sanskrit word meaning 'desire-world') he returns to Earth in the hope that a new life will give him an opportunity to ally himself with his spiritual self and thus enable him to claim his spiritual birthright, which is the higher consciousness.

A few more words might be written about the 'lower' principles to this effect: so closely related are the Astral and the Physical Bodies that they might almost be considered to be one principle; or, as H. P. Blavatsky pointed out, the physical body is really no principle at all. As G. de Purucker explained it, the physical is really the dregs or lees of the astral. It does provide the organs through which our senses have their expression, but our senses are not physical — they are astral.

Now, just as the physical body is composed of atoms which are recognized to be the chemical atoms, about which science is making many new and startling discoveries, so, Theosophy teaches, all of the principles are composed of atoms, by far the greater number of which are not physical at all and are therefore quite invisible and out of the reach of scientific investigation. These are technically called Life-atoms and they are of many kinds.

We are in a better position to understand now that in the process of death, when we say that the various principles of the Lower Quaternary are cast off one by one, we are really saying that the various kinds of life-atoms of which they are composed go their own way. They seek experiences of their own and may wander far and wide before they are called together again to unite and form the new vehicles for the entity when the time comes for him to be reborn on Earth in a new life.

We are also prepared to understand that Man mirrors in a small way the same general classification that was expressed in the terms Gods, Monads, and Atoms. Thus in Man, the Âtman is the Inner God; the true Âtmic consciousness partakes of universality itself, for Âtman is the Divine Universal Principle common to all men. The intermediate portion of Man's nature corresponds to Monads; and the 'lower' or less developed portion corresponds to Atoms. And this gives us a good opportunity to

*This Tibetan term, when transliterated from its original, may be rendered as *bde-ba-can*, the *ca* having the sound of *cha* in *chant*. The meaning of the word is "having the nature of happiness," analogous to the Sanskrit term *sukhâvatî*.

stress the idea that these three departments of Man's consciousness are not limited to three separate locations. All of them are interblended; for there is no part of Man that is in any way separated from *Âtman*, and, similarly, all of his principles embody themselves in vehicles or sheaths composed of life-atoms. To try to separate them would be something like the old question: if C-A-T is cat, what part of the cat is C?

We now come to a very important part of our study, in the course of which we must learn that the human principles are dual in nature — as are all things — and this duality is expressed in the teachings about the Soul and Ego. In theosophical terminology there is a specific meaning for the word 'soul' with which the student must become familiar. Whereas in general use the word 'soul' has a rather indefinite meaning, referring to the non-material part of us that survives physical death, in technical Theosophy the word means a vehicle for something that is still higher than it, even though it may be less material than the body. Thus, technically, we might call any one of the principles the 'soul' of the principle higher or more subtil than it.

To extend the meaning of these terms a step further; each one of the seven principles has *its own* egoic or energetic aspect and *its own* vehicular aspect, called the soul. Let us now enumerate the Seven Principles of Man, giving an expanded picture of Man's constitution.

<i>Souls</i>	<i>Egos</i>
Divine Soul, or Monadic Envelope.	<i>Âtman</i> , or Divine Ego.
Spiritual Soul, or Individual Monad. Buddhi: fruit and seed of Manas.	Jivâtman, or Spiritual Ego.
Higher Human Soul. Lower Buddhi and Higher Manas.	Bhûtâtman, or Human Ego.
Human Soul, or Man. Manas, Kâma, and Prâna.	Prâñâtman, or Personal Ego.
Beast Soul, or Vital-Astral Soul: Kâma and Prâna.	Beast Ego.
Physical Soul, or Body. Liṅga-Śarîra, Prâna and Sthûla-Śarîra.	Body.

It would be impossible to do justice to this subject in a book the chief aim of which is to show how these sublime teachings may be expressed through the media of geometrical symbols. However, a close study of the subject is recommended; and since this paradigm was taken from G. de Purucker's *Fundamentals of the Esoteric Philosophy*, p. 203, the student will be well repaid if he will give careful study to this passage. When the teachings are presented as the author has given them to us, it is once more like "approaching the window," as it was expressed in our Foreword, and contemplating the philosophy from the expanded view.

Yet another step towards realizing the objectives of this present book is now to be taken by relating the Egos in Man to the Cosmical Essences or Principles on the one hand, and the Souls in Man to the Cosmical Elements on the other, thus giving emphasis to the concept that man is the Microcosm of the Macrocosm. Thus the *Egos* of the human constitution correlate with the Cosmical Essences or Principles

known as the *Tattvas*; while the *Souls* in the human constitution correlate with the Cosmic Elements known as the *Bhûtas*.

Now just what are these Cosmic Elements? We sometimes read of the “ancients” as having worshipped the Earth, Water, Air and Fire. When rightly understood in their original meanings, these Elements were not to be taken as meaning literally the earth we tread, the water we drink, the air we breathe, nor the fire with which we cook our food. These words merely suggest the essential characteristics of the four elements just named. Possibly a better understanding may be found in relating these elements to the states of matter thus: Earth might be related to the solid state, Water to the liquid state, Air to the gaseous state and Fire to a fourth state, the recently discovered plasma state, understood by science as the condition of matter at the center of some stars, where it is subjected to extremes of heat and pressure. This plasma state has been achieved for brief periods of time in the science laboratories.

However, the Esoteric Philosophy recognizes not four but seven Cosmical Elements, and these are named as follows:

Divine
Spirit
Aether
Fire
Air
Water
Earth

These are to be considered first of all as the stuffs or materials out of which the Universe is built *on all of its planes of consciousness*. This last thought is most important. These Cosmical Elements are not the planes of consciousness themselves, but the materials, so to speak, out of which the Universe is built on all its planes — or all its fields of force, as we have also expressed it.

Now, each one of these Elements is really a duality (following the pattern that we are coming to see is universal) and, as just explained, the energetic or, if you prefer, the consciousness-aspects are the *Tattvas*, and the matter-aspects are the *Bhûtas*. They constitute the various *Prakṛitis* or “natures.”

There is much more to this teaching than at first appears. But at this point let us present another paradigm which emphasizes the inseparability of the *Tattvas* and *Bhûtas*, or the Cosmic Elements and Principles:

<i>Tattvas</i>		<i>Bhûtas</i>
1	Âdi — Original Principle THE ONE	1
2	Anupapâdaka — Parentless, Spirit	2
3	Âkâśa — Aether The Primordial spacial Substance	3
4	Fire — Tejas	4
5	Air — Vâyu	5
6	Water — Apas	6
7	Earth — Pṛithivî	7

Note that the *Tattva-aspect* is represented by the one column of numbers, and the *Bhûta-aspect* by the other — two aspects of the same thing. The paradigm also

suggests that, as already pointed out in the case of Man, each one of these Tattva-Bhûtas is the origin of the one below it; or, to put it in another way, each one is derived from all those above it. It is through a process of "outpouring" that the Universe is conceived as having come into being.

A useful way to emphasize that these Tattvas and Bhûtas are not the planes of consciousness themselves but the various stuffs or materials out of which the worlds are formed that occupy these planes, might be to bring out a lesson taken from Fig. 6 and Plate II. Figure 6 shows an Icosahedron surrounding a Dodecahedron, within which is another Icosahedron, enclosing yet another Dodecahedron, and so on *ad infinitum*. Plate II shows a complete Lesser Maze, with the Cube, interlacing Tetrahedra and Octahedron within the Icosahedron and Dodecahedron. Now, we might think of the five geometrical solids as being the Tattvas out of which each one of the Lesser Mazes is built, and that the continuing series or succession of Lesser Mazes represents the various planes of consciousness.

And now we come to a most important teaching. This is that whereas each one of these Tattvas is produced or emanated from the one higher in quality than itself, in serial order, it is likewise true that each one of the Tattva-Bhûtas produces *from within itself* uncountable hosts of elementary lives, partaking of the nature of the Tattvas that produce them. In brief, they are the entities of which the various 'kingdoms of nature' are to be formed. And since these Tattva-Bhûtas are the stuffs or materials of which the worlds on all the planes of consciousness are to be built, it follows that each one will produce elementary lives *from within itself* with characteristics of the plane on which it was first produced.

At this time we must bear in mind the distinction between entities and bodies. To be sure, all bodies of whatever kind are composed of living units which we call life-atoms, but the distinction must continually be borne in mind that they are but the vehicles of entities higher than they.

The present section deals with Monads, not the life-atoms that the Monads use in building for themselves their means of self-expression, which we call the various bodies that they inhabit. We may ask, for example, are the atoms of my body *in* the human kingdom simply because they form the outer vehicle that we recognize to be my physical body? Obviously not; for any one of them may have been almost anywhere on the earth before I took it into my system by means of the food I ate, or the air I breathed. And when any particular atom to which I now play host was a part of a plant that I once ate, was that atom in the vegetable kingdom at that time?

So we see that the various kingdoms of nature are the entities themselves that seek embodiment in such vehicles as will be most suitable to their needs. Thus do the entities utilize the Tattvas in which they live and move and have their being. They draw from them the materials that they need.

We have already seen how complex is a human being; and the story is far from told as yet. To locate him in the grand scheme, we might do well to enumerate the several kingdoms as recognized by the Ancient Wisdom. The three that we understand the best (or think we do) are the Vegetable, the Animal and the Human. Very little is really known about the Mineral Kingdom. This consists of monads as surely as do the Plant, the Animal and the Human Kingdoms. However, the materials of which the

Earth's crust is composed give us few clues as to the real nature of the Mineral Kingdom, and it is easy to fall into erroneous notions about it.

Other Kingdoms about which we need further explanations are the three Elemental Kingdoms, and the three Dhyâni-Chohanian Kingdoms. We may look forward to a fuller discussion of these later on, but a tabulation in accordance with the teachings of the Ancient Wisdom would be as follows: *

First Dhyâni-Chohanian Kingdom
 Second Dhyâni-Chohanian Kingdom
 Third Dhyâni-Chohanian Kingdom

Human Kingdom
 Animal Kingdom
 Plant Kingdom
 Mineral Kingdom

First Elemental Kingdom
 Second Elemental Kingdom
 Third Elemental Kingdom

We must relate these teachings to the study of *Man* at this time, and we introduce here a most important theme: the various levels of consciousness which are called the Monads. The seven Principles can scarcely be thought of as giving a full account of Man's nature. We are gradually coming to see that they explain only one aspect of the stream of consciousness that is the complete man.

A useful illustration may be found in the production of a book: the ideas which form the subject of the book may represent the Monads; the manner in which these ideas are organized and expressed in the form of chapters and so on may represent the coming into being of the Principles: whereas the pages, type, illustrations and the binding of the book may represent the Atoms which form the tangible vehicle of the ideas.

As we pursue our studies we shall see that there are actually many monads which in their totality comprise the human constitution. The Monad which is the focus of our consciousness at the present time is the human Monad; and it is the seven Principles of the *human* Monad that we have been referring to in this chapter. We shall learn in the next chapter that all the monads have their seven principles. The picture will resemble on a microcosmic scale the one that we are also building of the Universe itself.

*For those interested in the properties of numbers, these ten kingdoms group themselves according to their own nature as: 3 higher, 4 intermediate, and 3 lower. The number 343 is the cube of 7.

Chapter XIV

LOKAS AND TALAS

The picture has been developed up to this point: on the one hand we have the Universe composed of many planes of consciousness and, on the other hand, the materials, so to speak, of which it is built called the Tattvas and Bhûtas. The fact that these comprise the Universe on all its planes indicates that there may be several grades of each one of the Tattvas. Up to this point we have not been specific as to the nature of the planes of consciousness, and this will be the theme of this present chapter.

And then as to Man: We have learned something about his seven principles and have found that they are to the man what the Tattvas are to the Universe. It was indicated that there are many monads in Man's constitution; and these will correspond in Man to what the planes of consciousness are in the Universe.

Taking the cosmic picture first, we have been accustomed to indicate the planes of consciousness by a series of parallel lines one above another, and they are often shown thus:

Three
Unmanifested
Planes
Archetypal Plane
Intellectual Plane
Astral Plane
Physical Plane

If we have profited by what has gone before, we may at once surmise that each of these planes of consciousness is dual in nature; and we shall be correct. Let us then proceed directly to a study of them, each one a bipolarity with its energetic or consciousness side as well as its matter side. In this manner the subject is best studied under the heading of the Lokas and Talas, the former being the energy or spirit aspects, and the latter the material aspects of the planes. But there is something more. The unnumbered hosts of entities pursuing their evolutionary journeys through these planes of life follow a natural sequence: they start any one of their great cycles of development at the highest point and move downward, so to speak, through the planes of consciousness to the lowest of them, and then return upwards. These two phases of the journey are known respectively as the "Downward Arc" and the "Upward Arc." In passing through the planes on the Downward Arc, they do so through the Tala aspects, and on the return journey along the Upward Arc they do so through the

Loka aspects. Therefore, while it has been customary to name the light or consciousness side of any hierarchy first, as we did when enumerating the Tattvas and the Bhûtas, in this instance, because the descent is made through the Talas before the re-ascend through the Lokas, we shall enumerate them in that order, taking the Talas first and starting with the highest:

Atala
 Vitala
 Sutala
 Rasâtala
 Talâtala
 Mahâtala
 Pâtâla

As the entities make their descent through these Talas, they use the materials furnished by the Tattvas to build spheres of activity, or "globes," in each of these planes of consciousness. These are known as the *Globes of the Downward or Descending Arc*. In like manner they will build more globes on the same planes of consciousness as they re-ascend through the Lokas; and these are known as the *Globes of the Upward or Ascending Arc*. Thus is the complete Globe-Chain built by these hosts of entities as they journey through the Talas and Lokas, using the materials of the Bhûtas and Tattvas.

Here then are the Lokas:

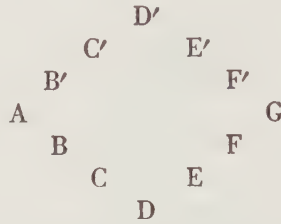
Satya-loka
 Tapar-loka
 Janar-loka
 Mahar-loka
 Svar-loka
 Bhuvan-loka
 Bhûr-loka

Having said that there is a globe formed on each of the planes of consciousness as the entities pass downward through the Talas and then upwards through the Lokas, it might be thought that therefore there are 14 globes to a planetary chain. However, the highest and the lowest of the cosmic planes have but one globe each because they are the turning points and represent the transition for the monads as they change over from the downward into the upward arc in the one case, and from the upward to the new downward arc in the other. In fact, this journey is made seven times; and on this teaching rest all the intricacies of the Rounds and Races.

Let us first present in paradigmatic form the Talas and Lokas, indicating the 12 globes of a planetary chain by circles:

	Atala	0	Satya-loka
	Vitala	0 0	Tapar-loka
	Sutala	0	Janar-loka
Rasâtala	0	0	Mahar-loka
Talâtala	0	0	Svar-loka
Mahâtala	0	0	Bhuvan-loka
Pâtâla	0		Bhûr-loka

It has been customary to letter the globes from Rasâtala downwards to Pâtâla-Bhûr-loka and then upwards again to Mahar-loka with the letters from A to G, since a study of the Globe Chain in much of our Theosophical literature is confined to the Seven Globes. For purposes of deeper study, however, all twelve Globes are included; and the diagram in its more complete form would be represented thus:



The entities that make these descents and ascents through the planes of consciousness, or more accurately through the Talas and Lokas, are the same entities that form the various kingdoms of nature, and we, of course, are among them. In considering the teachings about the Rounds and Races, we are studying these from the standpoint of the Human Race primarily, even though the other kingdoms are taken into account to be sure. However difficult it is to grasp the intricacies of the time-periods as they relate to the Human Race, how much more involved would be the study were we to try to understand the time periods for the other families of monads too!

In its simplest outline, the teaching is as follows: The process of building a Globe Chain is carried on under the aegis of beings of lofty type who themselves were once — in the unthinkable great stretches of past time — members of a kingdom corresponding to the human. They had evolved to the point where they were able (and in fact it was their karmic task to do so) to be present at the beginning of the formation of the Globe Chain. Their task was to guide the young monads as they were starting out to build the first outlines of the Globes, starting with Globe A, and onwards along the Downward Arc to Globe D, then upwards again to Globe G. The five higher Globes are not included in this explanation because they come under a different category and the teachings about them are quite abstruse.

Be that as it may, it is under the aegis of higher beings, the Dhyâni-Chohans, that the various classes of Monads — which by their own nature group themselves into the Kingdoms as enumerated in the last chapter — pursue their age-long journey through the Globes of a Planetary Chain.

There is one very important principle that has to be mastered: it postulates the relationship between the Tattvas and Bhûtas, on the one hand, and the Lokas and Talas on the other. We must reiterate that the Tattvas are the stuffs or materials out of which not only the Globes of the Chain are to be built, but that the entities forming the kingdoms of nature must also draw from these materials on their own behalf. They clothe themselves in what we shall call the Seven Principles, which they fashion for themselves out of these 'raw materials', if we may use the expression, the whole process beginning with the formation of Globe A.

Since the entities will find all of the Tattva-Bhûtas available to them wherever they may be, whatever plane of consciousness they may occupy at the moment, they will make a selection that is appropriate to their condition at the time of such selection. Thus, although all of the Tattvas are available when they start out on Globe A, nevertheless these entities are capable as yet of using hardly anything more than

the highest of these, because of their own very ethereal nature as young monads just starting out. The other Tattvas will contribute comparatively little as yet. Then when they move on to Globe B, they are in an evolutionary state which allows them to draw more fully upon the next Tattva-Bhûta; and when they reach Globe C, they can and do draw mainly upon the third Tattva-Bhûta, counting from the top, although to a degree all of the Tattva-Bhûtas do contribute something to the vehicles that are slowly being built.

On reaching Globe D (although we think of this Globe as being the lowest) the entities are taking mainly from the fourth Tattva-Bhûta. One reason our bodies appear to be so gross is that, mixed with the physical life of the body is the quality of Kâma, corresponding to the fourth Tattva.

Much later on in the course of evolution, when the Monads finally reach Globe G, the Sthûla-śarîra, though no longer gross as it is at the present time, will nevertheless be a more complete entity and will represent the Âtmic quality of the physical body; we can imagine it as having the appearance of an aura of light.

There is a paradox here; but in these studies we must learn to alter to a degree our appreciation of the terms "higher" and "lower," "ethereal" and "gross" or "spiritual" and "material." The distinctions are not always to be equated with "good and evil." It depends upon the aspect of the study that is being taken up at the time.

What has really been accomplished in this study is that we have come to a partial understanding of the "Cosmic Cross," wherein the upright is the series of the Lokas and Talas, and the horizontal is the series of the Tattva-Bhûtas. This might be set forth in diagrammatic form thus:

<i>Talas</i>	•	<i>Lokas</i>
Atala	•	Satya-loka
Vitala	•	Tapar-loka
Sutala	•	Janar-loka
(Tattva-Bhûtas):	•	
Âdi • • • Anupapâdaka • • •	•	Tejas • • • Vâyu • • • Apas • • • Pṛithivî
Âkâśa • • •	•	
Rasâtala	•	Mahar-loka
Talâtala	•	Svar-loka
Mahâtala	•	Bhuvar-loka
Pâtâla	•	Bhûr-loka
	•	

It is natural for the student to inquire at this point: "What about the Globes on the higher Lokas and Talas?" The best that we can say is that the experiences of the Monads in these higher Globes are indeed included in the process of the Rounds and Races but they are different from the events that take place in the seven manifested Globes. They can be mastered only in Initiation and in the secret processes of Death.

It might here be pointed out that sleep is an imperfect death, a rehearsal for death, if we may so phrase it. Similarly, death is an imperfect experience of the mighty processes of the Rounds and Races. Initiation is the grand and mysterious process whereby the one fortunately able to master the trial is 'reborn' with a full knowledge of the processes of consciousness in the higher globes, not only in a more or less

incomplete form as in death, but as experienced more fully by the classes of monads themselves in their pursuance of the Rounds.

This is by no means a full exposition of the teachings. It cannot be, because even if it were possible to understand them fully (and this cannot be accomplished short of initiation) one must follow the example of the teachers who are most reticent about these matters — and who are we to attempt to divulge their secrets? Therefore what we have written does not purport to be more than an outline; and we may state the teaching as far as we have developed it to this point, in these brief terms:

The seven Lokas and Talas combine to form the seven great planes of consciousness. As the Monads which form the various kingdoms of nature pass through these planes of consciousness on their evolutionary journey for the first time, they delineate 12 globes as the centers of their activities; and this constitutes the first Round. Then in subsequent cycles or rounds, they inhabit these globes which they have delineated. There are seven such Rounds and in each, the descent into the lower planes is known as the “Downward Arc,” while the re-ascent through the planes is known as the “Upward Arc.” Certain of the Globes are thus identified with the descending arc, and others with the ascending arc. During this process, the Monads draw upon the cosmic materials which are at hand at every stage of the journey. These materials of several kinds have been referred to as the Tattvas and the Bhûtas. The materials will be selected according to the needs of the Monads as they go along their journey. By the end of the journey, all the Tattva-Bhûtas will have contributed toward the building of the vehicles for these monads, and it follows that they will be used in the building of the Globes themselves.

And now we would like to quote from Dr. Judith Tyberg’s valuable book, *Sanskrit Keys to the Wisdom Religion*, wherein she gives the meaning of the names of the Lokas and the Talas. Her explanations include some significant hints as to the relationship of these to the human consciousness and indicate that they are to be studied not only as we have done in the sense that they are the Cosmical Planes of Being, but also that they represent states of consciousness within any one of *us* as well. Her explanations cover some teachings not yet taken up in this book, and they will mean more to us as we continue our study during the next few chapters.

<i>Lokas</i>	<i>Talas</i>
Satya-loka	Atala
Tapar-loka	Vitala
Janar-loka	Sutala
Mahar-loka	Rasâtala
Svar-loka	Talâtala
Bhuvan-loka	Mahâtala
Bhûr-loka	Pâtâla

“The *unconscious descent through the talas*, into matter, is the *first* and necessary process of evolution, a process which prepares the way for the *second* and more important half of the evolutionary journey, that of the *conscious ascent through the lokas*, the self-directed unfolding of the lofty inner qualities and powers. The Human Race is *now* in this *second stage* of development, because it long ago reached Globe D, the nadir of the descent. Therefore the different bodies, physical, astral, mental and spiritual, with which we have clothed ourselves in our descent, should now be kept pure in order that they may be used as sacred instruments on that self-directed spiritual journey upwards. The *first descent through the talas* is not evil, is not against nature’s laws; but a *second and conscious descent through the talas*, brought about by the

choosing of that which is low and the self-willing identification with matter and its limiting and selfish attributes, is evil, for it is against nature's laws. This latter is the Downward Path to annihilation, the path of a Lost Soul, or of a Brother of the Shadow.

So we may say that the tala-side of Nature has its two poles, its two contrasting aspects, the good — that which enables beings to build forms on their descent into existence; and the evil — that of self-identification with the base and selfish side of nature. Likewise the lokas have this dual aspect, which is demonstrated in the Path of the Buddhas of Compassion and the Path of the Pratyeka-Buddhas.

Though these lokas and talas may be depicted as states of consciousness or conditions of beings they are also actual localities in which different classes of beings, high, intermediate and low, live. The particular meaning of each set of loka and tala, beginning with the highest, is as follows:

Satya-loka is the 'world of truth and reality,' the realm in which live divine beings and Nirvânins. It is the highest state of consciousness possible to a human being, the loftiest Samâdhi. Its atmosphere extends into regions far beyond our ken, out into the fields of infinitude. Its nether pole, *Atala*, is the first suggestion of a place, the first *something* of existence. It is called *a-tala*, 'not-a-place,' because it is of such spiritual-ethereal matter that it can scarcely be considered a place. A Lost Soul or one who follows the Downward Path suffers final annihilation in *Atala*.

Tapar-loka is the 'world of spiritual meditation and devotion,' the realm in which live the Spiritual Guardians of our Universe, the state in which the Christos or the Buddhic Splendor manifests itself in its fulness. Its atmosphere, though not as far-reaching as *Satya-loka*, extends beyond our ken. Its nether pole, *Vitala*, is that spiritual-ethereal place in which there is a change (*vi*) towards matter, therefore it is a 'better place for matter.' It is in *Vitala* that the one self-consciously following the Downward Path breaks the final link with his Higher Nature.

Janar-loka is the 'world of spiritual birth,' the realm in which dwell the Kumâras, Agnishvâttas and Mânasaputras, the state in which the Higher Manas of man becomes the complete master of the lower principles. Its atmosphere extends to the reaches of our Galaxy. Its nether pole, *Sutala*, is a 'good place,' that is, a place that is good (*su*) for matter. In *Sutala* a human being who has self-consciously followed the Downward Path has brought his mind into the condition of an absolute slave to his lower desires.

Mahar-loka is the 'great world' whose field of influence extends to the limits of our Solar System. It is the realm in which live the different classes of Devas who are intimately connected with the mind and the senses. In this loka a man's brain-mind is no longer deluded by Mâyâ but is concerned with compassionate service to all. The nether pole, *Rasâtala*, is the 'place of taste,' that place in which one can perceive with one of the organs of sense. A human being whose brain-mind is wholly concerned with things of the senses and the objective world is immersed in *Rasâtala*.

Svar-loka is the 'heaven world' wherein the human being enjoys the after-death state of Devachan. It is the state in which a human being unfolds his higher aspirations. It is the abode of the higher Elementals, and its atmosphere extends to the pole star. Its nether pole is *Talâtala*. This word is a compound of *tala-atala*, meaning 'a place not a place' and implying that this place is more of a tala than those above it but is not yet a fully substantial tala. A man who centers his mind and energies in the gratification of his senses is in *Talâtala*.

Bhuvar-loka is the 'world of becoming,' the region of the Astral Light which extends to the Sun, and the abode of the lower Nature-spirits. A man who has attained to this loka has become aware of his inner and higher nature and hence has become more impersonal, and therefore more unselfish, more spiritual. The nether pole of *Bhuvar-loka* is *Muhâtala*, the 'great place,' the abode of man's astral shadow. When a man performs deeds which are selfish and unkind and impure he is in *Muhâtala*.

Bhûr-loka is the 'earth sphere' in which our planet Terra or Globe D exists. It is the abode of human beings who are thoughtful and good, but not necessarily spiritually awakened. *Bhûr-loka's* nether pole is *Pâtâla* or the 'nethermost tala' or the region beneath us, the Underworld. The derivation of *Pâtâla* is obscure, but it may be a contracted form of *pâta* — sunk or fallen, and *tala*. *Pâtâla* is the dwelling-place of

man's physical body and personal self, of animals, and of Nature-spirits such as the gnomes. Instinctual selfishness, self-preservation, gratification of the senses, and the helpless innocence of childhood are characteristic marks of one who is in Pâtâla. Pâtâla is often used for our word 'Hell.'

Such are the ranges of the Human Spirit: from the darkest regions of Pâtâla to the loftiest and divinest regions of truth — Satya-loka!"

Before we leave this chapter it will be useful to show by means of the following table how all the Tattva-Bhûtas are available to the Monads in their passage from Globe A to Globe G. This does not relate them, as we have shown them previously, to the planes of consciousness as such; but it does indicate how the Monads, while having available all the Tattva-Bhûtas, choose predominantly the one best suited to their needs on each Globe. In this table the dominant one in each case is shown in small capitals.

GLOBE A		GLOBE G
Âdi		Âdi
Anupapâdaka		Anupapâdaka
Âkâśa		Âkâśa
Tejas		Tejas
Vâyu		Vâyu
Apas		Apas
Pṛithivî		PṚITHIVÎ
GLOBE B		GLOBE F
Âdi		Âdi
ÂNUPAPÂDAKA		Anupapâdaka
Âkâśa		Âkâśa
Tejas		Tejas
Vâyu		Vâyu
Apas		APAS
Pṛithivî		PṚITHIVÎ
GLOBE C		GLOBE E
Âdi		Âdi
Anupapâdaka		Anupapâdaka
ÂKÂŚA		Âkâśa
Tejas		Tejas
Vâyu		VÂYU
Apas		Apas
Pṛithivî		PṚITHIVÎ
GLOBE D		
Âdi		
Anupapâdaka		
Âkâśa		
TEJAS		
Vâyu		
Apas		
Pṛithivî		

Chapter XV

WHERE MAN FITS IN

The pathway to the knowledge of the mysteries of human consciousness which started out as a mere towpath has by now broadened out into a well defined trail; and as we pursue our studies this will eventually become a road ever widening and leading to heights from which we shall gain a panorama of unutterable grandeur.

As of this moment, we have discussed in its broadest outlines the teachings about the Globe Chains. The Lokas and Talas are the planes of consciousness on which the Globes function by reason of the passage of the many classes of monads through them; and these Globes are built out of the monads themselves. They draw from the Tattvas and Bhûtas on all of the planes of consciousness for the materials needed for this Globe-building, as well as for the building of their own sheaths of consciousness.

The macrocosmic viewpoint is presented in the study of the planes of consciousness and the Tattvas associated with them. The same thing is repeated on the microcosmic scale when we paraphrase the terms to suit the evolutionary standing of a human being as contrasted with that of the cosmos in which he lives. Thus we are learning to regard the principles in man as his own Tattvas; and in the teaching about the souls and the egos we find that these principles are dual just as the Tattvas are.

We are now ready to learn that just as the Globes of the Earth Chain had to be built through a process of evolution of the Monads — and the study is as yet far from complete — so the principles of Man did not suddenly spring into being, all complete and fully developed, but were developed slowly, through an age-long process, and this was concomitant not only with the building of the Globes of the Earth Chain but continuous throughout the duration of the Rounds and Races. Not all the story can be told in these pages, because so many other factors come into the picture. Out of all these factors we must select those that will contribute toward the building of as simple a picture as is possible, leaving the more recondite aspects of the subject to be pursued by any student who desires further knowledge.

Let us now present an outline of the process of the development of the human principles throughout the seven Rounds of the Earth Chain, in a paradigm that will take the form of our concept of a Globe Chain. (See end of chapter.)

Note the similarity to the paradigm of the Tattvas. It is done in this manner to suggest the teaching that the principles of man are actually derived from the Tattvas, thus:

Âtman	from	Âdi-tattva
Buddhi	"	Anupapâdaka-tattva
Manas	"	Âkâśa-tattva
Kâma	"	Tejas-tattva
Prâṇa	"	Vâyu-tattva
Lînga-śarîra	"	Apas-tattva
Sthûla-śarîra	"	Prithivî-tattva

Note that all of the principles are sevenfold; thus they are repeated seven times in our paradigm, and in each case one of the principles is indicated in small capitals, this being the one that receives the greatest evolutionary impetus during that Round. It is not to be supposed that the other principles are not developed at all, for such is obviously not the case. Let us say rather that during each Round of the Earth Chain one aspect of the principles is accentuated, and that it will not be until the conclusion of the seventh Round on Globe G that all the aspects of all the principles will have been fully developed. Then Man, if he has successfully run the race, will be qualified to graduate into a higher kingdom of life.

It is natural that as of now we have been considering the Earth Chain alone, but we must learn to see it in relation to the Solar System as a whole. All of the planets are actually chains of Globes, and in the cases of the planets that we see, only their own Globes D are visible. The Esoteric Philosophy postulates that for every visible planet, there are dozens of Planetary Chains of which not even the Globe D is visible. Of those that we do see, five belong to a special group known as the Sacred Planets, well known to the ancient mystics. These are Mercury, Venus, Mars, Jupiter and Saturn. Then two of the invisible planets were known to belong to this group, and since they were not openly revealed, they were represented by two objects that we do see, to wit: the Sun and the Moon. Thus, there are seven in all.

The mysteries connected with these seven Sacred Planets are very deep. In this celestial economy "all things contribute to all things." The reason they are called the Sacred Planets is that each one of them had its part in aiding the building of one of the Globes of the Earth Chain. The Sun (symbol for a secret Planet) helped to build Globe A; and Globe A is still and will always be under its astrological influence. Jupiter helped to build Globe B. Venus helped to build Globe C. Saturn aided in the building of Globe D. Mercury aided in the building of Globe E. Mars aided in the building of Globe F. The Moon (symbol for a secret Planet) aided in the building of Globe G.

It should be obvious that this has nothing to do with the physical planets that we see in the sky. To suppose so would not be in keeping with the teachings of the Ancient Wisdom. The viewpoint is held that each planet is but the physical representative of the true planet, which is a Cosmic Being manifesting in and through a chain of Globes, just as the Earth does. This Planetary Being is one type of Dhyâni-Chohan — and we must remember that Dhyâni-Chohans were in the long distant past entities such as we.

It follows from the above that these Planetary Chains aided not only in the building of the Earth Chain itself, but also made it possible for Man to fashion his own seven principles from the Tattvas, as pointed out previously. The two processes were carried

out hand in hand, as it were, and will continue to do so until the end of the Seventh Round.

The following Table of Correspondences suggests the influence of each Planet in the fashioning of the seven principles of Man.

Âtman.....	This is the light of Divine Consciousness, universal to all men; it is not one of his 'principles' in the usual sense of the word.
Auric Egg.....	Jupiter
Buddhi.....	Mercury
Higher Manas.....	Venus
Lower Manas.....	Saturn
Kâma.....	Mars
Prâna.....	The Sun
Astral.....	The Moon

The physical body, being the "lees or dregs" of the Astral, or Liṅga-śarīra, is not really a Principle in its own right. It is of course fashioned of the materials of the Earth; and it is significant that the Earth is not counted among the "Sacred Planets."

Note that a new term appears in this table, the Auric Egg. Very little is said in the exoteric books about this Principle, in part because it is so sacred and in part because a knowledge of it could furnish keys to some of the finer forces of Man's constitution.

In G. de Purucker's words:

"It ranges from the divine to the astral-physical, and is the seat of all the monadic, spiritual, intellectual, mental, passionate and vital energies and faculties of the human septiform constitution. In its essence it is eternal, and endures throughout the Pralayas as well as during the Manvantaras, but necessarily in greatly varying fashion in these two great periods of Kosmic Life." (*Occult Glossary.*)

The Cosmic counterpart of the human Auric Egg is the Hiranyagarbha or "Golden Egg," the seed from which the whole Universe came into being.

The detailed manner in which Man derives his principles from the essences of the Sacred Planets has always been a closely guarded secret of the Mystery Schools, and the teachings delve deeply into the mighty processes of death and rebirth. At this time we are building a picture on general rather than on specific lines so that we may come to understand that man's life is part and parcel of the life of the Solar System in which he lives and moves and has his being. However, the story is far from told as yet, and we may now go on to new fields of investigation.

Having covered briefly the teaching about the passage of the Monads through the Globes of the Earth Chain in the process known as the Rounds and Races, we may now make a distinction between what are known as the "Inner Rounds" and the "Outer Rounds." The Inner Rounds are the passage of the monads through the Globes of the Earth Chain. The Outer Rounds constitute the passage of the life-waves through the seven Sacred Planets. This obviously involves much more study because in considering such an expanded picture we must realize that during any one of the Outer Rounds there will be the full cycle of seven Inner Rounds on each one of the Planetary Chains included in the group. However, there would be little point in our concerning ourselves with such overwhelming time-periods, and we are going to approach the subject in a manner that will have a closer bearing upon ourselves.

Let us therefore ask ourselves: Am I, as I find myself to be at this moment, capable of realizing any kind of experience on any of the planets other than this Earth? Is my sojourn on this Earth in the course of the Rounds and Races but an episode in the vast process known as the Outer Rounds? Are the Outer Rounds in progress all the time, or are they something entirely apart from the Inner Rounds?

These are quite basic questions, and we might consider first things first. Man as we know him is very much a denizen of the Earth on which he lives. He has few yearnings to experience life in any terms other than those to which he is accustomed. In other words, he is of the earth earthy. His personality is something that is fashioned for this life alone; it is not the real, permanent part of the individual at all. The individuality must be distinguished from the personality; its scope is vastly greater. It is that which is often called the Reincarnating Ego. Its range of consciousness is vastly greater than that of the personality, and it does partake of the type of consciousness possible on the other globes of the Earth Chain. In other words, even though that consciousness may be dim as compared with what he is capable of experiencing right now on Globe D, it is nevertheless that part of him that will be more fully active on other Globes in due course of time when, in the process of the Rounds and Races, the whole human family will have moved on to Globe E and that Globe will then be our home.

But even this Reincarnating Ego is not capable of experiencing consciousness on any other of the Planets of our Solar System. Yet the very teaching of the Outer Rounds suggests that somewhere in the human constitution there must be something that is native to these other planets and is perhaps pursuing its own Outer Rounds at this very time. In fact, in order to grasp the grander sweep of the Outer Rounds and their significance as far as Man is concerned, we have to take into consideration *all* the Monads in Man's entire constitution. Some of these Monads may be listed as follows, with their ranges of consciousness:

<i>Type of Monad</i>	<i>Range of Consciousness</i>
Divine Monad	The Galaxy
Spiritual Monad	The Solar System
Higher Human Monad	The Earth Chain
The Personal Monad	Globe D

When these Monads are viewed collectively, they are seen to be centers of consciousness in a vast stream of life which takes its rise in Boundless Space. If we must give this source a name, we may call it the Paramâtman. It is the eternal within man and it weaves for itself this very complex series of Monads in which it will manifest throughout the timeless duration of the Cosmos. No imagery of the mind can convey anything of its true nature. It is that within us which IS. It is pure consciousness and it defies description. However, the various Monads that emanate from it are only relatively immortal. There is nothing that is absolutely unchanging in the manifested universe.

Now, let us not forget that each one of the Monads is a living entity in its own right; and whereas it is undeniable that each one emanates from the one that is greater than itself and therefore its very existence depends upon its "parent," nevertheless each one lives its own life on the plane to which it is native. Were the Spiritual Monad to cease to exist, all the lesser Monads which it brought forth would immediately cease to exist also. Yet, paradoxically, the lives of the various monads are so separated in the type of consciousness belonging to each, that each one is barely aware of the others.

This is a point that can cause some difficulty to our minds until we stop to think that a person in good health is not really aware of the organs of his own physical body. They all perform their respective functions without hindrance, and the well-being of the individual depends upon this. Nor can the organs be said to be aware of the existence of the man dwelling within the body, and there is no reason why they should be. Their own orderly working does not depend upon such awareness. However, the well integrated human being knows how to use his body, and he has control over his senses and his faculties, so that he can derive the greatest possible benefit from them. They become his willing servants.

The situation is somewhat similar in the case of the various Monads in Man. The Spiritual Monad does not need to be consciously aware of the Human Monad, save in a most general way, since it functions through the entire series of monads which go to form its manifestation. Nor do they in turn have to be consciously aware of the Spiritual Monad, although an eventual understanding of it is requisite to the process of inner growth and unfoldment of one's spiritual powers.

The analogy with the human body cannot be pushed too far, however. For instance, whereas the functions of the body are seemingly automatic, we as human monads have freedom of choice in the things we feel and think and do; and knowing something of the structure of the stream of consciousness that we are studying at present will aid one in his own individual growth, especially if he is a serious student deeply interested in occult matters.

Now in enumerating these Monads with their ranges of consciousness, we discover the clue as to what parts of us experience the various processes within the Inner and Outer Rounds. We might list these facts in greater detail thus:

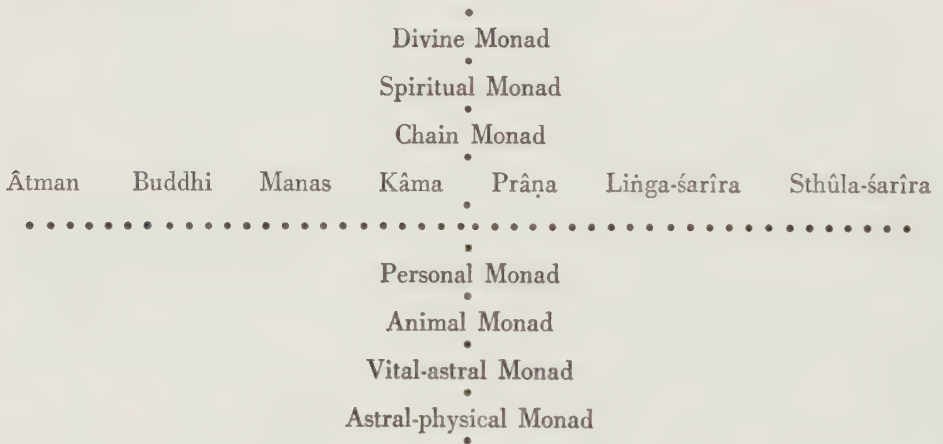
- Divine Monad.....Beyond even the Outer Rounds. Its sphere of action is the Galaxy itself.
- Spiritual Monad.....Makes the Outer Rounds and provides for itself a series of Planetary Chain Monads which will fulfill its needs as it makes its sojourns through the Planetary Chains. Thus the duration of the life of any such Planetary Chain Monad will be very long; in fact, it will endure throughout the entire seven Rounds of the Planetary Chain to which it is native.
- Higher Human Monad.....A typical Chain Monad as described above.
- Personal Monad.....Produced by the Human Monad for use during its sojourn on Globe D. With each successive incarnation, the Human Monad will produce a new Personal Monad. That is why we do not recollect the events of our past lives. The real memory lies within the Human Monad, but few can rise in consciousness above the Personal Monad and tap the resources of the Human or Chain Monad.
- Animal Monad.....The animal part of the stream of consciousness. It is reaching upwards toward the human consciousness to which it will eventually attain.
- Vital-astral-physical Monad...The tangible, visible portion of Man. His living body, which is the playground of the Animal Monad as well as being the Temple of the Divine in Man.

Just as we have noted the correspondences between the Tattvas and the Human Principles, so, by study of the table just given, we see the correspondences between the Monads and the Lokas and Talas.

It remains for us to relate the Seven Principles to the Monads, just as we related the Tattvas to the Lokas and Talas. The Tattvas, it will be remembered, provided the materials out of which the worlds were built upon and within the various Lokas and Talas. The case is similar in the study of Man, referring to the Seven Principles and the Monads. When we enumerated the Seven Principles of Man, on which level were we speaking? For the purposes of the study as far as it had been carried forward, we were speaking on the strictly human level, that is, the higher human. The Seven Principles, from Âtman to Sthûla-śarîra, were thus intended to mean the Seven Principles of the Higher Human Monad.

We should expect to find that each one of the Monads, then, has its own constitution of seven principles; and that is according to the teachings, although to express this thought in its entirety would require some understanding that we have not gained as yet. However, we may accept this as a pattern which we have found to be reliable in other fields of study. Thus, there is the Âtman of the Spiritual Monad, the Âtman of the Human Monad, the Âtman of the Personal Monad, and so on. Similarly, each Monad has its own Buddhic principle. However, we must keep our minds open to a fuller understanding of this concept, and remember that while these higher principles are latent for the most part in the Human Monad, they find much fuller expression in the higher Monads; while in the Animal Monad, and those even less developed than it, the Âtman, Buddhi and Manas are entirely latent. The master of life is he who has brought his own individual Buddhic Splendor into complete manifestation: the *Buddhi of the Human Monad*.

We made a paradigm of the Lokas and Talas and the Tattvas and Bhûtas, representing the Cosmic Cross. Now we are able to make the Human Cross, in which the vertical represents the series of Monads, and the horizontal arm represents the seven principles of the Human Monad.



These concepts lead to a further study, which may be alluded to at this time, but might provide food for thought to the serious student. This is that the Human constitution consists of the microcosmic counterpart of the Lokas and Talas. Just as in Plate V, we saw how the five-pointed stars can be multiplied without number, so we

see that not only has the human being his own series of Lokas and Talas, but each of his Monads has its own series of minor Lokas and Talas. This might be the explanation of a term used by H. P. Blavatsky where she speaks of the "forty-nine fires" in Man.

ROUND I

ÂTMAN Sthûla-śarîra
 Buddhi Liᅅga-śarîra
 Manas Prâᅇa
 Kâma

ROUND VII

Âtman STHÛLA-ŚARÎRA
 Buddhi LIᅅGA-ŚARÎRA
 Manas Prâᅇa
 Kâma

ROUND II

Âtman Sthûla-śarîra
 BUDDHI Liᅅga-śarîra
 Manas Prâᅇa
 Kâma

ROUND VI

Âtman Sthûla-śarîra
 Buddhi LIᅅGA-ŚARÎRA
 Manas Prâᅇa
 Kâma

ROUND III

Âtman Sthûla-śarîra
 Buddhi Liᅅga-śarîra
 MANAS Prâᅇa
 Kâma

ROUND V

Âtman Sthûla-śarîra
 Buddhi Liᅅga-śarîra
 Manas PRAᅇA
 Kâma

ROUND IV

Âtman Sthûla-śarîra
 Buddhi Liᅅga-śarîra
 Manas Prâᅇa
 KÂMA

Chapter XVI

THE KINGDOMS OF NATURE

Mention has already been made of the ten classes of Monads which we are accustomed to grouping together as 1) the three Dhyâni-Chohanîc Kingdoms, 2) the second or intermediate group comprising the Human, Animal, Plant and Mineral Kingdoms, and finally 3) the three Elemental Kingdoms. As a necessary transition from the study of Monads to a consideration of Atoms (or Life-Atoms, to be precise), we must now inquire into the wonderful relationships that exist between these kingdoms and the planet on which they flourish.

We meet with certain difficulties at the outset because so far as our everyday experience is concerned, there are but three kingdoms which properly deserve the name, to wit: the Human, the Animal, and the Vegetable Kingdoms. What, indeed, do we mean when we speak of the Mineral Kingdom, the three Elemental Kingdoms, and, most mysterious of all, the three Kingdoms of the Dhyâni-Chohans?

Well, we must begin at the beginning. We have referred to the Tattvas as the stuffs or materials of which the worlds are formed; and true as this statement is, it is nevertheless only the beginning of the story. We must understand that everything is alive—*everything*, and this includes even the materials which are the substances of the Tattvas themselves.

It would be more accurate for us to think that these materials are continually being produced by a process of emanation; for there is an inexhaustible supply, and because everything is atomic by nature, there must exist many grades or levels of life-atoms. Each of the seven Tattvas produces its own life-atoms; thus there are seven families of these. And since they are commencing their ages-long evolutionary journey as life-atoms, we say quite correctly that they start out in the most elementary grade of evolution. In other words, they are all Elementals.

It might appear at this point that we are allowing ourselves to become confused. We study about the three Elemental Kingdoms, yet we have just indicated that there are really seven types of Elementals. Are there then seven Elemental Kingdoms?

We can best answer this by quoting from G. de Purucker's *Studies in Occult Philosophy*, page 50:

“The kingdoms are aggregates or families or groups of monads. The cosmic elements are the essential stuffs in which they live and move and have their being and evolve.”

And then on page 51:

“What relation, then, have the three elemental kingdoms, kingdoms of the elementals, to the cosmic elements? Now in the first place, I will say that this phrase ‘three elemental kingdoms’ is an easy and graphic way of saying the seven kingdoms of the elementals, or the seven sub-kingdoms of the generalized kingdom of elementals; just as in a man we often generalize his constitution by saying spirit, soul, body, knowing all the time that the constitution is divisible into seven parts.

The three kingdoms of elementals in their first or original appearance in manifested *manvantara*, spring forth from the stuffs of the original cosmic elements; and therefore these baby-entities, which are as it were ensouling parts of life-atoms, are called elementals. This is the original and if you wish highest kingdom of the elementals, not highest here in the sense of evolution, but highest in schematic diagram. The so-called lower kingdoms of elementals are lower merely because they are farther from the spiritual part or nature of the cosmic elements, but being more evolved in that sense they stand higher. So that the lowest class of elementals, which is beneath the minerals, actually is the most evolved of all the elemental kingdoms. But they have not yet even reached the point where they can be classed as minerals or pass into the mineral kingdom.

Now the reason why there are really seven elemental sub-kingdoms, is because each such elemental kingdom springs from its own particular cosmic element. As there are seven cosmic elements, each cosmic element gives birth to its own elemental kingdom. Thus when all these elemental kingdoms are classed together, we say seven elemental kingdoms, each one such coming from its own different cosmic element.

As a final thought, it is to be noted that in occult or esoteric phraseology, the elementals are so called because whatever their class and whatever the cosmic element or *tattva* from which each elemental class springs, it springs directly from this *tattva* or cosmic element without intermediary. Thus, the elementals are, as it were, the denizens or inhabitants of the cosmic elements, because they spring forth immediately and without intermediary from the latter.”

There is a need at this point to make a distinction between the seven classes of monads, which differ from one another by reason of their different origins from the *Tattvas*, on the one hand, and the various phases they must pass through on their long cosmical journey from the condition of unself-consciousness to the eventual condition of full self-consciousness, the state of Godhood, on the other. Their several origins give them their own types of *Svabhâva* which they retain from first to last. And although each one follows its own pathway of evolution, nevertheless it retains the essential characteristics of the *Tattva* from which it sprang at the very beginning of its journey as an Elemental.

The various phases through which they must pass merely indicate the changing degrees of unfoldment of their essential *Svabhâvas*. In the first phase, they are Elementals in the truest sense of the word, and as such they are the insouling life-sparks of the atoms, and this is the reason that there are several kinds of life-atoms.

We are approaching a study of the life-atoms *per se*, but there are some final points of teaching about the Monads which must be covered first.

Illustrations taken from life often serve a good purpose in clarifying these fine points of teaching, and we shall use here again the illustration of the schools. In our educational system, there are many grades of learning, and while in each grade there may be pupils of many nationalities, yet they all study together and learn the same lessons which will equip them for life. They nevertheless retain their national characteristics throughout their years of learning. So we might think of the various classes of monads as though they were the various cosmical nationalities; although they are all evolving together, passing through all the phases of life offered by Nature, they

nevertheless do so with their own essential characteristics, which they never lose. And all of these *phases* are grouped together under the term the Kingdoms of Nature.

The first three such phases (or seven, according to the degree of study being undertaken) are known as the three Elemental Kingdoms. They represent three stages of unfoldment of the growing consciousness which must be passed through before they can qualify for promotion into a higher condition. When they have evolved the monadic consciousness to the required degree, they are ready for identification with the next phase, which is the Mineral Kingdom.

However, for the reason that, while still in the Elemental Kingdoms, they retain their essential Svabhâvas — which are what they are by reason of the Tattvas from which they originally sprang — they naturally form themselves into classes; and while passing through the first of these Elemental Kingdoms, these classes may be identified by naming them after the seven kinds of life-atoms which they ensoul.

At a later stage, when they have evolved their consciousness to a quasi-individuality and quasi-intelligence, they may be identified as the several types of “nature spirits,” and may be named after the Cosmical Elements from which they sprang, and which are named, as we remember from our earlier studies, after the elements known as Earth, Water, Air and Fire.

Fairy tales have always been popular with people of all ages and of all nationalities. Some, like the Celtic races, seem to have been especially disposed toward the folklore that deals with the “little people,” such as the brownies of Scotland, or the leprechauns of Ireland; and in these countries we often hear of people with “second sight” who firmly believe that they have seen and talked with these nature-spirits. Then there are the nature-spirits well known in other countries, and the mischievous poltergeists known in all lands.

Many people who ridicule such ideas nevertheless do enjoy fanciful stories or plays which deal with the “supernatural”; and it seems quite likely that there is actually a close connection between us humans and the denizens of other planes of life. Although these things are not really as they appear to our senses, their impact upon us is translated into the terms that will appeal to our minds and imaginations. Thus has arisen all of the folklore of virtually every nation.

It would be best to express a word of caution before proceeding further. Lest it be thought that a theosophical student believes in fairies, let me assure you most emphatically that he does not in the sense of the “little people” of folklore. The impression that he does believe in such things comes about because of the great difficulty of explaining such matters as they really are. Yet, one cannot help but point out that the people who would be the first to laugh at anyone believing in the nature-spirits would in all probability accept quite seriously the existence of the angels. Actually, although in this last instance it is a part of their religious belief and as such would be considered to be quite defensible, nevertheless it comes to the same thing. For the nature-spirits are on one side of the group of Kingdoms familiar to us, and the higher beings represented by the angels are on the other. It is only a matter of degree.

To enumerate then: The nature elementals which belong to Earth are often known as the Gnomes; those belonging to Water are the Undines; those that belong to, because they were emanated from, that cosmical Element we call Air, are the Sylphs; and lastly, those that belong to the cosmical Element we call Fire are the Salamanders.

All of these, including the three higher classes for which we do not have popular names, start out as Elementals of their own type yet retain their Svabhâva or essential characteristics throughout the long evolutionary journey through all of the Kingdoms of Nature. This is because they retain *the essential characteristic of the Tattva from which they originally sprang and to which they therefore belong.*

We meet with a problem in further explanations because we are trying to condense the various stages of elemental growth into three, whereas in reality there are seven such stages. However, since we do not have available all the teachings which would complete a sevenfold picture, we can cover the point by explaining that, after passing through the "nature-spirit" phase of their growth, the Elementals attach themselves to and become a part of the living constitution of entities in higher kingdoms. In this phase of their growth they have a very important work to do. Many of the functions of our own bodies, for example, are carried out by elementals of certain types; and this is equally true of the bodies of the animals, and even of the plants. Nevertheless we must endeavor to understand that even though elementals attach themselves to monads in higher kingdoms, they are still elementals and do not yet belong to the kingdoms that they serve. They are striving upwards, to be sure, and in time will become members of these kingdoms in their own right.

Thus we may learn that these elemental monads, having at last graduated from the highest of the three Elemental Kingdoms, pass on into the Mineral Kingdom; thence, after inconceivably long periods of time, they evolve from within themselves the plant consciousness, enabling them to build their appropriate vehicles, and they then graduate into the Plant Kingdom. Again, after a long evolutionary growth in the Plant Kingdom, they evolve forth from themselves those faculties and qualities of consciousness which place them in the Animal Kingdom. Eventually, thereafter, they evolve forth from themselves the human consciousness and they take their places in the Human Kingdom. Then, after long periods of evolutionary growth, when they make the grade, they evolve into the first of the three Dhyâni-Chohanîc Kingdoms, and so on to the second, and then to the third and highest. Having successfully run the race, they have become full-blown Gods.

It is easy to fall into the error of saying that a mineral *becomes* a plant, a plant *becomes* an animal, an animal *becomes* a human, and so forth. That is why we stress the concept that it is the evolving monad which brings forth from within itself the ever-increasing degree of consciousness which places it progressively in ever higher Kingdoms of Nature. In each step, as it attains to the Kingdom to which it belongs, it follows the example of the Tattva from which it first emanated; that is to say, in its turn *it emanates its own family of life-atoms with which it is to clothe itself in such vehicles as will best fill its ever-increasing needs.*

Thus we return to the important thought that it is the Tattvas from which the Kingdoms of Nature are brought forth, each and every one of the monads comprising these Kingdoms having started out as "an unself-conscious god-spark" — to use a phrase given to us by G. de Purucker — and each retaining to the last the essential characteristics of the Tattva from which it originally sprang while progressing through the Kingdoms to eventual self-conscious godhood.

Now when we spoke of the Principles and Elements of which the worlds are formed, we were leading up to a most important concept, to wit, that these various kingdoms of nature *are actually the Principles of the Globe Chain.* When we presented the several paradigms representing the various Tattvas as they contributed toward the

building of a Globe Chain, and later in a similar format when we showed how the various Principles of the human constitution were developed during the seven Rounds of the Earth Chain, we were most careful *not* to imply that the Globes of the Chain are its Principles. This would have been inaccurate and misleading. The Globes are *not* the seven Principles of the Earth Chain; they *are* the Lokas and Talas. Appearing as they do, two by two on the various planes of consciousness (excepting the highest and the lowest, which contain but one Globe each for reasons already explained), these Lokas and Talas are essentially the Monads of the Planetary Chain, ranging from the divine to the physical in their own dual aspects. The case is similar to that of the human constitution. (We may call it the Human Chain, if we like). A man has his own Monads, ranging from the divine to the physical, and each one of these is dual in nature forming thus his human Lokas and Talas. He also has his seven Principles; these Principles in Man's constitution are themselves *living entities*, each one composed of hosts of life-atoms, and they may be said to be the "Kingdoms of Nature" on a microcosmic scale. That is what they are to him, and it is reasonable to suppose that they make their own microcosmic peregrinations throughout his inner constitution in a manner paralleling what the Kingdoms of Nature do on the Earth Chain in pursuing their own Rounds and Races.

Let us state it in this manner:

1. The twelve Globes are the Lokas and Talas of the Earth Chain. As such, existing on the seven Cosmical planes of consciousness, they constitute its Monads. The Kingdoms of Nature are its Principles, and they can and do function on all the Globes of the Chain in the course of the Rounds and Races.

2. The Monads in Man are his own Lokas and Talas. His seven Principles function throughout his Monads, and they are thus for him the offspring of his own Tattvas, all of these producing their own hosts of life-atoms, "baby-monads" in their own right, already starting out on their age-long evolutionary journey throughout their own universe, which is Man himself. This microcosmic universe is as great to these "baby monads" as our own macrocosmic universe is great to us. And this is to say that Man is already a universe — on a lesser scale to be sure — but containing within himself all that the macrocosmic universe contains.

By way of further explanation, we may consider a word picture given to us by G. de Purucker (see *Studies in Occult Philosophy*, p. 113) in which he likens the development of the seven Principles to the unrolling of a scroll. That which has been unrolled and which can be seen is the manifested. That which lies within the portion not yet unrolled is there but it is the unmanifested. Thus, when *Ātman* is first "unrolled" it nevertheless contains within itself, in unmanifested form, all the other Principles, from *Buddhi* on down to *Sthûla-śarîra*. Similarly, when *Ātman* and *Buddhi* have been developed, they still contain within themselves all the other five Principles, from *Manas* on downwards; and the process is carried on to the final unrolling of the scroll, when all the principles have been emanated or brought into manifestation.

Another thought of value here is that whereas it was pointed out that these seven principles do exist (because they are repeated) on all the planes of consciousness, that is to say throughout all the Lokas and Talas, nevertheless *Ātman* on the highest of these Lokas, *Satya-Loka*, is inconceivably higher in quality than the *Ātman* on the lowest, or *Bhûr-loka*. Even the *Sthûla-śarîra* on *Satya-loka* is inconceivably lofty by nature; the only thing on Earth with which to compare it is light which, we are taught, is the *Sthûla-śarîra* of Spirit.

A further elucidation is in order on the statement made earlier that all of the life-atoms produced by the Tattvas must pass through all the kingdoms of Nature, because they all start out as unselfconscious god-sparks. Whereas this is true enough as a simple statement of fact, it is actually an over-simplification. To clarify the picture still further, we must remember that, when speaking of the Earth Chain, only the Globes from A to G were considered; we have left for another time a discussion of the five higher globes on the three highest cosmical planes. The reason for this might be more apparent if we show a certain similarity of pattern between the Planes of Consciousness, the Cosmical Principles, the Monads, and the Human Principles. In every instance we may correctly differentiate between the higher triad and the lower quaternary. The following chart shows it.

<i>Planes of Consciousness</i>	<i>Monads</i>	<i>Cosmical Principles</i>	<i>Human Princ.</i>	
Atala	Satya-loka	Divine Monad	Âdi-tattva	Âtman
Vitala	Tapar-loka	Spiritual Monad	Anupapâdaka-tattva	Buddhi
Sutala	Janar-loka	Higher Human Monad	Âkâśa-tattva	Manas
.				
Rasâtala	Mahar-loka	Personal Monad	Tejas-tattva	Kâma
Talâtala	Svar-loka	Animal Monad	Vâyu-tattva	Prâṇa
Mahâtala	Bhuvar-loka	Vital-Astral Monad	Apas-tattva	Linga-śarîra
Pâtâla	Bhûr-loka	Astral-Phys. Monad	Prithivî-tattva	Sthûla-śarîra

As a closing note to this chapter, let us recall that the three higher Principles of Man were derived from the three Logoi. These have been given in the terms of the philosophy of the Mahâyâna School of Buddhism thus:

<i>From these Three Logoi</i>	<i>Evolved forth</i>
Buddha Amitâbha (Buddha of Boundless Light)	Âtman
Alaya (Spirit: the source of all)	Buddhi
Avalokiteśvara (The Lord seen everywhere)	Manas

We may think of these three Logoi collectively as the omnipresent Heart of the Universe. They are not remote and unreachable. Beauty can be found everywhere, and wherever there is the beauty of Nature, be it in the colors of the flowers, the wonder of the stars, the glory of the sunlight, the graceful movements of the animals, and, grander still, wherever there is beauty in the life of a human being, there is Avalokiteśvara. Its very nature is joy and compassion, and as it is to be found in abundance in Nature, so also it takes its rise in the heart of Man.

We have only to see it and to ally ourselves with it in order to understand the grandeur and beauty of life. Pain and sorrow do indeed exist, but as an ancient saying has it: "For him who faces the sun, his shadow lies behind him." This does not mean that we turn away from suffering humanity. It means that the more we see of the sunlight, the more of it we have to share with others. And the man who has found the light is the more fortunate if he can learn to share it with others, because it belongs to all.

Chapter XVII

THE BUILDING OF A WORLD

Considering once more the pattern which was brought out at the conclusion of the last chapter, we find ourselves in a better position to understand why the life-atoms and the monads which issue forth from the three highest Tattvas are altogether different in type from those which emanate from the four lower Tattvas. It will likewise be understood that in the case of the "human chain" a man's own life-atoms which spring forth from his Âtman, his Buddhi and his Manas will be quite different in type from those which emanate from his Kâma, his Prâṇa, his Liṅga-śarîra and his Sthûla-śarîra. This matter points to a teaching which was hinted at in the chapter on the Seven Jewels of Wisdom, wherein we discussed the processes of Involution and Evolution, or Nivṛitti and Pravṛitti.

We stress again that there are actually two lines of evolution going on side by side in the Universe. It might better be thought of as Evolution taking two directions at once — in order to avoid the erroneous idea that entities pursuing one line of evolution will forever belong to it, never being able to participate in the other process of evolutionary growth. Let us therefore put it in this manner:

One aspect of evolution takes the form, as previously explained in the case of the Human Principles, of progressive manifestation or unrolling, something like the unrolling of a scroll, so that from Âtman is produced Buddhi; from Âtman-Buddhi is produced Manas; and from these in turn are produced Kâma, Prâṇa, Liṅga-śarîra and Sthûla-śarîra. This is the course of evolution depicted as coming from above and working to produce all of the vehicles in which the Monadic Essence is seeking to clothe itself.

The other line of evolution exhibits itself in the process whereby each of the human monads is striving upwards so that in time the Animal Monad in Man may become a Human Monad; the Human Monad may become a Mânasaputric Monad, and so on.

In looking for evidence of these two lines of Evolution on a mundane scale, we point to the teaching explaining the descent of the Mânasaputras, wherein these higher beings reached down to help early humanity. And again, to the teaching of the Silent Watcher or the Great Sacrifice. It was from this lofty Being that radiated, as portions of itself, other divine entities, and from these again were emanated yet others of a somewhat less lofty caliber, and so on through a succession of Teachers of even less grandiose caliber, and eventually to ourselves.

The upward process of evolution on the mundane scale was touched upon in describing the manner in which the various Pitṛis developed the earliest races of

mankind on this Globe during this Round, following a pattern established more or less clearly in previous Rounds. In this case, Mankind was first of all in its infancy. At that time it was represented mostly by the Lunar Pitris or the Barhishads; and as evolution proceeded towards the point when these members of the infant race were developed sufficiently so that they could receive the Light of Mind, the higher beings known as the Mânasaputras were also ready, and they "descended" and incarnated in the Human Race, thus giving to it the ability to think and to discern. Conversely, there is always the urge to "come up higher," which if followed to its conclusion, will result in the present members of the human race eventually finding themselves in a position to help as Mânasaputras to awaken the light of mind in a human race that will flourish ages hence on a world not yet fashioned.

Thus we can see the two lines of Evolution proceeding side by side, the one reaching downward in order to raise what is low, and the other striving upwards in order to attain the condition of cosmic consciousness, that men may become Manâsaputras in their own turn.

This dual aspect of evolution, the "reaching down from above" and the "striving upwards" is unknown to the exponents of modern theories of evolution, and it is this lack which makes the story so one-sided. Pick up any modern book on the subject and the story is always the same. Evolution is explained as a change of form resulting from a long series of adaptations and specialization, due in great measure to changes in environment. Thus from a protoplasmic slime out of the sea came the lowly creatures that would one day be men and women capable of laying the foundations of our great civilizations. There is never any variation from the theme, and the evolutionists have all the evidence in the form of fossils to prove their point. Facts are facts, they tell us.

Yes, facts are facts, the Theosophist will agree, but a fossil is not a fact. Things are not facts. They can help to explain certain facts; but some facts can be very elusive and never appear in the theories of modern science. The great clamor is always for proof. Well, you cannot always prove a fact, but you can prove the existence of a thing; therefore the position of the theosophical student appears to be weak. He is faced with *things* which are proven and told he must prove his *ideas*.

He is dealing with a way of thinking which results in the crystallization of the mind, whereby a thing cannot be accepted unless it is proven. And since "God" or Cosmic Intelligence cannot be proven, therefore it does not exist. Hence the materialistic viewpoint. But mere rejection of an idea does not disprove it. For if a thing were to depend solely upon our acceptance for its existence, the world would become greatly impoverished. All those unprovable traits of character which add dignity to human life would have to go into the discard. All our finest intuitions and our aspirations would have to go, and we should be reduced to a race of brain-mind automata, obeying but one law, the survival of the fittest. Let us thank the stars above that this is not so.

The factor that is missing is the concept of the stream of evolution which is unfolding from within itself the many principles or sheaths of consciousness, starting with the highest, Âtman, and continuing on downwards in the manner just explained. Without this all-important key, we can never hope to answer some of the most perplexing questions that have always confronted us.

We must not make the mistake, however, of discounting the work of Darwin and other equally dedicated men. They made a significant contribution to human knowledge. The mistake that has been made is that we have failed to see that they presented

a one-sided picture of evolution, and therefore the concept as presented was necessarily incomplete. At just about the same time that Darwin was carrying on his exhaustive research, the other side of the picture was being presented, and it is humanity's loss that it was not taken seriously save by a few intuitive minds. H. P. Blavatsky was publishing her books, and had they been more widely studied and understood, they could have shed the light of the Esoteric Philosophy upon the work of the scientists of her day, and our understanding of life would have been far richer than it is.

One might use the simile of the iceberg: Only about one tenth of the ice shows itself above the water. That tenth would represent the work of such men as Darwin. It was a part of the iceberg, to be sure, but by far the greater part lay beneath the surface. This was the Ancient Wisdom, and every student has the opportunity of exploring these hidden depths and discovering the teachings that may broaden his own understanding of the universe about him.

We continue our theme along the lines which were emphasized at the conclusion of Chapter XVI, wherein the distinction was made between the triad and the lower quaternary and it was shown that this pattern applies in several manners. It is time now to present the paradigm of the Globe Chain in the form that is familiar to most theosophical students. The Talas and Lokas have been included because our studies have brought us to the point where their connection with the Globes of the Chain can be readily appreciated.

<i>Talas</i>				<i>Lokas</i>	
Atala		Three			Satya-loka
Vitala		Unimanifested			Tapar-loka
Sutala		Planes			Janar-loka
Rasâtala	A			G	Mahar-loka
Talâtala	B			F	Svar-loka
Mahâtala		C	E		Bhuvar-loka
Pâtâla		D			Bhûr-loka

In the beginning of our studies we limited ourselves to a conception of the life-processes as commencing on Globe A, the entities pursuing their development throughout all the seven Globes until they reach Globe G, and considering a Round to be completed at the conclusion of their time-period on that Globe. We furthermore studied that it is during the first Round that the Globe Chain is actually built, and that once established, the Globes serve as schools of experience for the armies of monads which make up the various kingdoms which flourish on them.

We should like to present now a concept of a Globe Chain which will be consistent with the general subject of Mathematical Symbolism. It may offer some new insights into the workings of the life-processes, particularly as they apply to the concept of Involution and Evolution. For the time being we shall confine ourselves to the concept of the seven Globes on the four manifested planes, and proceed into the more advanced teachings later on.

Let us then turn to Plate 8 wherein an Icosahedron is shown enclosing a Dodecahedron, both of these enclosing an Octahedron at the center. It was explained in an earlier chapter how the Icosahedron is taken to represent the energetic or consciousness aspect of the Universe, while the Dodecahedron is taken to represent the more vehicular aspect, and the Octahedron thus formed by the lines emanating from both figures then

represents Man as the child of the dual Universe. Now Plate 8 shows that we have drawn this at the center of a Tetraktys, using the seven interior dots for this purpose. Furthermore, the Icosahedron, Dodecahedron and Octahedron are seen to be enclosed in circles, as is also the Tetraktys. These should really be thought of as being concentric spheres, although for ease of comprehension, we shall see them at this time as circles only. Also note that each circle is drawn half continuous, and half dotted lines, representing the principle of duality once more, since these will eventually be used to represent the planes of consciousness which we have already come to see as being dual in character.

Note also that three more circles have been added to the figure joining together the four circles above mentioned, and we discover that the seven circles combine to form two spirals, one drawn with a continuous line, and the other with a dotted line.

In Fig. 10 we have lifted these spirals from the geometrical figures, and shown how they may form the basis of a Globe Chain diagram. We have filled in the

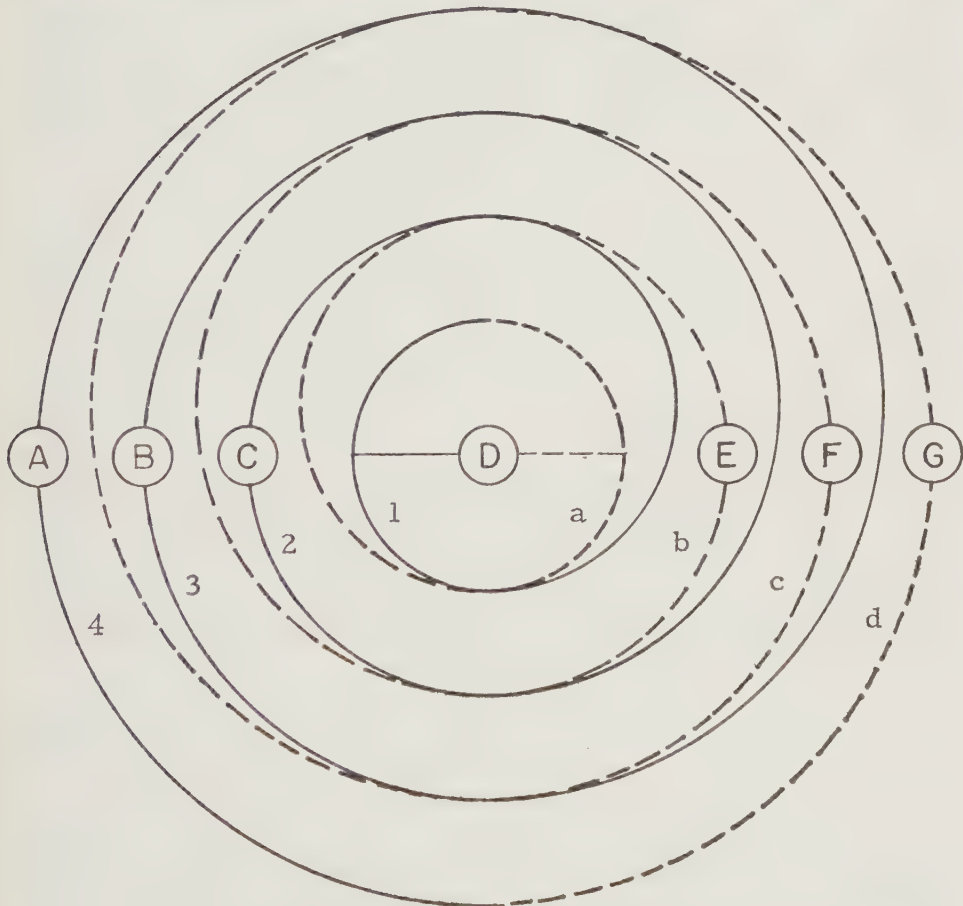


Fig. 10—Lokas and Talas in a Globe Chain.

- | | |
|--------------|-----------------|
| 4 — Rasâtala | d — Mahar-loka |
| 3 — Talâtala | c — Svar-loka |
| 2 — Mahâtala | b — Bhuvar-loka |
| 1 — Pâtâla | a — Bhûr-loka |

Globes from A to G only for the moment. We have also indicated by the numbers 1, 2, 3 and 4 how the Talas are related to the planes of consciousness within which these globes function; and in like manner, the letters a, b, c and d indicate the corresponding Lokas.

These four Loka-Talas form the four circles that had enclosed the Regular Polyhedra in Plate 8, and the three other circles which serve to complete the spirals represent lines of communication, as it were, between the various spheres of consciousness. This is highly suggestive of the mystical processes whereby the hosts of life-atoms are carried from Globe to Globe, not to mention the armies of monads themselves as they pursue their Rounds and Races.

Let us follow these spirals around. Start at the bottom of the figure and follow the *involute* clockwise in to the center of the diagram. We have passed successively through the circles representing Globes A, B, C and D. Halfway through D, the involute is joined to the dotted line *evolute* which we will follow around, leading us through Globes E, F and G. Thus, by a spiral motion we have represented one Round of the Earth Chain. The first portion of the curve, leading us through the Talas as we progress from Globe A through Globe B and C and into Globe D, is called the Downward Arc, and that portion leading us through the Lokas, as we pass from Globe D on up to Globe G, is known as the Upward Arc.

The process of tracing these spirals leads us to a concept of the Globe Chains as it is expanded in the deeper teachings. In following the curves leading from Tala to Tala, we traced parts of three other circles which have been identified only as "lines of communication." This idea is really very important and will be further expanded at another time when we lift this diagram out of the consideration of individual Chains into that of the Solar System as a whole. However, we must proceed step by step.

We have reached the point where we must inquire: What happens at the ending of a Round through the Globes and the commencement of a new Round? How do the entities make the passage from Globe G to Globe A for the beginning of the next Round? On this point lies the deeper teaching about the complete Globe Chains, each of which contains not seven but twelve Globes, five of which are referred to as the unmanifested Globes. Here we come to an interesting point, to wit: If a thing is not manifest, does it exist? If these five Globes are unmanifest, how can they be spoken of as though they were Globes, having a spherical shape?

Well, the shape of a thing is its outward appearance, and this is not necessarily the only thing that may be said about it, nor is it necessarily the most important. What shape is a thought? If you cannot describe it in terms of outline, does that negate its existence?

We must remind ourselves that "unmanifest" does not mean non-existent. Quite the reverse. In the earlier chapters of this book we drew a distinction between the unmanifest, the partially manifest, and the manifest. We may relate these to life itself. In any human endeavor there are always the three necessities: the need, the plan and the work. It is exactly the same idea.

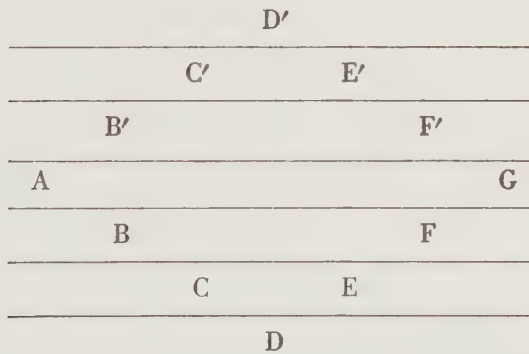
We must understand furthermore that in dealing with a subject such as planes of consciousness, there is the question of relative degrees of manifestation. Thus Globe D may be thought of as being fully manifest, Globes C and E somewhat less fully

manifest so far as this plane of existence is concerned, although they are no doubt fully manifest on their own planes. Then again, Globes B and F are still less manifest from our standpoint than are Globes C and E; and so on to Globes A and G, which are the least manifest of all from the standpoint of this physical world. Nevertheless even they are fully manifest on their own planes.

But the case is not similar with whatever Globes there might be on the three higher planes. The distinction must be along lines similar to that which was drawn when we considered the higher triad and the lower quaternary. Actually, the nature of the Globes on these three higher planes is as different from that of Globes A to G as the Higher Triad of Man, his Âtman, Buddhi and Manas are different from his principles associated with his lower quaternary.

Man experiences certain types of consciousness as he passes through the Globes of the Earth Chain, and if we are to have an adumbration of the consciousness which belongs to the three highest planes, then we must think in terms of Âtmic, Buddhic and true Mânasic consciousness. These may be present and functioning within Man on all the Globes, but in the lower globes they are colored by his other principles, whereas when the monads pass through the higher planes during the intervals between the Rounds, they are in a condition of Nirvâna, and they enjoy pure consciousness of an Âtmic quality in the highest plane, of the Buddhic quality in the second, and of the higher Mânasic quality in the third plane.

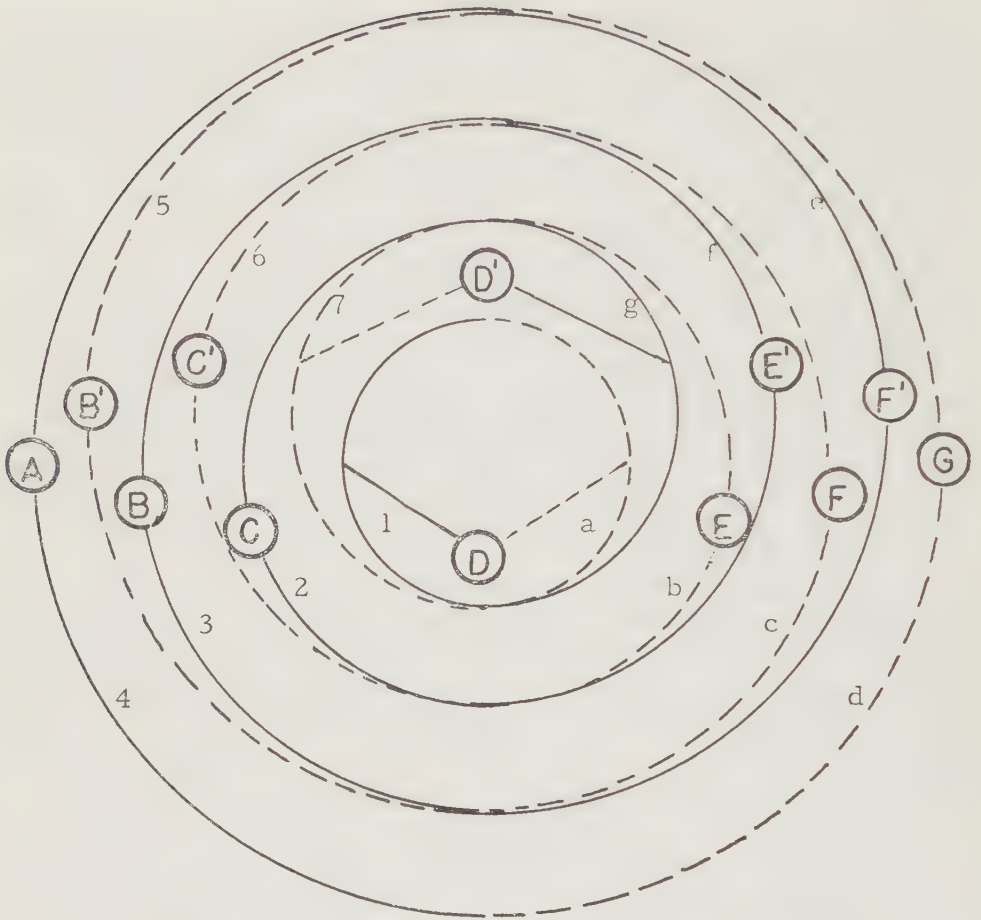
We may now relate the three connecting circles of Fig. 10 and which were thought of as the "lines of communication" to these three higher planes of consciousness, and we may also indicate the "unmanifested" Globes on these three unmanifested planes. Since it is customary to identify them with letters, we do so with the same letters that are used to designate the manifested Globes, but with the prime mark (') after the letter, thus:



In placing these letters upon the five "unmanifested" circles, we shall have the completed diagram as in Fig. 11. We are now in a position to see that a Round does not really begin with Globe A, but with Globe D' (which combines within itself the quality of Atala and Satya-loka) proceeds through Globes C', B', A, B, C, D, E, F, G, F', E' and is ended on D'. In this manner there is a continuance of life, and what has been called a rest period between Rounds is really a change of consciousness. However, because the life-wave passing through these higher spheres is absent from the manifested Globes, we say that these latter are in their inter-Round *obscuration*.

7 — Atala
 6 — Vitala
 5 — Sutala

g — Satya-loka
 f — Tapar-loka
 e — Janar-loka



4 — Rasâtala
 3 — Talâtala
 2 — Mahâtala
 1 — Pâtâla

d — Mahar-loka
 c — Svar-loka
 b — Bhuvan-loka
 a — Bhûr-loka

Fig. 11—The Expanded Globe Chain.

To follow the spirals representing the Round through all twelve Globes, we must now start at the place near the center of the diagram where we see the arrow, and follow the evolute clockwise until it reaches the outermost point where it is joined by the involute, and follow this around to Globe D, and thence outwards again on the evolute, and thence to the involute once more, stopping at the arrow. Thus we have traced the spirals, outwards and inwards twice over.

While on that portion of the spirals which relate to the unmanifested Globes, we are concerned with them only, so we disregard the manifested Globes through which the spirals must necessarily lead; and *vice versa*, while tracing the curve through Globes A to C, we disregard that portion of the curve which must necessarily pass

through the unmanifested Globes. This points up the fact that in the last analysis, although a diagram may be useful in its ability to explain some of the more difficult aspects of the teachings, it may also have its limitations; and while we may certainly profit by the elucidation of the teachings which they can bring, we must avoid the tendency of placing too much emphasis upon them. After all, since this is a study of consciousness, there are many roads which can lead to the same realization.

One more point is worth noting before we leave this portion of the book which has dealt mainly with the study of Monads. As we traced the spirals outwards and then inwards, outwards again and then inwards, we have symbolized what is known in the Esoteric Philosophy as the "outbreathing and the inbreathing" or the cyclic exhaling and inhaling of the "Great Breath" as the Universe is called. The word *Brahmâ*, as pointed out before, is from the Sanskrit verb-root *bṛih*, meaning to expand or to breathe.

And now we are ready to take up more specifically the study of the Atoms, represented by the third arm of Thor's Hammer.

SECTION FOUR

Chapter XVIII

ATOMS ARE EVERYWHERE

One evening I was looking through a microscope at the luminous hands of a watch; it was a remarkable sight. High speed particles emitted from the minute quantity of radium salt which was a part of the luminous paint bombarded other atoms of another constituent of the paint (probably barium platino-cyanide), and whenever an atom was struck by one of the flying particles it glowed momentarily, and the effect was as though I were looking into the depths of space with stars sparkling all about. Nothing was still; these sparkles of light appeared in all directions, visible evidence of the activity of particles too small to be seen.

The thought that struck me at the time, and on which I have often pondered, is that nothing is still. Within an apparently motionless rock, for instance, there is intense activity going on at the atomic level, typical of similar activity to be found everywhere, even in the depths of interstellar space.

The picture of the atom as it had been conceived a hundred years ago has been discarded entirely. What was at one time held to be a tiny sphere of hard matter is now understood to be mostly space, and within the inconceivably small volume of that space, ultra-minute particles are moving at unbelievable speed in obedience to the enormous forces which these particles exert upon one another. These forces are spoken of in terms of billions of electron volts of energy. Even these ultimate particles are no longer thought of as being matter but are considered bundles of energy. The best picture of an atom is now a mathematical equation.

Let us see if we can gain some conception of the sizes of some of these particles, relative to their distances from one another. In order to give meaning to the concept that matter is mostly space, it has been estimated that if it were possible to squeeze together all the matter of which the Earth is composed (and this must include the oceans and the atmosphere) and compress it so that all of the atoms are caused to collapse, leaving no space at all between each atom's particles; and if, furthermore, all of the atoms and molecules could be brought together, causing them to touch one another, with no space left between them, then this whole Earth could be made to fit within the volume of an average sized room! And since we have not eliminated any of the material itself, this mass would weigh as much as the Earth now weighs! While such a fact could obviously not be accomplished with the Earth, it is nevertheless believed that matter at the center of certain of the stars of a particular type is in just such a state of compression, and one cubic inch of such compressed material would weigh perhaps millions of tons!

Another way to visualize this would be to suppose that we could shrink our entire Galaxy and all the stars in it so that the size of the average star would be reduced to that of a basketball. But because we are maintaining their relative distances, it would follow that at the same time the spaces between the stars would be reduced in the same proportion. Even so, there would not be room for more than a dozen of such compressed stars within the limits of continental North America! So if you can imagine 12 basketballs spaced about within this land mass, you will have a rough idea of the distances between the stars relative to their sizes.

It is estimated that the same size-to-distance ratio maintains throughout matter itself, although of course one cannot obtain an accurate picture of this, for the reason that some materials are vastly more dense than others. But this does give us a general idea. And on the same basis, it is estimated that the sizes and distances between the particles within the atom itself are roughly the same as distances between the planets of the Solar System and their own relative sizes.

The stars vary greatly in size; some are very small, as stars go, perhaps only one hundredth the size of our Sun. Some are very large as is the case with Betelgeuse in the Constellation Orion, and it is estimated that our Sun, with Mercury, Venus, the Earth and Mars on their respective orbits could all be accommodated within its volume.

Now let us imagine, if we can, the amount of material that must exist in our Galaxy, which consists of over a hundred billions of suns. Great as that must be, it is believed that there is far more matter in the form of gases and clouds of dust which float about in the spaces between the stars. These great clouds of gas and cosmic dust are known as the Nebulae. Some of them glow by starlight reflected and diffused within the cloud itself, which gives us an idea of the immense size of the nebulae. Other clouds glow by reason of electronic excitation caused by the intense radiations emitted by some of the stars. The phenomenon is similar to the light emitted by the molecules of gas within the tubing which is used to make advertising signs. Some other nebulae glow because, when traveling at high speed (a hundred miles a second or more), sometimes one cloud will penetrate another, and the collision of the molecules forming these clouds will cause them to glow as a result of their impact. Then again, there are nebulae which do not glow at all. These are the Dark Nebulae which actually hide the light of the stars behind them. However, we must not imagine any of these nebulae to be dense like smoke. Actually the gases of which they are composed are exceedingly diffuse.

There is one important nebula, the Great Nebula in Orion, which is so diffuse in nature that it might be compared in density to that of the air that is left in an ordinary electric light bulb, which by our standards is a vacuum. Yet this nebula is so huge that it weighs 22,000,000,000,000,000,000,000,000 (twenty-two octillion) tons!

A great deal of this material which fills the spaces between the stars is debris, the remains of dead stars, comets and what not. When these particles are large they are known as meteorites, and so far as is known, these bits of cosmic dust will wander about at high speed for countless ages and a very small percentage of this material will become absorbed by the stars and the planets. Yet we do receive material from outer space all the time; it is estimated that hundreds of tons are collected every day, but this is infinitesimal as compared with the amount of material that there is in outer space.

Apart from all of this debris, which we may regard as useless, there are two very important types of nebulae which should command our attention. Some of the most

recent theories about these nebulae are coming very close indeed to the theosophical concept concerning the formation of the suns and planets, and it is worth our while to explain some of these modern ideas at this time.

Some of the nebulae, such as the Great Nebula in Orion just referred to, are thought to be the birth-place of stars. In fact, there is birth and death going on all the time in the depths of space, just as there is here on Earth. Only details vary. It is believed that some of the clusters of stars, such as the Pleiades and the Hyades originated from a nebula of this type. The stars forming these clusters are all of the same type and apparently of the same age, and they are moving together as a group. Most of the constellations which we see are groups of stars by appearance only, without any real connection between them cosmologically speaking. However, there are a few real constellations, and it is interesting in this connection that at the present time our Solar System is passing through just such a real constellation, part of which is already known to us as the Great Bear (Ursa Major), also known as the Big Dipper. Although the stars of this constellation appear to be very far away and all seem to be located in one part of the sky, these stars that are identified as belonging to Ursa Major are only a portion of a large group. One important star belonging to this group is Sirius, the Dog Star, and there are others far less conspicuous. The reason they are apparently in so widely separated parts of the sky is that our Sun is carrying its family of planets right through this group. The Sun does not belong to this constellation; not only is it traveling in quite a different direction from the main group and at a different speed, but also it is not of the same type as the stars of this particular group.

Modern research has determined that the stars are composed of hydrogen for the most part, although of course other chemical elements are present. It is estimated that over ninety percent of the matter in the universe is hydrogen, which is really the primary stuff of which the other chemical elements are made. So these vast nebulae which are destined to resolve themselves into stars are composed chiefly of hydrogen.

Where, then, do the other chemical elements come from? How are they made? That is another story, and we shall tell it according to the theories of some of the modern scientists. A fine book that should be studied in this regard is Fred Hoyle's *Frontiers of Astronomy*. There are of course many other writers whose work is reliable.

In brief, the theory of the origin of matter states that the many chemical elements are formed at the heart of a star which is in the act of exploding. Such chemical formation requires intense heat and pressure, which can be achieved only at the heart of an *exploding* star, known as a Supernova. The nebula or cloud of matter which results from such a mighty explosion is composed not chiefly of hydrogen, as are most of the other nebulae, but of quantities of heavier atoms which were formed during the explosion, so it will be rich in many chemical elements. Such is the Crab Nebula in the Constellation Taurus. This was seen to explode about 5,000 years ago, and at that time the light was plainly visible in broad daylight. It has been estimated that it was equal in brilliance to that given off by several millions of suns! Actually the explosion had taken place thousands of years before, but light takes time to travel in space, and that is why we do not see these cosmic events when they actually happen.

A second type of nebula may be formed in the following manner: Many of the stars travel in pairs. As such they are called Binaries or double stars. It is believed that when one star of such a pair becomes a Supernova, the resulting cloud of gas completely envelopes the other star, and the materials of which this cloud is formed are held by the gravitational pull of this companion star. Much of the material will become absorbed by the star, but much of it will remain for a time in the form of an

immense atmosphere surrounding the star destined to become a sun to its own solar system. As this atmosphere rotates and condenses, it will tend to form concentric rings, which will become separated from one another something like the rings of Saturn. It is thought that the matter which composes these rings will gradually begin to coalesce and form nuclei which will sweep up the material of the rings and thus form a family of planets following nearly circular orbits around the star, which now becomes the sun for these newly formed satellites. Thus the planets will be rich in chemical elements newly formed in the stellar explosion that was the Supernova.

When this idea was first presented by modern science, it was the cause of rejoicing among many theosophical students, for while much was lacking in the theory, it was nevertheless a giant step in the direction of the teachings of the Ancient Wisdom. Though it deals with one aspect only, and for that reason is necessarily incomplete, it is nevertheless a great advance over some theories which had been widely taught even as recently as twenty years ago.

The incompleteness of all the scientific hypotheses lies in the fact that in every instance the explanation of certain cosmological processes is from a purely mechanistic viewpoint. One could not expect Science to do otherwise than present a mechanistic picture. Philosophical and religious concepts lie outside the province of modern science. However, if we were to be content with a scientific explanation alone, it would be like saying that the only explanation for a letter being written is that a man sat before his typewriter and moved his fingers in a certain predetermined manner (the only manner possible which would have resulted in the letter in question), and that this motion activated the mechanism of the typewriter. The explanation does cover one aspect of the writing of the letter, but it would be absurd to think that this was the whole explanation. Nor need we labor the point here, because the other factors are self-evident.

The case is somewhat similar in the presentation of modern scientific ideas as to the origin of the universe and its component parts. In the chapters which have gone before, we have attempted to present some of the teachings of the Ancient Wisdom concerning the origin and the building of the Earth Chain. These teachings do not run counter to the scientific teachings as to the origin of this physical globe. There is no religion higher than Truth, and a scientific truth must fit into the general picture — provided it actually is a statement of truth.

Thus, insofar as the explanation of the appearance of the planets around a star is concerned, the modern scientific hypothesis has some very remarkable features. One of the most interesting is the concept that the materials of which the planets were formed are the result of the mighty nuclear processes which were a part of the explosion of the supernova. It is quite an idea to consider that the very materials of which our bodies are formed were once at the heart of a star!

Let us then give a brief statement of but one aspect of the relationship that exists between the Sun and his family of planets, as explained in the deeper teachings of the Ancient Wisdom.

There is a constant give and take between the Sun and the Planets, not only in the sense of the transfer of particles emanated from the Sun, which phenomenon results in the appearance of the Northern and Southern Lights, but also in electrical storms, and in the many growth processes which maintain life on the earth itself.

There is another instance of give and take between the Sun and the Planets which might be expressed in this manner: The materials of which the sun is now composed

are destined to become the materials of which planets of a future solar system will be formed, which planets will revolve around a star not yet known.

The planets as we know them will eventually become absorbed into the Sun.* However, this absorption by the Sun will not occur before another five billions of years shall have passed. Such absorption need not necessarily imply that the orbits of the planets are becoming smaller so that the planets will eventually be so close to the sun that they will fall into it. It could mean that the Sun will expand so that in time it will engulf some of the planets. This idea does not run counter to modern scientific thinking; the reader is referred again to *Frontiers in Astronomy*, p. 140 *et seq.*

A step further into the teachings of the Ancient Wisdom will lead to the understanding that, since the planets are the outer manifestations of cosmic entities, these "planetary spirits," as H. P. Blavatsky calls them, themselves partake of the Solar Essence and they too will be absorbed into the living vital essence of the Solar Hierarchy in due course of time. Entities which are now a portion of the Sun's own constitution, not yet evolved to the point where they can undertake individualized cosmic existence, will in the far distant future themselves be Planetary Spirits in their own right and will manifest as Planetary Chains of the far distant future.

It is because some of the more recent concepts held and explained by modern Science point in a remote way to these exceedingly recondite teachings of the Ancient Wisdom, that it is a source of real joy to the earnest student when he reads of the continual advancement in modern research and thinking. This cannot be a scientific discussion, however; we must confine ourselves to the purpose in hand, but it would be tempting to take the time to discuss the far-reaching discoveries which are being made almost daily.

Another scientific book which would be well worth the time to study is titled *Toward a Unified Cosmology*, by Reginald O. Kapp. The author gives some exceedingly well conceived ideas on the nature of the universe and the origin and extinction of matter. He maintains that if one were able to create a complete vacuum, atoms of hydrogen would appear in the course of time because matter is continually appearing. He relates this appearance of matter to the effect of gravitation in a fascinating manner. Here again a modern author presents ideas which point to the teachings of the Ancient Wisdom.

In brief, the teachings state that atoms are continually entering this physical plane through what are termed Laya Centers. The word *laya* is from the Sanskrit verb-root *li*—to dissolve. Thus Laya Centers are dissolving points through which matter can and does leave this physical universe to manifest on other planes of consciousness; and *vice versa*: they are the gateways through which matter enters this physical plane from other planes of consciousness. This ties in with the teachings about the Lokas and Talas previously explained.

Thus we see that not only are the atoms extremely active in the sense in which science explains their activity, but there is activity of another kind, which involves the transfer of atoms from one plane of consciousness to another—in and out of this physical universe.

What, then, are these atoms?

*It might be stated that from the standpoint of the Rounds and Races, the older planets are closer to the Sun than are the younger ones.

Chapter XIX

NATURE'S WORKERS

I can remember the first phonograph I ever saw. It was one of those wind-up monstrosities with a large horn, and although by modern standards the tone could not have been called hi-fi, yet among my earliest recollections it still stands out as one of the greatest wonders of my boyhood.

Compare our modern electronic instruments with these early machines. We have indeed come a long way; where once the needle moved a celluloid diaphragm in order to produce the sound waves, now electrons do the marvelous work. Whether they be working in a radio tube, or in a transistor, the enormous complexity of their behavior staggers the imagination. Although we understand and can apply the laws of electricity, and although we have succeeded in making these electrons work for us, our ability to visualize the motions of these tiny particles is so inadequate that we fail if we try to give a meaningful picture of it all.

And now think of the many other applications of electronics. Think of the computers which can solve difficult problems with the speed of lightning. Think of the complex instruments in the earth satellites.

Are the electrons aware of what they are doing for us? No thinking person would suggest that they have any knowledge of the tasks they perform. They are all acting automatically. Because their behavior is predictable, we can set up the required conditions and they will faithfully follow our instructions. Nor do they ever tire of working for us. They are always instantly ready to carry out the most complicated tasks.

In all of this we have something more than a mere illustration of a point. We have an instance of a natural phenomenon. Because electrons serve as messengers for us, in that they can be made to carry intelligent ideas across thousands of miles of space; because they can perform work that is beyond our human capacity, they are in the truest sense unconscious servants of the human race. They are carriers of intelligence, albeit they act automatically. But it is we who must have the intelligence to set them to the tasks that we wish to have performed.

From the standpoint of self-awareness, the electrons, and the many kinds of atoms which form the physical universe, may all be said to exist in a dormant condition although, paradoxically, they are the most active things that we can imagine. Their activity is not self-impelled, however, and they therefore serve as obedient and highly useful tools.

Theosophy teaches that all the physical atoms are destined to become conscious entities in due course of time. How they will reach this more developed condition and when is beyond the scope of our knowledge, but the important thing for us to learn at this time is that although they seem to be dormant in respect to conscious awareness of themselves or of the environment which they help to build, they have a far more important role in Nature than that which was just described. They are, indeed, taken up and used by all living things. The specific uses to which Man can put them are extraneous to their real destiny; such uses were only mentioned as a convenient way in which to introduce this aspect of our study.

The primary role of the hosts of atoms, and that which makes them most useful in Nature, is that they are the means by which the Monads build for themselves living *bodies* in which they may function during incarnation. Eventually these bodies are discarded, and the atoms which formed them may then pass on to help other entities in forming for themselves new bodies. Thus it would be difficult at this time to say of a certain atom of carbon, for instance, that it properly belongs in the mineral, vegetable or animal or, again, the human kingdom. It would seem to depend upon prevailing circumstances and what type of body it is helping to build at the moment. It is the imbodyed monad which identifies itself as belonging to one kingdom or another, not the atoms of which its physical body is formed. Furthermore, it is the monad itself which gives life to the body it has built, rather than the atoms of which the body is composed. Apart from these physical atoms, it is nevertheless true that every entity does emanate hosts of life-atoms belonging especially to it; but that is another story which will be explained later in this chapter.

Whereas we have been careful in our studies to make it clear that we are speaking of Monads whenever we have considered such topics as the Globe Chains, now the time has come when we may consider the teachings concerning *bodies*. It will become necessary to expand the threefold concept so that it takes on a more complete manner of presentation, to wit: Gods, Monads, Souls, Bodies and Atoms. From the Gods proceed the Monads; from the Monads are emanated the Souls, as vehicles of the Monads; and the Souls embody themselves in their own appropriate vehicles which we call Bodies; and these last are built of Atoms. But we must remember that the bodies themselves are much more than mere aggregates of atoms. If it were not so, we could fashion any kind of body we wished to in our chemical laboratories and it would come to life. Yet who has ever succeeded in doing this? Even though we might conceivably collect together all the elements needed in a human body and construct it in every detail, could we then infuse a soul into it? Assuredly not.

Perhaps at this time we should clarify the meanings of certain terms. We have already covered in some detail the teachings concerning Gods and Monads, so that little need be said here except to remind the reader that we emphasized the fact that every Monad is dual in nature and that this duality was expressed in the teaching about the "souls and egos." The energetic aspect of the Monad is the Ego, and the vehicular aspect was shown to be the Soul. This is not the generally accepted definition of the word "soul," but we would like to point out that in the dictionary nothing definite is given as to the nature of the soul, while in theosophical literature the word has a very specific and technical meaning: It is regarded as a vehicle of the egoic part of the Monad. It was further explained that there are a number of Monads in the human constitution and that therefore there are a number of "souls and egos." Thus, there

might be said to be the spiritual soul enshrining the spiritual ego, a higher human soul enshrining a higher human ego, a personal soul enshrining a personal ego, and so on to the vital-astral soul enshrining the vital-astral ego. There is even the physical monad, itself dual by nature, and its "soul" is more intimately related to the physical atoms than are the souls of the other monads in the human being.

Are there, then, atoms which are appropriate for the building of the bodies of the higher souls in Man? The teachings assert that there are. These other grades of atoms, non-physical, and therefore unknown to modern science, go by the general term of life-atoms. There are life-atoms of many grades; it might be said, and quite truly, that even the physical atoms constitute one of the grades of life-atoms.

Just where did all these life-atoms come from? From many sources, but it might be said, speaking generally, that they originate in that aspect of the Universe called Cosmos. To clarify the subject, let us review the Table given in Chapter VIII:

Chaos.....	Gods
Theos.....	Monads
Kosmos.....	Atoms

Recollect also the symbol of the three-axis Svastika or Thor's Hammer, one arm of which represented for us the study of the Gods, the second arm the study of the Monads, and the third arm the study of the Atoms, in which we are now engaged.

Now, when we postulate these three divisions, we are not relegating them to different areas within the Universe. Naturally they interpenetrate one another on all conceivable planes of consciousness. We might say, however, that their degrees of consciousness differ on the different planes. It is on the highest planes that the Gods are fully conscious; on the intermediate planes they are less so; and on the physical plane they are latent, as for instance, the Gods are latent within us humans. We have to make them manifest by our own efforts, and this ultimately is the story of Initiation.

Similarly, there are Monads on all the planes of consciousness, and likewise there are Atoms to be found everywhere, and it follows that there are atoms of many kinds. Although numerous beyond imagining, the physical atoms represent only the smallest part of the picture, as we have already pointed out.

Probably the best manner in which to picture an atom is in the role of a *life-carrier*, and even this thought is not a simple one. It can and does mean that each atom is destined for great adventures of its own, evolutionally speaking, when in unthinkably long ages hence it will have found its place as a monad among other monads, working out its destiny as are the monads of the present time.

Aside from this meaning of life-carrier, there is the role that each atom plays, along with hosts of its fellows, in building bodies which enshrine the entities that have already gone relatively far along the evolutionary pathway. So, in this sense also the atoms are carriers of life: they help to enshrine the consciousness which uses them, albeit temporarily, for the fashioning of its living body. Once the body dies, as we say, the atoms are free to go their own way, seeking new adventures.

Yet a third understanding of the meaning of the term "life-carrier" is to be found in the teachings. Strange as it may sound to some readers, it is nevertheless taught in

the Ancient Wisdom that each atom, resembling as it does in certain respects a miniature solar system, has its own organism of planetary bodies, which pursue their own evolutionary cycles in a manner somewhat similar though not necessarily identical with the processes of the Rounds of the Planetary Chains.

Think, if you like, that you can put your imagination upon an electron whirling around the nucleus of an atom in your own body. You might find your place momentarily within a race of entities that is pursuing its own course of evolution, and this electron would be the planet on which you live. The nucleus of the atom would be its sun, and the other electrons would be other planets within its solar system. The nearest atoms would be like the stars to it, and all the atoms within the cell in which it finds itself would comprise its own island universe or galaxy. Is this a flight of fancy too wild to be given any credence? Well, others have engaged in similar imaginings but without the advantage that the Ancient Wisdom has to offer.

Science made a great advance when it discovered the nature of the atom and likened it to the structure of the solar system. It soon found the difference, however, and declared that the similarity is not very good after all. However, from the standpoint of the Ancient Wisdom, the concept of the atom according to modern Science gives us some startling clues as to the occult nature of the Solar System; and if our scientific instruments could probe into the real structure of the Sun and his family of Planets, there would be some surprises in store for us. The Ancient Wisdom teaches that the Solar System consists of far more than the Sun that we see and the nine or ten planets circling around the Sun at enormous distances from it. It sees the intervening spaces as filled with planets, by far the greater number of which are totally invisible and beyond the reach of even the most refined astronomical instruments. Eventually we shall inquire into the nature of the Solar System, and the study will be more thrilling than any that we have as yet attempted.

By way of elaborating the teaching that the Gods emanate the Monads, and the Monads do indeed emanate the Atoms, let us make clear that it is likewise true that each class on its own plane emanates the substances of which it fashions its own sheaths of consciousness. A parallel teaching was explained wherein it was shown that while each of the human principles does emanate the one or ones "below" it, nevertheless each of the principles also emanates its own sheaths of consciousness on its own plane. On this concept rest the Teachings about the Tattvas.

The following quotation from G. de Purucker will throw more light upon this highly recondite theme (*Fundamentals of the Esoteric Philosophy*, pp. 331-2) :

"Now, take any one universe or Hierarchy as an instance of the general rule. Any universe is infilled with beings finding their origin and taking their rise in the Summit, the Acme, the Seed in another sense, which is, so to say, the god of that Hierarchy; and this god, at the beginning of any period of manifestation, this spiritual elementary Being, casts off from itself, or throws forth from itself, evolves from itself, brings out from itself, a multitudinous series of hierarchies consisting of less or inferior beings; beings less in spirituality and dignity than itself. They are, as it were, the thoughts that the God or 'Kosmic Primal Thinker' thinks. Take the instance of a thinking human being, as an analogy. He thinks thoughts. Each thought has its own life, each thought has its own essence, each has its own course to run. Each thought is based on a particular vibration, as it were, using words common to our understanding today. Each has its own particular svabhâva or intrinsic essential nature, which is its individuality.

So this Summit of the Hierarchy 'thinks thoughts.' Now I do not mean to say that this Summit is a human being or a god-being, which thinks thoughts as we do. The figure here used is an analogy. As a man thinks thoughts, and thus fills his atmosphere around him with these living beings, these winged messengers called thoughts, so the Primordial Elementary Being, the Summit, the Seed, the First to issue forth from the bosom of the infinite Mother, casts forth from itself these parts of itself; these monadic aggregations, these kosmic 'thoughts.'

And what are these first emanations? They are what the Ancient Wisdom called the gods. And these gods in their turn send forth from themselves other multitudinous series of beings, less than they — less in dignity, less in grandeur, less in understanding. and these secondary emanations or evolutions are the *monads*. And these monads, as they pursue their way down the Shadowy Arc, in the beginning of a *manvantara*, in their turn cast forth from themselves, in identically the same way and on the same line of action. other entities, less than they, forming still more outward Hierarchies, more material intelligences; and these tertiary emanations are the *souls*. And the souls, as they pursue their way down, exactly as their higher progenitors did, cast forth from themselves, think forth from themselves, send forth from themselves, evolve forth from themselves, beings still less in wisdom and spirituality and dignity and power than they. And these are the *atoms*—but not the physical atom. Let us cast that idea out of our minds instantly. The atoms of physical science are really molecular aggregations of atomic elements only, existing on the borderland of the astral plane."

We have reached the point in our study where we must be reminded of the *Tattvas*, which, as it was explained, are the stuffs or materials of which the various planes of consciousness are built. So we find that the picture so clearly drawn for us by G. de Purucker helps us to grow into the understanding that it is ultimately in and through these *Tattva-Bhûtas* that the life-atoms emanate from the souls. And because they spring directly from these *Tattvas*, without any intermediary of any kind, they are therefore to be called Elementals in the true sense of the word. They are elemental lives.

There are differences in degree only, but not in kind between the life-atoms produced from the *Tattvas*, cosmically speaking, and those produced from Man's own *Tattvas*, which we have learned to call his Principles. Thus it is that the unnumbered hosts of life-atoms that any individual human being has produced will belong to him, and will be a part of his own evolutionary stream of consciousness, however far they may roam at times; to each one of us belongs an unthinkable numerous family, many more than any one of us has within his constitution at any one time. They are coming and going constantly and yet they belong to him. This is true of the entire human race, as it is true of the Animal Kingdom and the Plant Kingdom, for that matter. And just because they function as part of the evolutionary stream of the entity which at first emanated them, even though temporarily entering into the bodies of other members of his own or any other kingdom, nevertheless they are completely at home when they are forming a part of their own parent-entity.

This concept gives us some new insights into the interdependence of all life. We could not live without one another, and even though this seems to be a function of nature that is sustained without our own conscious effort, nevertheless it is fundamental to the processes of human, animal and plant growth. It would be interesting to know what some people with strong prejudices against members of other races would think if they came to understand that they play host to life-atoms belonging to the very individuals that they despise!

This exchange of life-atoms is not confined to the Kingdoms on this Earth; there are also cosmic life-atoms, children of the Tattvas which produced them, which make their own mighty circulations of the Cosmos in and through the various planes of being. The processes of the Rounds and Races point to just this fact of nature. We all were once life-atoms of Nature in a cosmic sense, and as such we still carry with us the stamp or Svabhâva of the Tattva which produced us; but since our first awakening we have traveled far and wide. If this theme were developed further, it would lead us into some of the most recondite of the teachings concerning the adventures after Death, and we can do no more than make hints and allusions to these deeper teachings at this time.

What a grand feeling it must be for any man when he realizes for the first time that he started out as a life-atom of some lofty entity for which we can give no better term than to say that it was a God. To think that any one of us might have started out as a thought in the mind of some Cosmic Divinity!

If this idea is consistent with the teachings of the Ancient Wisdom, and the writer believes this to be so, does it not follow that even we, imperfect as we are, are collectively one of the principles in the constitution of a Higher Being? Would this thought not place us within the life-currents of the Divinities themselves, bound to them with unbreakable ties? Do we not therefore benefit greatly for the reason that their life flows through us? And is it not possible that even they could be benefited by us, once we have learned to live according to our highest possibilities, just as any man is benefited by inhabiting a healthy body?

Chapter XX

THE CIRCULATIONS OF THE COSMOS

We shall endeavor now to carry this study to the very frontiers of human understanding. Fragmentary as certain teachings are in the form in which they have been given to us, they are nonetheless very much alive in the power they contain to lift the human consciousness above its limitations into those realms of pure thought wherein it can breathe the air of spiritual freedom.

We have laid the foundations for this new aspect of the study in all that has gone before, and we are now equipped to take wing in imaginary flight into the spaces of space and make straight for the heart of the Spiritual Sun. Having left our organs of sense behind, we are no longer hindered by the reports of sight, hearing, touch, taste and smell. We may well laugh at ourselves for having believed what our senses once told us about the Sun, the Planets, and the spaces within the Solar System. Understanding somewhat better the nature of the physical Sun, we perceive the Solar Splendor of the Divinity at its heart, and we can understand to a degree the teaching of the Ancient Wisdom which tells us that everything is alive and that each star within our galaxy is but a unit in a living organism, the heart of which is the Boundless itself.

Since even in our flight we must attach names to things, we have learned to call the Heart of the Universe by the name of Brahman, in which dwells our own great Solar Divinity which goes by the name of Brahmâ. Indeed, this is the name given to the Divinity at the heart of any star; that is why we say that within the divine essence of Brahman there are myriads of Brahmâs.

Our imagination can lead us no farther than to a contemplation of our own Brahmâ, however; and as we make our flight to his home at the heart of the Sun, we see his family of Planets in a new light. As explained before, each planet that we see is but the visible representative of a cluster of Globes, such cluster forming what we have learned to call a Globe Chain, or a Planetary Chain.

Because we are now seeing with a larger vision, we are going to imagine a number of these clusters located in the sky within the general vicinity of the Primary Globes which we recognize as the planets Mercury, Venus, Earth, Mars, and so on. The word primary is used merely to indicate that these are the worlds with which we entered upon our study of the several planetary chains. As far as this present study is concerned, we are

going to number the Sacred Planets as 7, leaving further expansion of the teaching to the intuition of the student.*

Astronomy teaches, quite correctly, that the Sun is the center of the Solar System, and, confining itself as it does to the phenomena of the physical universe, it scorns any reference to Astrology. The Ancient Wisdom is equally impatient with *pseudo*-astrology, which is often used for mere fortune-telling by astrologers who know little if anything about the nature of the Universe and of Man and cannot really relate the two. In fact, so little is known of the implications of the relationship between a human being and the planets that one could hardly expect anything more from modern Astrology than the form it usually takes.

All that has gone before in these studies may be called an introduction to Esoteric Astrology, even though nothing has been said about the Signs of the Zodiac, planetary aspects and all the other terms that are used in casting horoscopes. Here we have attempted to delve into the inner structure of the Solar System and to discover the foundation upon which the superstructure of enlightened Astrology could be built. Such a science would not be a hit-or-miss affair but would carry with it and confer upon the genuine astrologer immense knowledge, and hence enormous power for good. The time may come when we shall discover some of the all-important keys. In these lines of study, everything seems to fall into place at the right time, and we must move forward step by step.

It is significant that everyone sees the universe as though he were at the center of it. It is no wonder then that the early astronomers thought that the universe was geocentric; and this is the viewpoint still assumed by Astrology. Astronomically it is all wrong, but from another standpoint, there are certain keys to truth which can be discovered in the geocentric viewpoint. It goes back to the idea explained previously that we see the entire universe as a gigantic illusion, and we must guide our mundane lives by the physical illusions which frame our earthly existence. Knowing that the Earth spins on its axis does not make us feel its motion; and we still govern our lives by the apparent rising and setting of the sun.

So in this next step in our study we are going to adopt the geocentric viewpoint as we lift the spiral diagram from Fig. 11 and superimpose it upon a diagram of the Solar System. The orbits of the planets are of course drawn around the Sun as they should be, but the spirals (which do not represent orbits) will be superimposed, and the central starting-point of the curves will be the Earth itself. These spirals may now be thought of as *connecting curves or pathways* joining the orbits of the various

*There is one aspect of our studies that can become quite confusing. So we emphasize here what has already been explained in earlier chapters: We number the Globes of the Chains sometimes as though they were seven and sometimes as though they were twelve, depending upon the level of study we are undertaking at the time. It is much like the case of a young student learning arithmetic who is told that some day he will learn other methods of working with numbers, and that the higher branches of mathematics are known as Algebra, Trigonometry, Calculus, and so on. This does not make his arithmetic wrong; it merely means that this is the aspect of mathematics that he can best grasp at this time. Similarly with the teaching of the Planetary Chains: To speak of the Globes as being seven in number is not wrong; but a further advancement in the study brings other factors into the picture, and the Globes not counted among the seven are of such a different character that there must be no confusion between the lower seven and the upper five.

Thus, while we are not going into any great detail as yet, nevertheless we should become accustomed at this time to recognize that these clusters of Globes that we imagine to be in the sky in the vicinities of the Planets that we see, are in every case composed of 12 Globes. Not only is this true to the deeper teachings, but it fits in perfectly with the mathematical aspects of Symbolism as developed in this book.

heavenly objects. See Fig. 12. Naturally this cannot be laid out to scale; as a matter of fact this is never attempted in portraying the solar system in the text books. The shapes of the evolute and the involute are also necessarily altered as well, but this detracts not at all from the ideas that are to be set forth. In these matters we are dealing with ideas and not with exactness in form.

We are ready now to identify the circles taken from Fig. 11, having modified their relative sizes, as explained, in order to show the following interesting result:

1. The first circle reaches from the Earth to the orbit of the Moon. It is internally tangent to the Moon's orbit.

2. The second circle reaches from the orbit of the Moon to the orbit of Mars. It is tangent externally to the Moon's orbit, and tangent internally to the orbit of Mars.

3. The third circle reaches from the orbit of Mars to the orbit of Mercury (on the far side of the Sun). It is tangent internally to the orbit of Mars, and externally to the orbit of Mercury.

4. The fourth circle reaches from the orbit of Mercury to the orbit of Jupiter. It is tangent externally to the orbit of Mercury, and internally to the orbit of Jupiter.

5. The fifth circle reaches from the orbit of Jupiter to the orbit of Venus (again on the far side of the Sun). It is tangent internally to the orbit of Jupiter, and externally to the orbit of Venus.

6. The sixth circle reaches from the orbit of Venus to the orbit of Saturn. It is tangent externally to the orbit of Venus, and internally to the orbit of Saturn.

7. The seventh and outermost circle extends from the orbit of Saturn to an orbit beyond. This orbit beyond represents not that of Uranus, as one might think, but the occult boundary of a certain section of the Solar System setting it apart from the remainder of the planets known to Astronomy, to wit, Uranus, Neptune and Pluto.

This division of the planets into the two groups is done here on the basis of our studies which have brought to us the understanding that there are certain of the planets known as the Sacred Planets, and that these belong to a closely knit group bound together by karmic ties of destiny. It is very significant that the seven circles derived from the Tetraktys should of themselves bring about this separation of the planets into the two groups.

It is virtually impossible to tell anything briefly about the Sacred Planets because any understanding of them involves a foundation of teaching that would fill volumes. Suffice it to say that it is these particular planets that are involved in the processes of Initiation. They are also the group of planets that had a very special part to play in the building of the seven Globes of the Earth Chain, as explained earlier.

For the time being let us say that the outermost of the circles represents the Sun itself, in a mystical sense — not viewed as a star at the center of the Solar system, and of insignificant size as compared with the orbits of the planets, but rather as that mighty field of many forces which encompasses the entire Solar System. In the Eastern Philosophy this is referred to as the "Egg of Brahmâ" and includes everything within the Solar System, worlds invisible as well as those which are recognizable to our senses.

Now if we list these celestial objects in the order in which their orbits have been touched by the circles, we find that we come face to face with a remarkable clue to the Mysteries, to be found in the days of the week. It had better be mentioned first of all that the Roman gods were associated with the days of the week, as were also the Scandinavian gods. The English names point to the Scandinavian mythology, whereas the names in French and Spanish point mainly to the Roman mythology. However, there is a direct correspondence between the Gods themselves as portrayed in the Scandinavian and in the Roman mythologies. They are really the same Gods but with different names, according to the races which honored them.

First of all, we shall give the English and the Scandinavian names for the days of the week, then the names of the Scandinavian Gods from which they are derived, and finally the names of the "Seven Sacred Planets."

Monday	Måndag	Manen	Moon
Tuesday	Tisdag	Tiw (God of War)	Mars
Wednesday	Onsdag	Wotan	Mercury
Thursday	Torsdag	Thor	Jupiter
Friday	Fredag	Freya	Venus
Saturday	Lördag	?	Saturn
Sunday	Söndag	?	Sun

The French and the Spanish names of the days of the week are also very interesting; these will be given with the corresponding Roman Gods which are also the names of the Sacred Planets:

<i>French</i>	<i>Spanish</i>	<i>Gods and Planets</i>
Lundi	Lunes	Luna, the Moon
Mardi	Martes	Mars
Mercredi	Miércoles	Mercury
Jeudi	Jueves	Jupiter
Vendredi	Viernes	Venus
Samedi	Sábado	Saturn
Dimanche	Domingo	Sun

Notice that due to the Christian influence and customs, the correspondences break down for the names of Saturday and Sunday, although the English words for these two days quite evidently correlate with Saturn and the Sun.

One branch of the more advanced studies deals with the Law of Correspondences. In this study we find that there are occult correspondences between colors, musical tones, the planets and the signs of the Zodiac, the cosmical elements, the principles of the human constitution, the days of the week, and other things as well. A very small glimpse of this remains even to our day in the names of the days of the week.

It is with full knowledge that one exposes oneself to ridicule showing in writing or speaking that he takes these ideas seriously. Nor can he make a good case for himself by demonstrating an acceptable basis for this study. And of course H. P. Blavatsky was ridiculed, as have been other exponents of the Ancient Wisdom. This

is one reason for caution in the exposition of these ideas; it is useless to attempt to explain them to unsympathetic minds.

The fact remains that there is an occult language, and these teachings are the letters of the alphabet. As students we are privileged to learn the letters, and if we apply ourselves to the primary lessons, we may even learn to spell a few simple words. However, it is not possible for us yet to use the words of the occult alphabet to form really constructive sentences. The mystic process of Initiation confers upon the Initiate the power and the right to work creatively with the occult language; his true work is beyond the ridicule of the world for the simple reason that it is unknown. We students are in the interesting position of having, on the one hand, the unspeakable privilege of setting down the teachings for those who will listen and, on the other hand, the well-nigh thankless task of trying to explain matters that sound incredible if viewed by the standards to which the world is accustomed. Nevertheless we feel that we are amply rewarded if but one or two will listen and understand.

One point of contact with the people that we would reach is the fact that in all the great religions there are stories (usually accepted literally by the adherents of those religions) that would be considered unacceptable to the mind that requires everything to be weighed against logic. The simple statement of the Christian belief that God created Man in his own image is a case in point. If we wish to analyze this with the brain mind, we might ask: Which man? Which nation? Was it early man? Was it modern man? A religious thought breaks down before a barrage of such questions. But we miss the principle of the teaching in the act of framing these questions. Physical man was never meant. The saying is a deeply mystical one, full of esoteric meaning and strictly in line with the teachings of the Ancient Wisdom.

The mystical approach is all-important and should not be abandoned just because it cannot be evaluated on logical grounds. It is the only basis on which the teachings to follow can be accepted. It establishes a footing that can neither be proved nor disproved. It appeals to certain faculties that go far beyond the brain-mind; without these we find ourselves confronted by an impenetrable wall, a barrier to our further progress.

That is why we are taking an imaginary flight through the spaces of the Solar System. No modern scientific device is carrying us. We are propelled by another power — that power which speeds the great rivers of *lives* from planet to planet, and from planet to Sun. We have become a part of those rivers. They are streams of consciousness in the truest sense of the word, the vital streams which are the Solar blood, vitalizing the vast organism which we call the Solar System. These streams nourish not merely the physical globes which we recognize with our senses, but all of the Globes of all the Planetary Chains. That is why with our awakened vision we see them all; and the sight is wonderful beyond telling. The diagram that we have used is nothing more than an aid, even though it carries in its very outlines potent keys. If we wished, we could expand it to take in the still deeper teachings which will be briefly explained in the following chapter.

Of what are these living streams composed? In part, of the many classes of life-atoms of which this section of the book is treating. It is not the whole story of course, but it is sufficient to carry out our theme, and the wonder of it is that it ties in with the studies of these geometrical figures which form the basis of Mathematical Symbolism.

Chapter XXI

COMPLETING THE CIRCLE — THE UNIVERSAL SOLAR SYSTEM

Our recent journey into the spaces of the Solar System has helped to build a picture for us that is in keeping with the teachings of the Esoteric Philosophy, wherein we have come to understand that everything is alive. Each planet is really a Chain of Globes, and they are all living entities owing allegiance to the Sun, which is the ever-living heart, ever serving and sustaining his planetary family.

We must now explain more specifically certain of the teachings which will bring to a conclusion this portion of the book, and this aspect of the Doctrine of the Spheres will help us to see the Solar System in a new light.

We must remind ourselves that of the many planets we see, certain ones are studied with special interest because they are connected by karmic ties which set them apart as a group. These are the Seven Sacred Planets: Mercury, Venus, Mars, Jupiter and Saturn, and the two secret planets which go by the names of the Sun and Moon for the reason that these two visible objects, although no planets themselves, provide meaningful symbols and therefore give their names to these two planets whose true names and nature are known to the Adepts. Uranus, Neptune and Pluto are not numbered among the Sacred Planets because, although belonging to the Solar System in a general sense, they do not belong to this group in particular due to the fact, as already suspected by modern astronomy, that they did not belong to the Solar System in the first place when it was formed, but have been captured. It is interesting that this term is used by modern astronomers, and it is right in line with the teachings given us by H. P. B.

Why, then, is the Earth not also numbered among the Sacred Planets? We have learned that it is because, according to the teachings, these seven Sacred Planets have a direct and wonderful relationship to the Earth. In a sense it might be said that the Earth is their Child, for the reason that they all helped to build it. We must stress again that the physical planets are not meant here, obviously, but it is the indwelling Planetary Spirits that are involved. Each and all of them had a most important part to play, for, in the words of Gautama the Buddha, "All things contribute to all things." Their help was in the nature of guiding the armies of monads as they performed their work of constructing the Globes of the Earth Chain during the First Round; in all probability they still do guide and watch over the denizens of the Earth during their peregrinations through the Globes in the course of the Rounds and Races now going on.

We have a very meaningful lesson in the phenomenon of white light being broken into the seven prismatic colors. Whenever we see a rainbow, for instance, we are witnessing a phenomenon with deeply occult implications.

It should be understood that the seven Planetary Rectors which seek imbodiment as Globe Chains, and which form this group known as the seven Sacred Planets, are like prismatic colors emanating from the white light of the Solar Consciousness, and

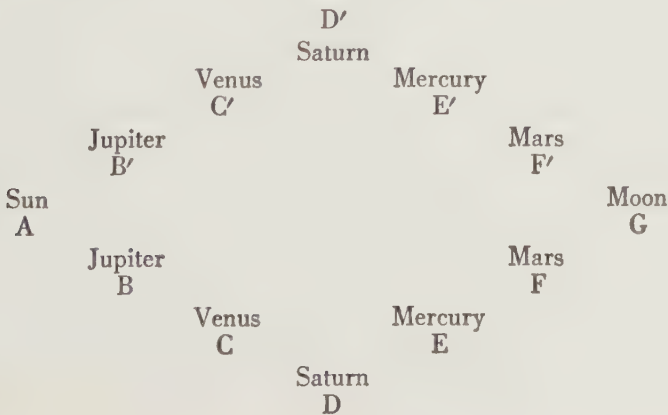
it is natural that they should differ one from another, just as the colors do. Indeed, each one of the planets has its own characteristic Svabhâva, while yet owing spiritual allegiance to the common parent, the Solar Intelligence.

This is exactly in line with the teaching previously elaborated, which shows how the One becomes the Many: how each entity sends forth rays of itself which are entities of a somewhat less lofty type, and how this process is continued ad infinitum. Therefore it is in line with this sublime teaching that we are to consider that each one of the globes of any chain is itself the imbodiment of a global entity, a ray from the Planetary Spirit or Rector which is the hierarch of its own planetary system of globes.

So if we wish to think of the Planetary Rector which is the indwelling consciousness of the Earth Chain as a whole as the white light which emanated its seven rays, then each such prismatic ray will be such a Global consciousness. And it is natural that these should differ one from another in exactly the same manner as the Planets differ among themselves.

Now it is these differences between the colors, representing the differences between the natures of the Planetary Spirits on the one hand, and the Global Entities on the other, that bring about certain similarities of nature, or correspondences, between the Planets and the Globes of the Earth Chain. Green, for instance, a component of sunlight, is not fundamentally different from the green of a fluorescent rock. Thus, the intelligence of a certain Globe, Globe D for instance, might be quite similar in type to that of one of the Planets, Saturn for instance. On this idea rests the teaching about Correspondences, which presents one fascinating aspect of esoteric study. Whereas it may have little practical value at this time for the student to know these correspondences, yet they are to be regarded as the letters of the occult alphabet. The ability to form words and combine them into meaningful sentences will mark the awakening of true spiritual powers; it is a part of human destiny that this shall come about in due time.

Here then is the more complete chart of correspondences (involving as it does the five higher Globes) as given by G. de Purucker in *Fundamentals of the Esoteric Philosophy*, p. 487. You will see that this paradigmatic form shows that all twelve of the Globes have their correspondences, and that except for the secret planets for which the Sun and the Moon stand as symbols, the Sacred Planets have two corresponding globes each. At our present level of understanding, we must see each Planet as dual in character, each one closely related to, or governing as we say, a manifested Globe and the unmanifested Globe bearing the same letter.



If this teaching were expanded still further, one would find that while each of these correspondences points to the dominant influence, the other planets all have their part to play in each and every one of the Globes of the Earth Chain. Thus there are the correspondences between the Sacred Planets and the Rounds of the Chain and, furthermore, between the Planets and each one of the Root-Races on any one of the Globes, and so on.

This is the aspect of Esoteric Astrology which has real meaning for the theosophical student, for it deals with consciousness itself. Indeed, it can be further expanded to show how each one of us is related to this mighty scheme: Every one of us is related to one of the seven Sacred Planets by reason of his own essential Svabhâva, which is the same type as the Svabhâva of the Planet with which he is connected by occult ties of destiny. This relationship may or may not show itself in any particular horoscope. The ruling planet, so called, may pertain to one particular incarnation only, and may indicate certain circumstances into which the individual was born. The occult correspondence may be hidden and is not to be ascertained by the ordinary methods used in astrology.

We are prepared now to carry our study yet a step farther. We now understand the pattern whereby, like the white light giving rise to the prismatic colors, the hierarch of a system gives rise to its prismatic rays which are entities seeking their own means of self-expression. So let us probe into the mysteries of the Solar System as taught in the deeper teachings of the Ancient Wisdom: We shall see that this Sun, which we acknowledge to be the Hierarch of the Solar System, is but a ray of a Solar Intelligence of a super-spiritual type, a super-Solar Intelligence, if you like. And thereby hangs a tale. It is that of the Râja Sun, referred to occasionally by the Mahâtms and H.P.B. We are now to learn, therefore, that there is a Solar System vaster by far than that which we have been accustomed to studying. Within the confines of space enveloping our known Solar System, which is mystically known as the Egg of Brahmâ, there are innumerable planetary chains. Certain of these Chains have specific karmic ties with one another; others do not, but not unlike the "captures" referred to earlier, they have their place, though their destiny is general rather than particular, in the interest they have for us in our present studies.

To be more specific then, our family of Sacred Planets forms but one group of such families of planets. In all there are seven: each such group constitutes a family of Sacred Planets whose destinies are being worked out along similar lines to those of our own group. Each such "sacred" group has its own Sun, its own Hierarch of the system, and each such group consists of seven planetary chains, functioning, as said, along lines similar to our own but all of them on other planes of consciousness and therefore beyond the reach of our understanding. In fact, they are far more remote in terms of planes of consciousness than are the Globes of our own Chain, and yet their karmic destiny is inextricably linked with ours. So now the Super-Solar Intelligence which is the Râja Sun is to be likened to the white light, and the seven prismatic colors are taken to represent the seven Solar Chains, chiefs of their own systems of planets. Thus we see that this scheme, which has been constructed in order to enable us to grasp the teaching, really originates deep in the recesses of Cosmic Consciousness.

This aggregate of Planetary Chains, 49 of them in all, in seven groups of seven, is known collectively as the Universal Solar System—not to be confused with our Galaxy. It might be said that within the Galaxy there are undoubtedly millions of such Universal Solar Systems. In one of our earlier chapters, it was said that within Brahman there are many Brahmás. Brahman is the Galactic Consciousness, and each unit Brahmâ is the indwelling super-Solar Consciousness which at its heart is a Râja Sun.

In presenting this picture, we have approached it from the standpoint of the Globes of the Chains: seven manifested globes in each chain; seven chains in a family of sacred planets, making 49 globes; seven such families within the Universal Solar System, making 343 Globes, the cube of 7. (We have met this number before in relating it to human consciousness.)

Adhering to the sevenfold system is an over-simplification, and it may well be that many questions will come to the mind of the student on this point. These are best left to the intuition of the student himself; to try to anticipate them and deal with them in full would encumber this study to the point that it would become confusing, and we would lose sight of the purpose we have in mind.

In approaching this picture first of all from the standpoint of the Globes, we have done so in keeping with the theme of that portion of this book just completed: Atoms. The Globes themselves are builded of atoms, life-atoms of many kinds whose work it is to provide the vehicles for the use of the intelligences embodying themselves as these planetary chains, and also for the races of entities inhabiting the chains. Now it is time to complete the circle and approach the study in keeping with the first theme: Gods. For within the circle formed by the Gods on the one hand and the Atoms on the other, live and thrive the hosts of Monads.

Turning our attention, then, once more to the Gods, we are reminded of the teaching about the Hierarchy of Compassion, which was explained to some extent when we discussed the nature of the Buddhas and the Bodhisattvas. It was explained that just as there are the Human Buddhas, so there are the Celestial Buddhas; and just as there are the human Bodhisattvas, so there are the Celestial Bodhisattvas. The celestial beings were related to the Rounds of the Earth Chain and to the Globes, as well as to the Root-Races, and so on. What was given was correct as far as it went, but because it was not appropriate at that time to refer to the Universal Solar System, the teaching was left incomplete. We are now in a better position to amplify the study in the light of the further understanding that we have gained.

It is important for us to remember that in speaking of these lofty beings as comprising the Hierarchy of Compassion, we are discussing matters which are intimately related to human consciousness and the possibilities that lie in wait for any and all of us as we seek further enlightenment. These lofty entities, spoken of as the Silent Watchers, have a vastly important part to play in the spiritual advancement of the Human Race: It is through them that initiations take place; it is through them that the Buddhas and the Christs have become what they are; and it is through them that these things shall become ever more real to the human race as the cycles bring man ever closer to the goal of human endeavor—his ultimate perfectibility.

A review of the Section dealing with the teachings about the Gods is strongly recommended before going further.

Highest of all in any Universal Solar System is *Mahat*. It is the Hierarch of the Hierarchy, working in and through the Râja Sun. From it spring:

Seven Solar Logoi. These are the Silent Watchers which hold spiritual sway over the seven families of sacred Planets. There is such a Solar Logos as the Spiritual Chief of our own family of Sacred Planets. It has its seven rays which are themselves lofty spiritual beings. They are the:

Âdi-Buddhas. These are the seven Silent Watchers which guide and inspire the seven Planetary Chains within any one family of Sacred Planets. There is such an Âdi-Buddha watching over this Earth Chain. Its seven rays are:

Dhyâni-Buddhas. These watch over the Rounds of the individual Chains. Thus, for this Earth there is a Dhyâni-Buddha whose function it is to watch over this fourth Round, as there were three such Dhyâni-Buddhas watching over the three previous Rounds, and as there will be three more watching over the Rounds yet to come. Each one has its seven rays which are the:

Dhyâni-Bodhisattvas. These watch over the Globes of the Chain during the Round which is the special province of their "parent" Dhyâni-Buddha. Thus, there is a Celestial Bodhisattva watching over this Globe D which will do so during the course of this Fourth Round. Other Dhyâni-Bodhisattvas will watch over Globe D during succeeding Rounds, just as there were others who watched over it during the three preceding Rounds. From the Dhyâni-Bodhisattvas spring forth seven rays which are the:

Mânushya or Human Buddhas. There is one such Mânushya Buddha for each of the seven Root-Races during this Round on this Globe, just as there are seven Mânushya Buddhas on each and every Globe of the Chain during this Round, all springing from the seven Dhyâni-Bodhisattvas governing the seven Globes.

If we were to gain nothing more from this study, it would at least be worth our while to understand that never is the human race deserted. We are always under the watchful guidance of lofty spiritual powers who live that all pilgrims on the Path may eventually reach enlightenment. Why is the world in such a sorry state then? Why do these entities not step in and solve all our problems? Because there would be no growth if they were to attempt to do so. They could produce no lasting good, because we poor struggling humans would learn nothing by such untimely help. The only way that we can grow is by our own efforts. But the way is clear; it is never really hidden from us. If we refuse to open our eyes, we cannot see the light although it is there and cannot ever be extinguished.

By completing the circle, we have concluded this section on Gods, Monads and Atoms; and the symbol of Thor's Hammer has served us well.

PART THREE
THE GREATER MAZE

Chapter XXII

A QUICK REVIEW

We are now embarking upon the final phase of this study in which we shall expand the Lesser Maze, which was constructed in Part One, into its most complete form. This is the Greater Maze in which we shall see certain of the geometrical solids repeated and reproduced in a most fascinating manner.

It will be best by way of preparation to understate a quick review of the material covered in Part One. To study Part One in its entirety will well repay any student who wishes to undertake such study, because he may find that some points which might have been obscure to him previously will now become much clearer. For those who do not wish to do this, the following brief summary may suffice.

We started out with the concept of a moving circle (Figs. 1 through 4), representing the gradual process of the Universe awakening out of a state of pralaya into that of manifestation. When the circle had moved a distance of its own diameter, it was found that by the simple laws of geometry it had inscribed within itself a regular Decagon or ten-sided polygon. This was taken to represent the fact that the Universe (within the limits of our understanding) consists of ten planes of consciousness. The mathematical properties of the regular Decagon in its relationship to the Golden Section were discussed at length, and the ten points on the circumference of the circle were shown to be one form of the Tetraktys. The more usual form is that of an equilateral triangle composed of ten dots, and it was shown that we might consider the three dots at the corners to represent the three unmanifested planes, and the seven dots at the center the seven manifested planes. The concept of the seven manifested and the three unmanifested is basic in the Esoteric Philosophy.

The seven dots at the center of the Tetraktys were joined (Fig. 5) in such a manner that we have a three-dimensional Svastika, which we have called Thor's Hammer; and these three axes of rotation—as they turn out to be—are known to be most important in mechanics. Every rotating object moves about three axes mutually at right angles, as represented in this figure.

The three arms of Thor's Hammer were taken to represent three fundamental streams of consciousness: the Gods, the Monads, and the Atoms. Part Two was devoted to an expansion of the teachings concerning these.

Going back to the inscribed Decagon, which also included the ten radii of the circle, by joining alternate points we found that we had drawn an Icosahedron

(Plate 1). This is one of the five regular polyhedra, and it consists of 30 lines, 20 equilateral triangular faces, and 12 vertices. The 12 vertices may be thought of as being 12 points spaced about on the surface of a sphere.

We joined internally the points of the Icosahedron, and the resulting 30 lines formed a Dodecahedron (Plate 5), a regular polyhedron consisting of 12 faces and 20 vertices. Constructed in this manner, the vertices of the Dodecahedron may be thought of as being 20 points spaced about on the surface of a sphere which is smaller than that circumscribing the Icosahedron, and therefore within it. The Dodecahedron was drawn by joining the 20 points on the circumference of the sphere. The Icosahedron enclosing the Dodecahedron represented the dual nature of the Universe, the former representing the consciousness aspect, and the latter the corpuscular—or we might say, more briefly, Spirit and Matter. This is of course an over-simplification necessary in a review of the subject; the idea is more fully expanded in Part One.

Each of the 12 points of the Icosahedron was joined by a line with a vertex of the Dodecahedron, the resulting lines intersecting in 6 points within the Dodecahedron. The resulting figure was an Octahedron (Plate 7) a regular polyhedron consisting of 12 lines, 8 triangular faces and 6 points. Because this is formed by the union of the Icosahedron with the Dodecahedron, it was taken to represent the inmost essence of Man's consciousness; for he is a child of the Universe, both aspects of its duality contributing to Man. It is hoped that we can show at the conclusion of this study how apt a symbol is the Octahedron in demonstrating this relationship between Man and the Universe.

Since the Octahedron consists of 8 equilateral triangular faces, it is possible to consider each of these faces as the base of a triangular pyramid, or Tetrahedron (See Plate 1). These were constructed, and it was found that these 8 Tetrahedra combine to form two larger interlacing Tetrahedra with the Octahedron at the center of them. (A Tetrahedron is a regular polyhedron consisting of 6 edges, 4 triangular faces and 4 points.) The manner in which they intersect represents in a most graphic way the same principle long associated with the interlacing triangles, or the union of Spirit and Matter as it applies to the consciousness of Man. In this solid form, generated as it is from the Octahedron itself, it represents the principle that when the indwelling core of Divinity in Man seeks to manifest itself in the process of rebirth, it first emanates from itself sheaths of Spirit-Matter which in turn eventually produce the vehicles of the many-faceted being we call Man.

Now, the points of the interlacing Tetrahedra touch just those 8 points of the Dodecahedron which were not occupied by the lines emanating from the Icosahedron in the process of forming the Octahedron. This beautiful bit of geometric construction, which is simply a fact of mathematical law, forms a most telling symbol of the inter-relationship between Man and the Universe. Where could one find a more graphic symbol than this?

To complete the construction of the Lesser Maze, we joined externally by 12 lines the 8 vertices of the interlacing Tetrahedra. The resulting figure was a Cube, or Hexahedron, a regular polyhedron consisting of 12 edges, 6 faces and 8 points. It follows that this Cube fits neatly within the Dodecahedron; in fact, each of the faces of the Dodecahedron is crossed by a line of the Cube as shown in Plate 1.

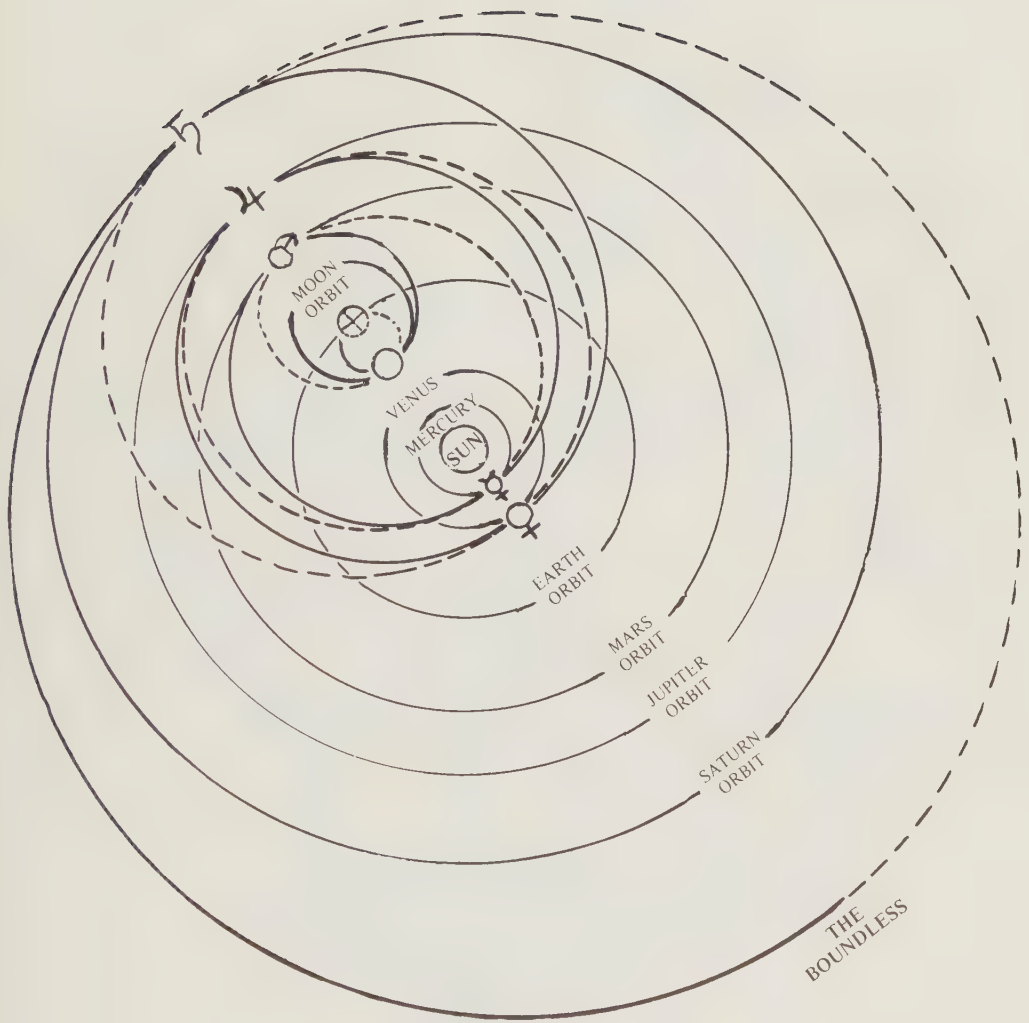


Fig. 12 – The Circulations of the Cosmos

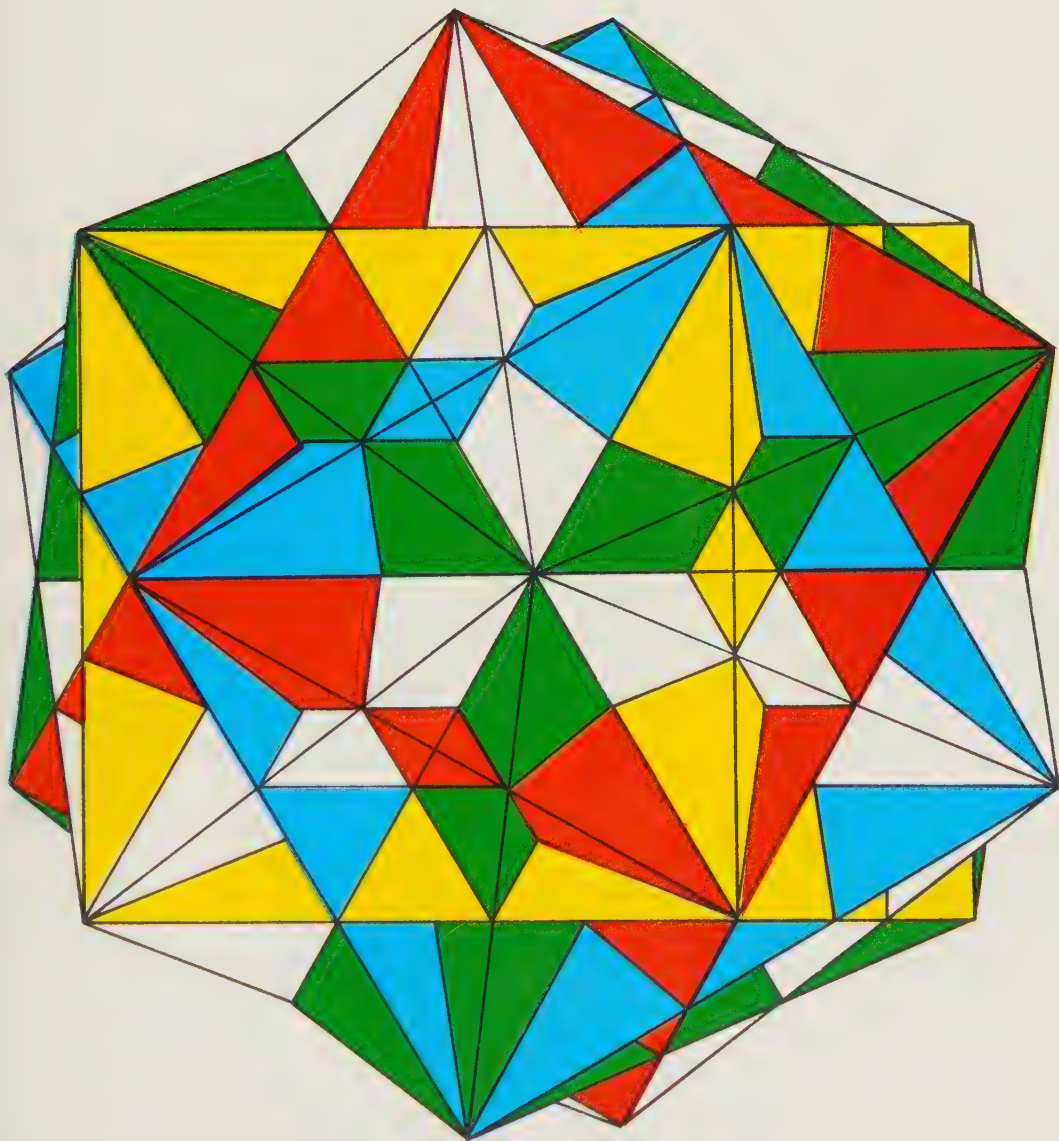


Plate VI – A Cluster of Five Cubes

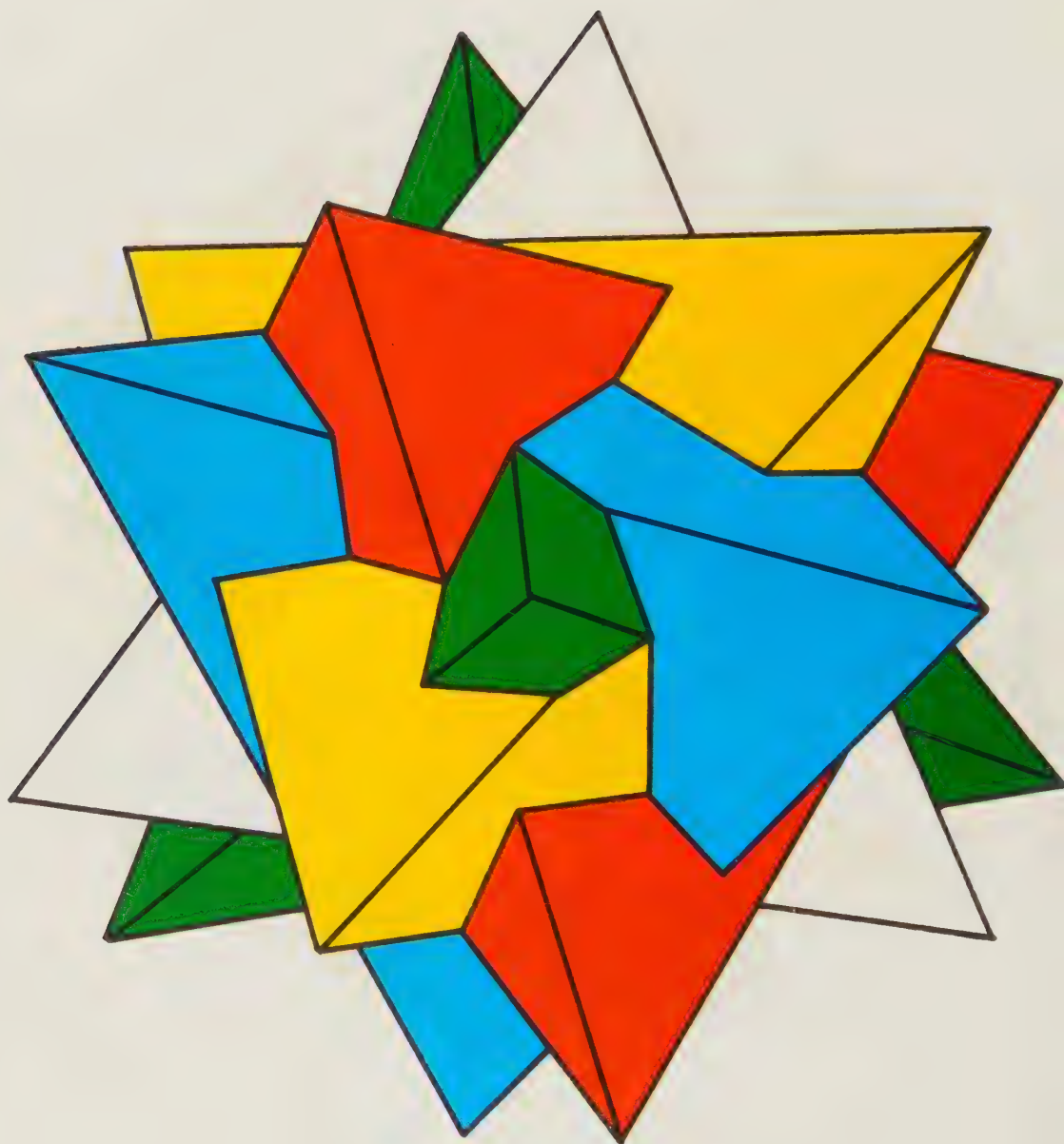


Plate VII – A Cluster of Five Tetrahedra

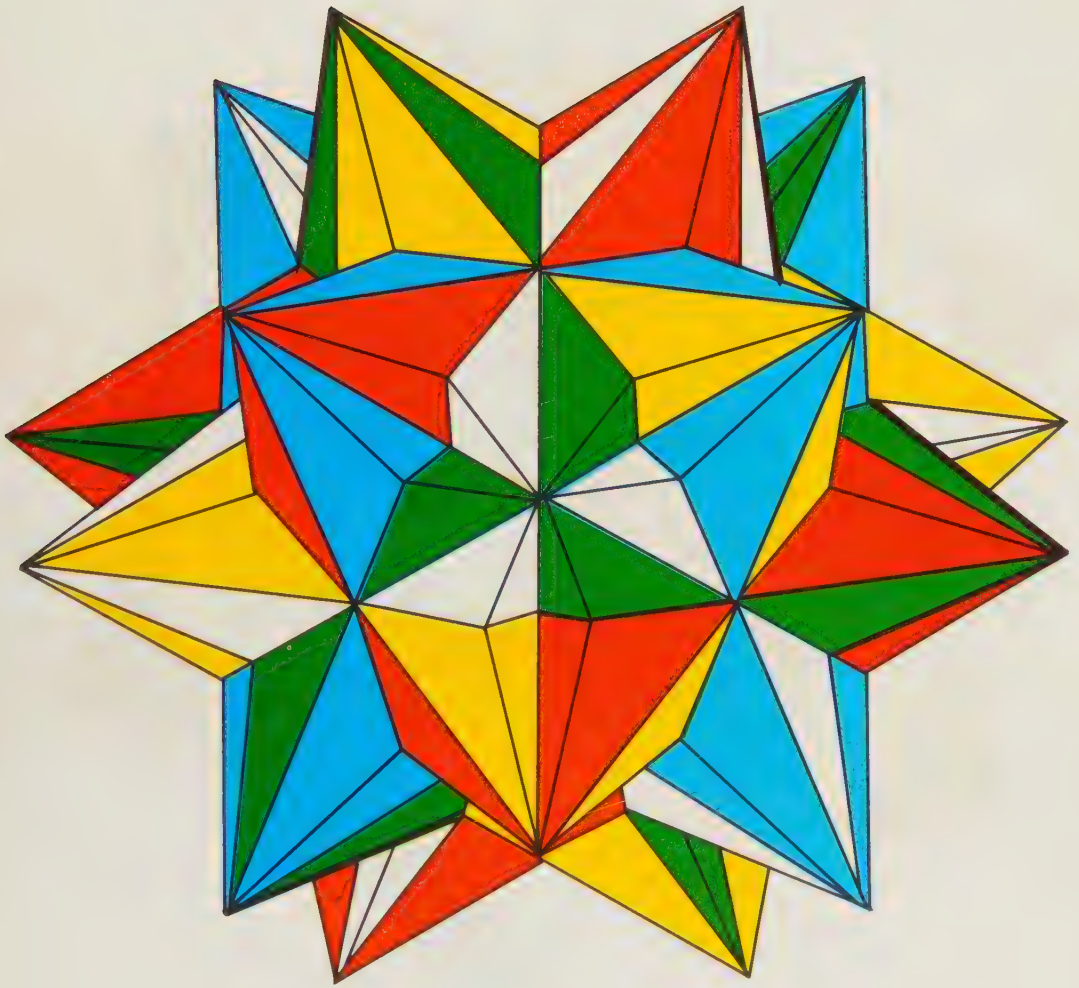


Plate VIII – A Cluster of Five Pairs of Tetrahedra

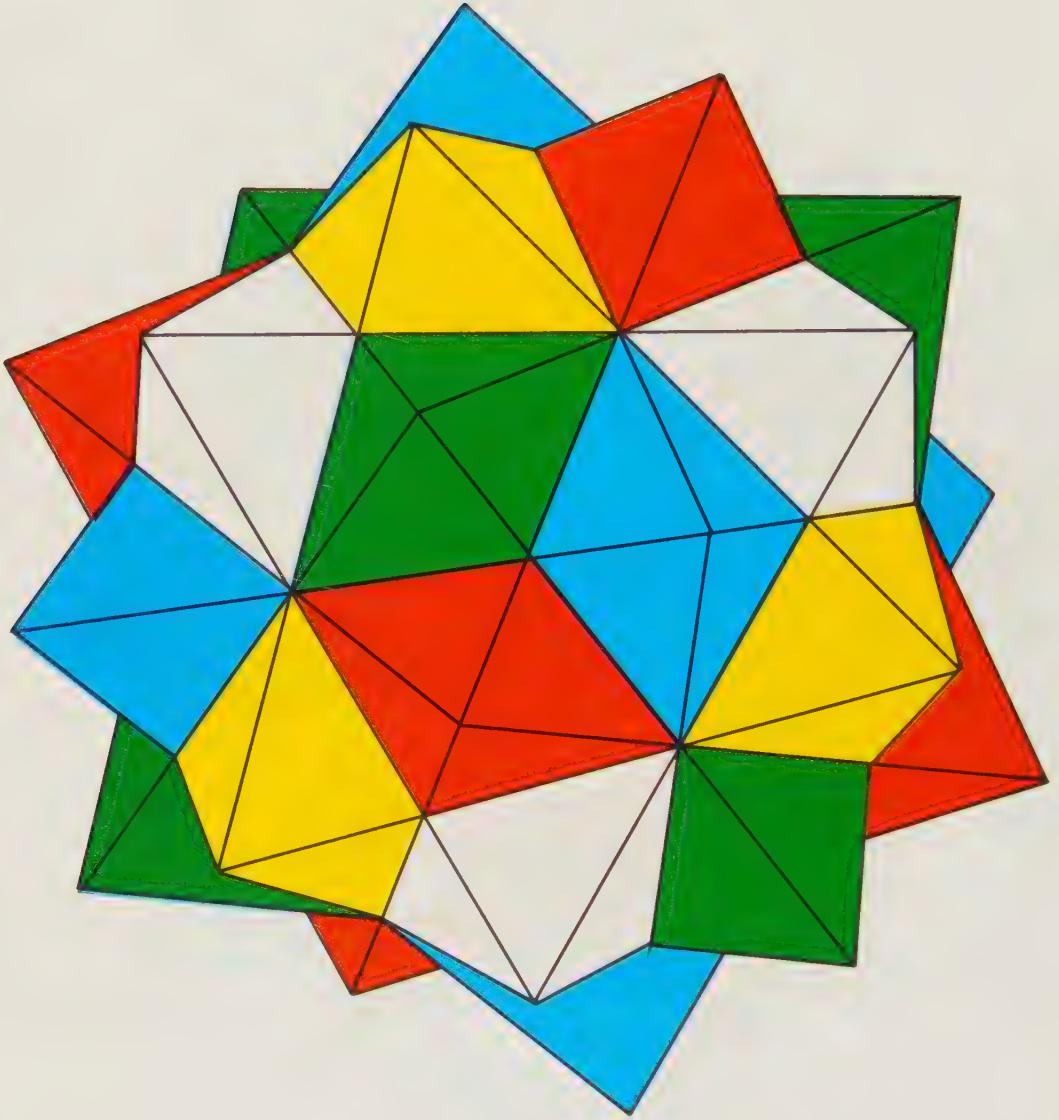


Plate IX -- A Cluster of Five Octahedra

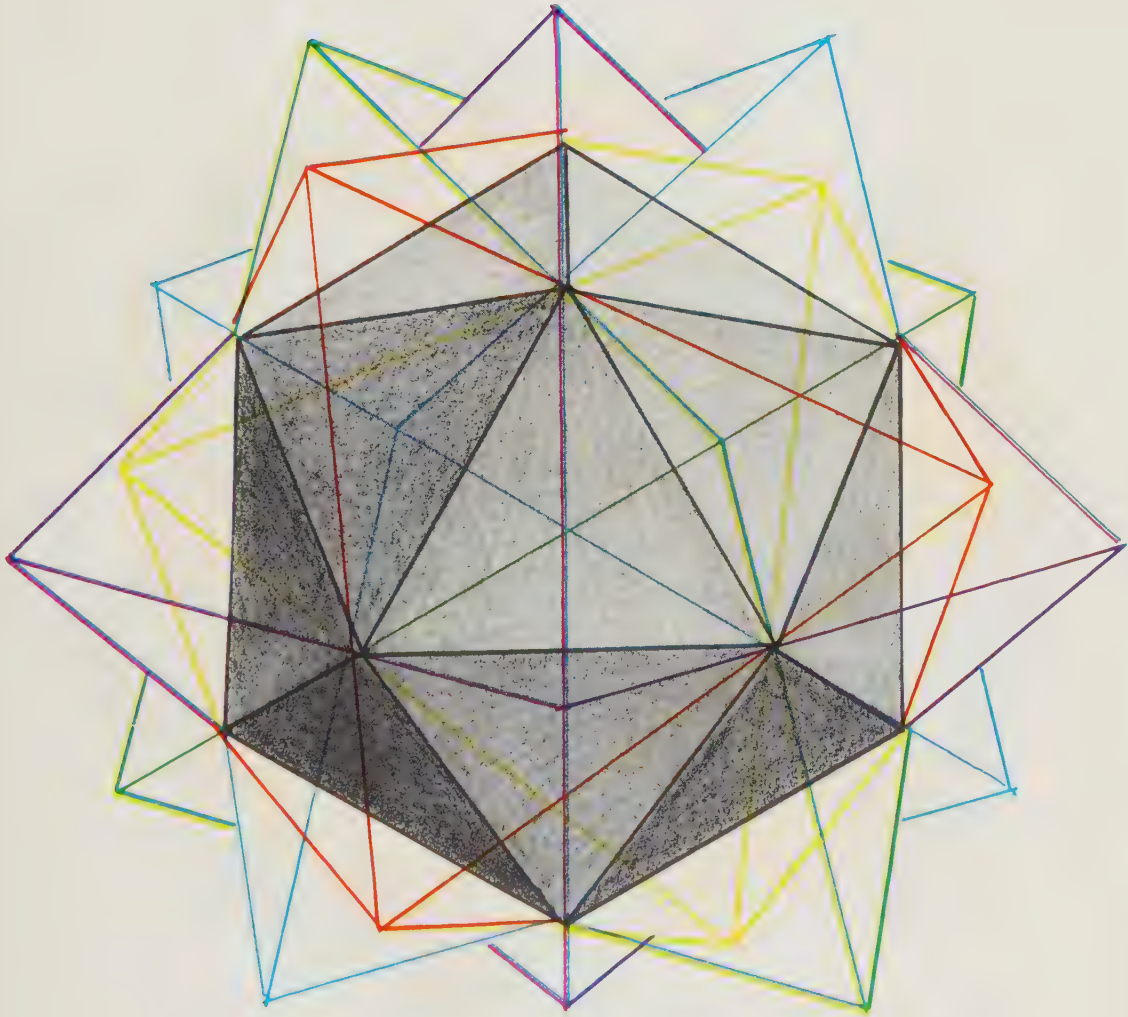


Plate X – Five Octahedra Clustered about an Icosahedron

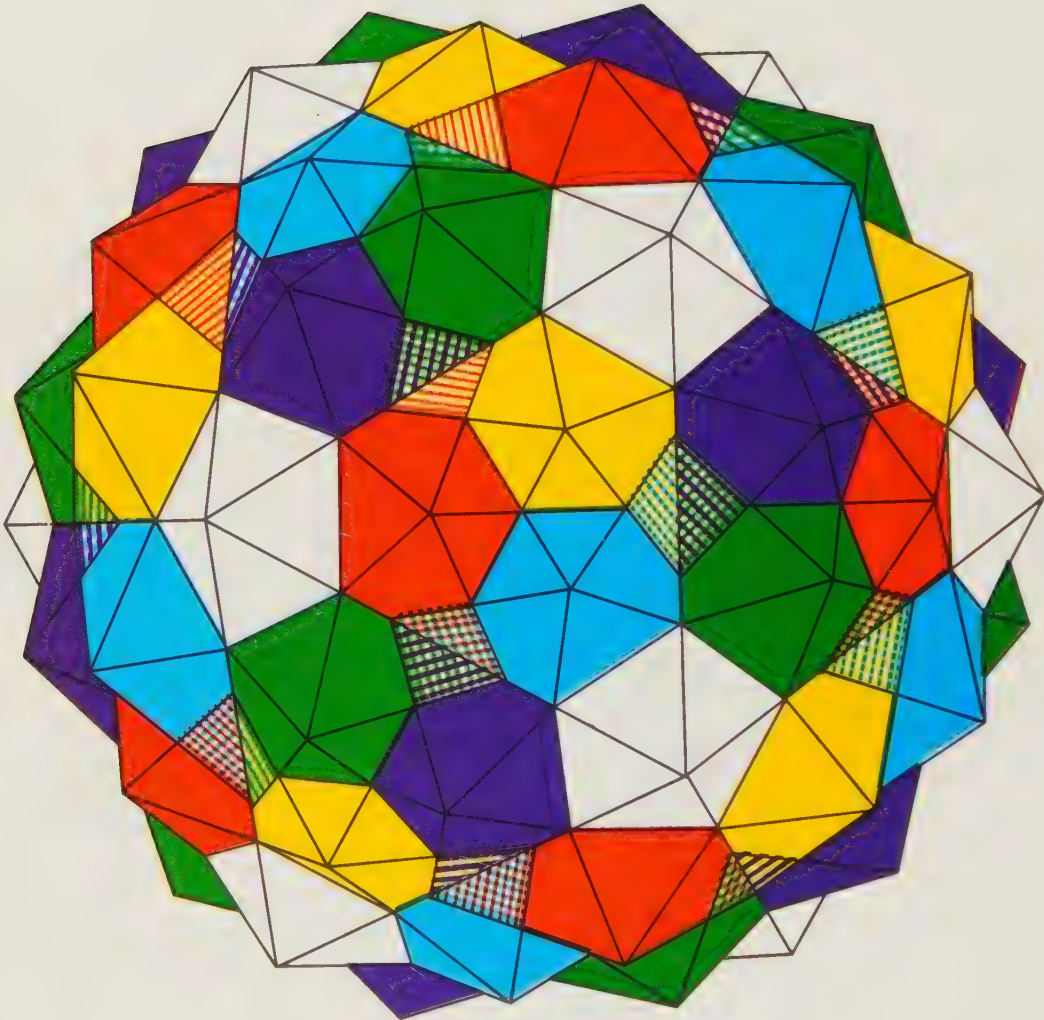


Plate XI – Five Icosahedra Clustered about a central Icosahedron (white)

So here is the completed Lesser Maze, a perfect symbol of Man within the Universe, or "the Jewel in the Lotus" (Plates II and III). Remember that it can all be drawn in the center of the Tetraktys.

One more point of importance which was brought out previously is that, just as we formed the Dodecahedron by joining internally the points of the Icosahedron, so we may form another Icosahedron within the Dodecahedron, and this process may be repeated indefinitely, alternating with the construction of an Icosahedron and a Dodecahedron; although they become ever smaller, one may never reach the center (Fig. 6). This was taken to represent the concept that this Universe is but one term in an infinitely repeating series of universes. Each such repetition, of course, implies the construction of an infinite series of Lesser Mazes.

It may be difficult for some minds to understand that these symbols are not interpreted arbitrarily—for it might be said that you can see anything you want to wherever you look; it is just a question of where your inclinations lie. If that is true, then how wonderful is the Universe to him who looks for the consciousness of the Divine, for he can see it everywhere. Yes, it might be truly said that all things are in the Universe. However, the case is really somewhat different where these geometrical figures are concerned. Their amazing inter-relationships cannot be denied by the most pragmatically minded, and even if he were to let it go at that, he would be amply rewarded by the study along strictly geometrical lines.

Yet to one whose mind is engrossed in the Theosophical teachings, these geometrical solids have a special meaning. For one thing, he feels that in studying them he undergoes a stimulation of his mind and his intuitions, which is a wonderful experience. He learns that not only do these figures represent to him many of the teachings that he has studied, but that they can serve as very real pointers to new understandings. Few if any of the teachings have been fully explained in the books. There is every reason why much should be left to the intuition of the student and to further study on his part; there would be little progress possible to us if we were told everything.

It has been my own experience that some understanding has become available to me through the study of Mathematical Symbolism which was later corroborated by a further study of *The Secret Doctrine*. To be sure, the teachings were there all the time; yet it is a cause for some wonder how that which once seemed so illusive in the pages of a book could become so perfectly apparent as a result of this particular form of research. I unhesitatingly give credit to Mathematical Symbolism for its power to open new doors of understanding.

And why should these figures serve as guide lines? We go back to the statement that was made at the beginning of this book: "It is in the nature of things." They actually contain within themselves the principles of the truths they symbolize.

Chapter XXIII

THE GREATER MAZE

The climax of our studies is now within our reach. We are about to consider a truly marvelous structure in which the Cube, the interlacing Tetrahedra and the Octahedron are built upon a fivefold plan, and these within the Dodecahedron enclosed within the Icosahedron presents a geometrical figure of great beauty.

The Five Interpenetrating Cubes

Let us look once more at Plate 1. We see that the Cube is formed by 12 lines within the Dodecahedron. Across each pentagonal face of the Dodecahedron there is seen to be a line which is an edge of the Cube; twelve faces on the Dodecahedron, twelve lines forming the Cube.

In the course of our study, the Cube has been regarded as a symbol of Man as an intrinsic part of the Solar System. It is right therefore to consider the length of the edge of the Cube as the unit, with which the lengths of the edges of the other Polyhedra will be compared. From this we derived the numbers as found in Plate 4, wherein it is shown that an edge of the Dodecahedron is equal to .618, and that of the Icosahedron is 1.618. It will be also noted that the edge of the inner Icosahedron is .382, and placing these in the order of their lengths, we have four terms of the remarkable series of numbers associated with the Golden Section (See Appendix I).

Now, since all of the faces of the Dodecahedron are regular pentagons, it might immediately be asked why there should not be five lines crossing each of the faces, thus making twelve pentagrams or five-pointed stars. We may certainly do this, and we shall find that the resultant figure is that of five interpenetrating Cubes (See Plate VI).

We must take this study step by step, and we shall eventually draw all of the figures in the Greater Maze. Taking them first as simple figures, we shall draw each one in two views, and Fig. 13 shows the two views of a Cube that will be needed. Eventually the view to the left will be drawn twice, and that to the right, three times. It must be remembered that actually there is no difference in the Cubes themselves as they appear in the constructed figure; it is only necessary in the drawings to show them in two views.

The rectangular view to the right indicates that two of the faces are "edge on" as it were, and can be seen as straight lines only. Thus the overall appearance is that of a rectangle.

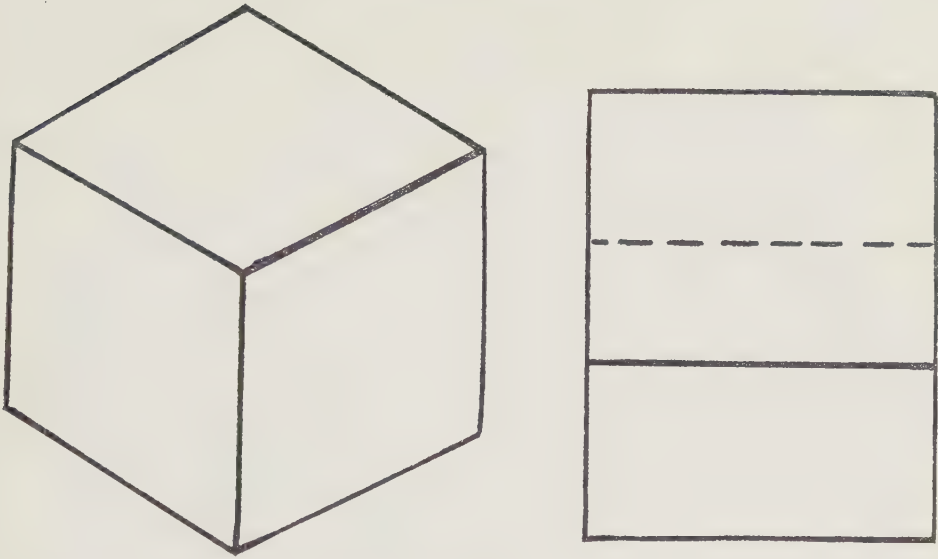


Fig. 13 — Two Views of a Cube

The next step toward an understanding of this very complex figure must be taken in learning about two irregular Tetrahedra based upon the Golden Section (one of them being, in fact, merely a reflection of the other). These will be quite different in appearance from the regular Tetrahedron. They are shown in Fig. 14. This irregular Tetrahedron is most interesting because its three edges are respectively: BD , .382; AD , .618; and CD , 1.00—three terms in the Golden Section series. The reflected Tetrahedron indicates the same dimensions by the letters followed by ($'$). Thus we have a “left-hand” and a “right-hand” Golden Tetrahedron. Fig. 14 shows also how these Tetrahedra may be interpenetrated and resting upon a Square. Three sides of the Square are divided at the points of the Golden Section. (Note points A, A', B, B' .)

Figure 15 shows two right-hand Tetrahedra interlaced upon the Square. Figure 16 shows four Tetrahedra (two right- and two left-hand) interpenetrated and resting upon the Square. As one might expect, the edges of these intersect one another at points of the Golden Section.

The construction of the five interpenetrating Cubes was accomplished by making a mold in the shape of the four interlacing Golden Tetrahedra; plaster of Paris was poured into this mold and six casts were made. A block of wood was carefully shaped into a Cube of the right size and these six plaster casts were carefully positioned and glued upon the six faces of the Cube. The result was the complex form of the five interpenetrating Cubes; when they were painted so that they could be distinguished one from another, the result was as shown in Plate VI.

When constructing these figures into the Greater Maze, where colored threads were used, all of the lines forming the five Cubes were made of red string, and they combined to form red stars within the faces of the Dodecahedron, which had been constructed of heavy wire and painted blue (See Frontispiece I).

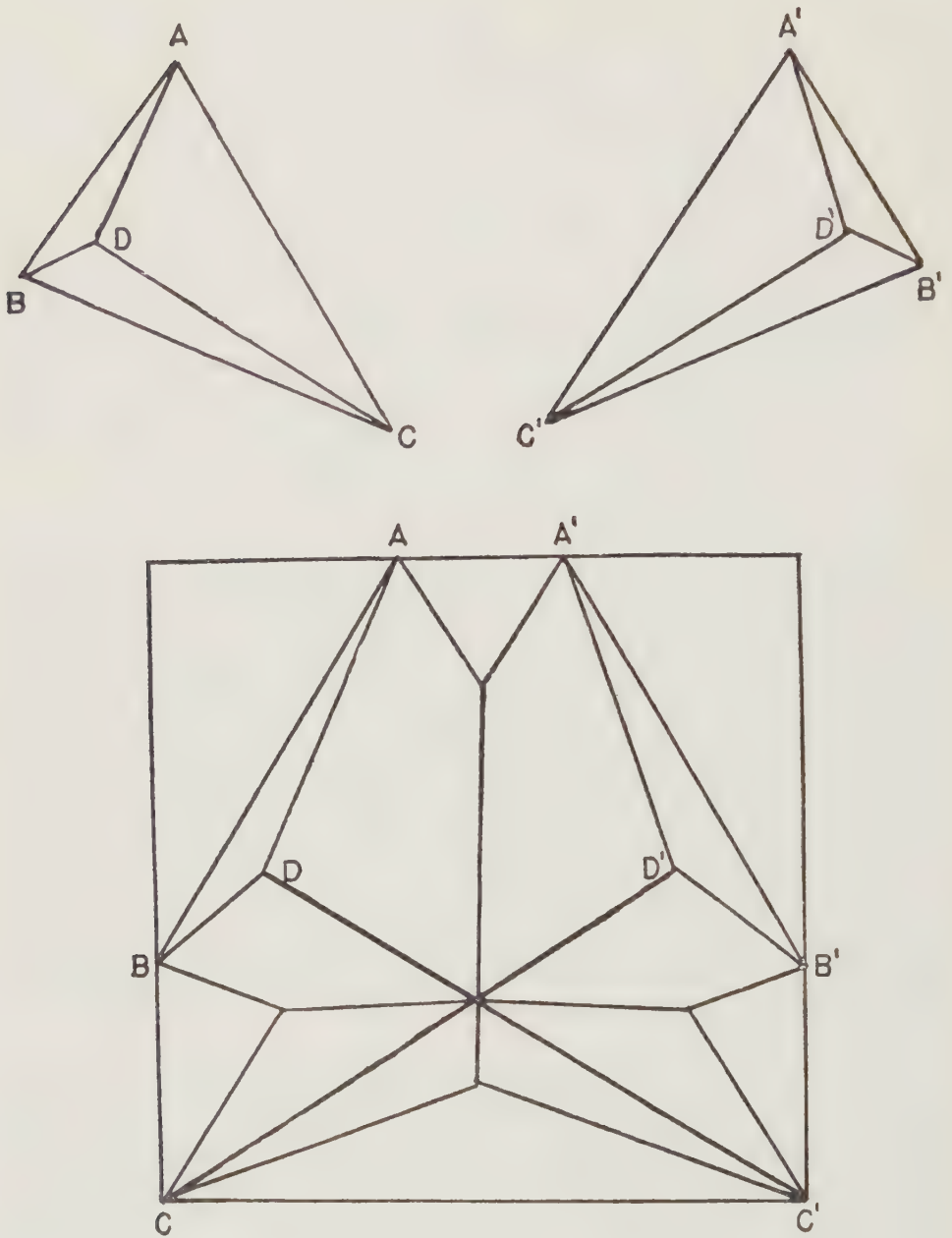


Fig. 14 — Left- and right-hand "Golden" Tetrahedra (above).
The same interlaced upon a Square (below).

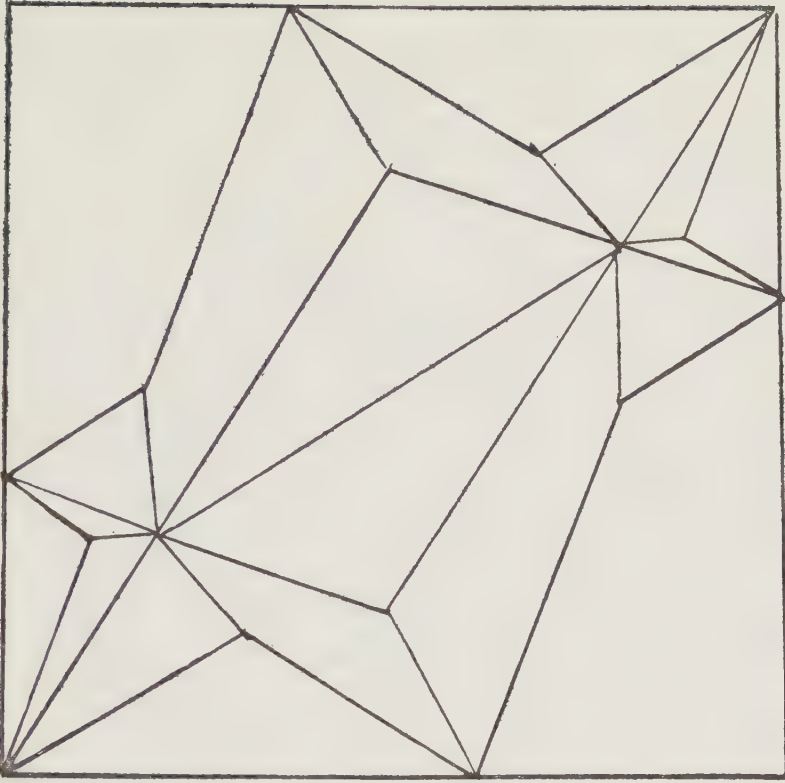


Fig. 15 — Two left-hand “Golden” Tetrahedra interlaced upon a Square.

However, as already explained, in the solid figure constructed of wood and plaster of Paris, the Cubes were colored white, red, blue, yellow and green, as it then becomes easy to distinguish them one from another. The resulting twelve five-pointed stars may now be examined (See once more Plate VI). It will be seen that now each of the lines forming a star is of a different color, so that in each star all five Cubes are represented. What an exercise in visualization it is whenever one sees a five-petaled flower, to construct in imagination a five-pointed star overlaid upon the flower, and to reflect that each line of the star is but an edge of a Cube. Let us picture what all five cubes would look like, delineating the existence of a Dodecahedron to contain them, itself within a surrounding Icosahedron! This gives us a clue to a sort of hidden beauty within the outward form of things. When we see that other designs in Nature are related to the Golden Section, we find that the physical universe is surrounded by a kind of mathematical albeit mystical universe, a concept which we can grasp more fully as our familiarity with these figures grows.

The Tetrahedra

Just as there is a pair of interlacing Tetrahedra within the cube in the Lesser Maze, these become five pairs of interlacing Tetrahedra in the Greater Maze.

In order to understand this construction, we take the case of a single Tetrahedron. This may be formed by drawing one diagonal across each face of the Cube, and as

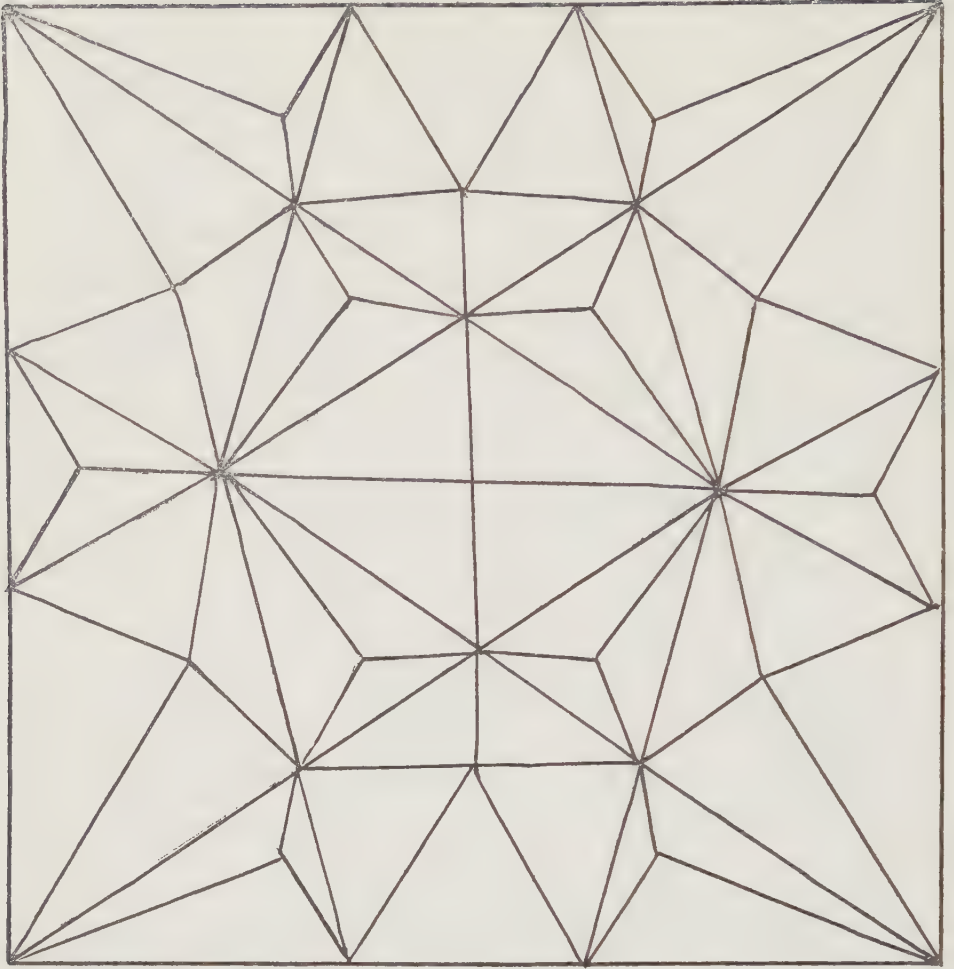


Fig. 16 — Four “Golden” Tetrahedra interlaced upon a Square.

the Cube is drawn in two views, the resulting Tetrahedron will also appear in two views, as in Fig. 17.

We are considering the edge of the Cube as representing 1 or unity, and the lengths of the edges of all of the other Polyhedra are related to it. Thus, the length of the edge of the Tetrahedron is equal to the square root of 2, or 1.414.

Plate VII shows how the five Tetrahedra will be placed in space, being constructed within the five Cubes. As in the case of the Cubes, they all fit within the Dodecahedron, but whereas each point of the Dodecahedron carries the vertices of two Cubes, each point of the Dodecahedron carries the vertex of only one Tetrahedron. The Dodecahedron has 20 points or vertices, and as there are four vertices on the Tetrahedron, five Tetrahedra provide all twenty points required to fill the Dodecahedron.

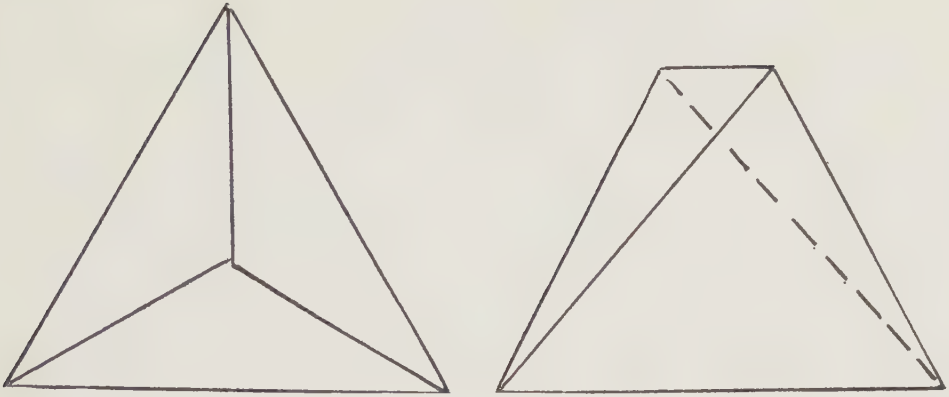


Fig. 17 — Two Views of a Regular Tetrahedron.

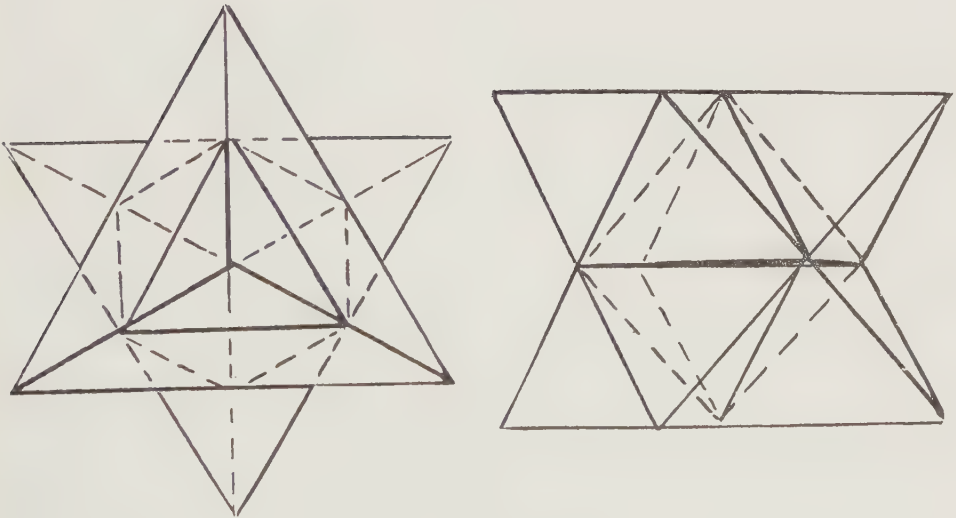


Fig. 18 — Two Regular Tetrahedra interlaced.

Because a Cube contains a *pair* of interlacing Tetrahedra, Figure 18 shows two views of these interlacing Tetrahedra, and Plate VIII shows the construction of the five *pairs* of interlacing Tetrahedra. This naturally fits within the Dodecahedron, as it should.

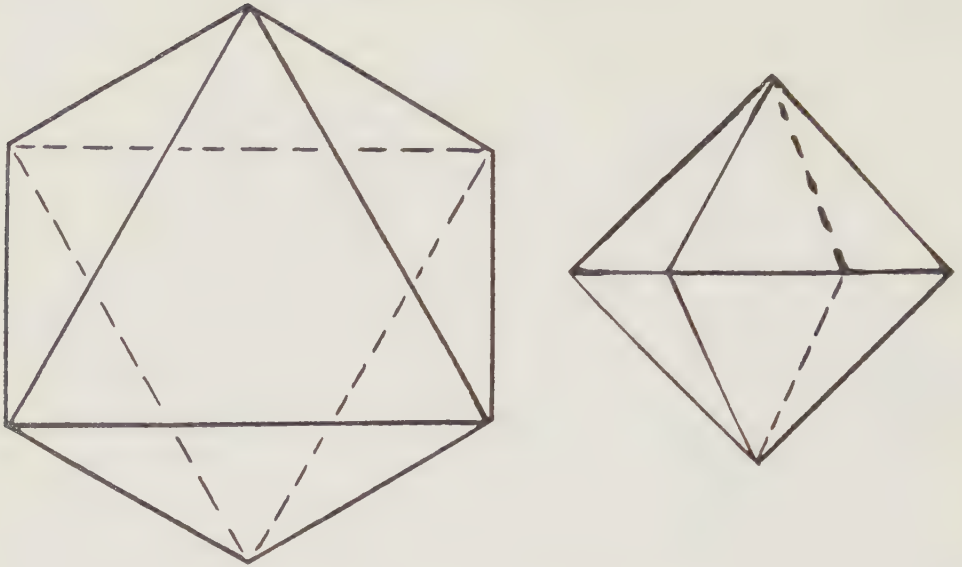


Fig. 19 — Two Views of a Regular Octahedron.

The Five Octahedra

Figure 19 shows two views of an Octahedron as it would appear if drawn at the center of a pair of interlacing Tetrahedra. From all that has gone before, we should expect to find a cluster of five Octahedra in the Greater Maze, and we shall not be disappointed (See Plate IX).

Again, as one might expect, we find the edges of the combined Octahedra intersecting one another at points of the Golden Section. Another amazing fact is that it is just these points of the Golden Section that are also the vertices of the inner Icosahedron which would be the framework on which an entirely new, but smaller Greater Maze would be constructed. And this process could be carried on to infinity. Plate X shows five Octahedra clustered about a central Icosahedron. Note the intersection points of the edges of the Octahedra in relation to the vertices of the Icosahedron.

The overall appearance of the figure in Plate IX is that of many irregular quadrilateral pyramids. The bases of these pyramids are not rectilinear, nor are the faces equilateral triangles. *All of the faces are congruent triangles however*, and their angles are of special interest. The angle at the apex is 60° and the two angles at the bases are 48° and 72° . These numbers, 48, 60 and 72 are most interesting as they fit in so well with the study of the occult numbers: they are 4×12 , 5×12 and 6×12 , respectively.

In another respect, the five interpenetrating Octahedra present a most interesting figure which is really a hybrid. If we were to join externally all the points, we would have the *Icosidodecahedron*, pictured in Fig. 20, which is a combination of an Icosahedron and a Dodecahedron. It consists of 20 equilateral triangles and 12 pentagons.

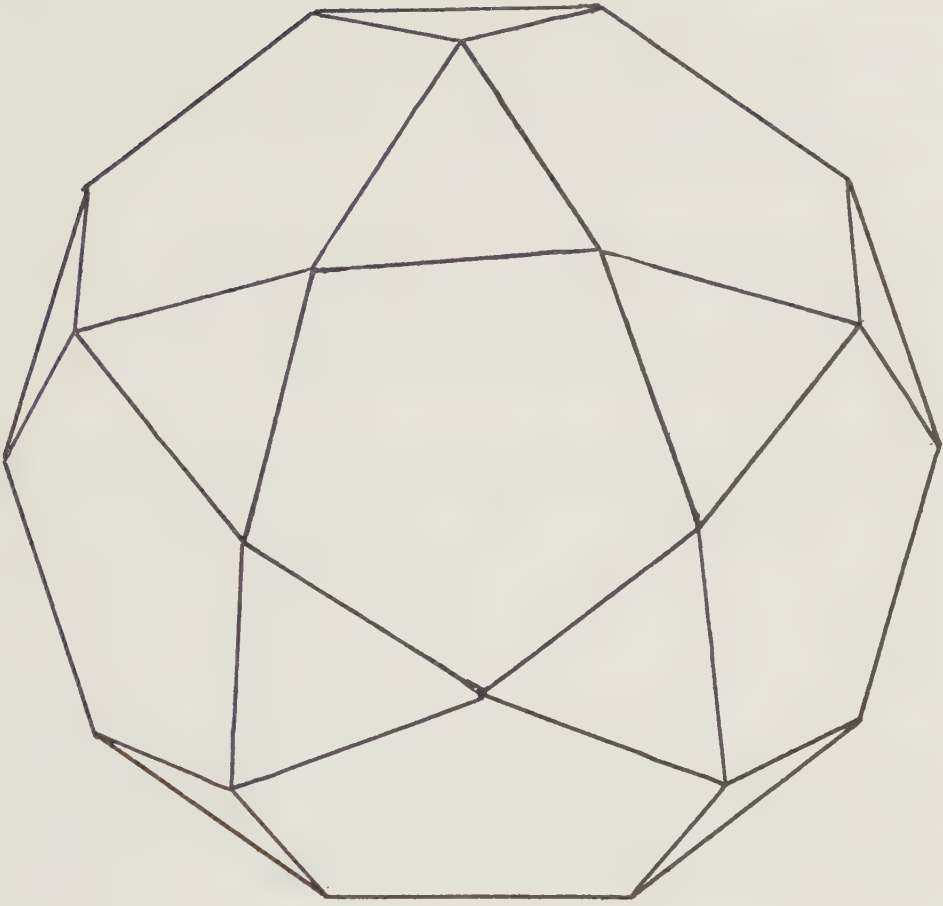


Fig. 20 — An Icosi-dodecahedron

Since our first acquaintance with the Octahedron came about as the result of joining internally the points of the Icosahedron with certain points of the Dodecahedron, it should follow that all five Octahedra might have been constructed in the original manner by drawing *five* lines from each point of the Icosahedron; such is actually the case. When we construct the Greater Maze, which contains the totality of these figures, that is just how the five Octahedra are formed. This fact gives the completed figure its marvelous beauty. Frontispiece II shows the Greater Maze as drawn, whereas Frontispiece I shows it constructed of wires and colored threads, totaling 270 lines.

In the Greater Maze these five Octahedra are worked out in yellow threads, but in the solid form, they are made in the five colors as were the Cubes and Tetrahedra.

It is another amazing fact that whereas there are now five lines radiating from each of the points of the Icosahedron (5×12 making 60 lines in all), we find that these same lines combine in groups of three at the 20 points of the Dodecahedron (3×20 is once more 60 lines). Each Octahedron having 12 edges, all 60 lines are accounted for (12×5 is once more 60).

Now it is most remarkable that these golden lines emanating from the points of the Icosahedron penetrate the faces of the Dodecahedron at the very points of intersection of the lines of the interlacing Cubes. This means that if you look for the red five-pointed stars on the faces of the Dodecahedron, it is just where these red lines intersect (at the points of the Golden Section, of course) that the yellow or golden lines penetrate the faces of the Dodecahedron!

Before leaving this chapter let us emphasize the significant point that as the lines of the Octahedra intersect one another at their own points of the Golden Section, it is with precisely these points that the vertices of the internal Icosahedron coincide. (See once more Plate X.) We showed in Fig. 6 that there is an endless series of alternating Icosahedra-Dodecahedra, suggesting strongly that this Universe is but one term in an infinite series of universes.

The other geometrical figures are constructed primarily upon the Dodecahedron, and yet the Octahedron, lying at the center of them all, is a marvelous connecting link between one such hierarchy and the next, in the sense that the smaller Icosahedron, constructed in the correct manner, by joining internally the vertices of the Dodecahedron, is by its own nature so positioned that its own vertices just touch the edges of the Octahedron where they intersect at their own points of the Golden Section!

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The full beauty of this Greater Maze becomes apparent when, after having given due attention to its structure and the truly remarkable mathematical and geometrical relationships within it, we turn our attention to the mysteries which are symbolized in this particular manner. Remembering that a genuine symbol carries within itself (albeit here in mathematical form) the principles of the thing that it symbolizes, we may now see the Greater Maze as the window that we may approach for a panoramic view of the secrets of cosmic life.

Chapter XXIV

THERE IS NO FINAL WORD

We now come to the greatest adventure of all, wherein we shall see the symbol of an endless complexity of inner worlds and planes of consciousness come to life. This will be the climax of our study of Mathematical Symbolism, one which extends even further our understanding of the Greater Maze, bringing us new concepts that reach into the deepest teachings about human consciousness.

Let us study in greater detail the Icosahedron lying at the center of either the Lesser or the Greater Maze. By the laws of its own structure, its twelve vertices touch the twelve lines of the Octahedron at the points of the Golden Section, as explained in the previous chapter.

Now we will remember that there are *two* points at which any line may be so divided. This implies the construction of a second Icosahedron within the Octahedron, and this possibility is shown by the lines in Fig. 21. The most interesting part of this study will be to show that this second Icosahedron has no physical reality even though it may be constructed as well as drawn, as will be shown. How can this be? Well, there are two good illustrations which will clarify the point. Every planet in the Solar System follows an elliptical pathway around the sun, even though in many instances the deviation from a true circle is slight. However, if we take the instance of the comets, we see orbits which are extremely elliptical, and we learn something of interest by studying them.

In the first place, a circle is defined as a closed curve such that every point is equidistant from a fixed point called the center. All radii of the circle are equal. Thus there can be one and only one center.

By contrast, an ellipse is a closed curve such that the sum of the distances from any point to the two fixed points called foci, is constant. It might be said that in an ellipse where the foci are close together, the curve is approximately circular, whereas in the case of an ellipse in which the foci are widely separated, the ellipticity of the curve is more pronounced.

What this is leading to is that since the orbit of every planet and comet in our Solar System is elliptical, the center of the Sun occupies one of the foci of the ellipse. What is at the other focus? Apparently there is nothing there, although the location of that focal point may be determined in space. Thus, as a matter of pure science, a

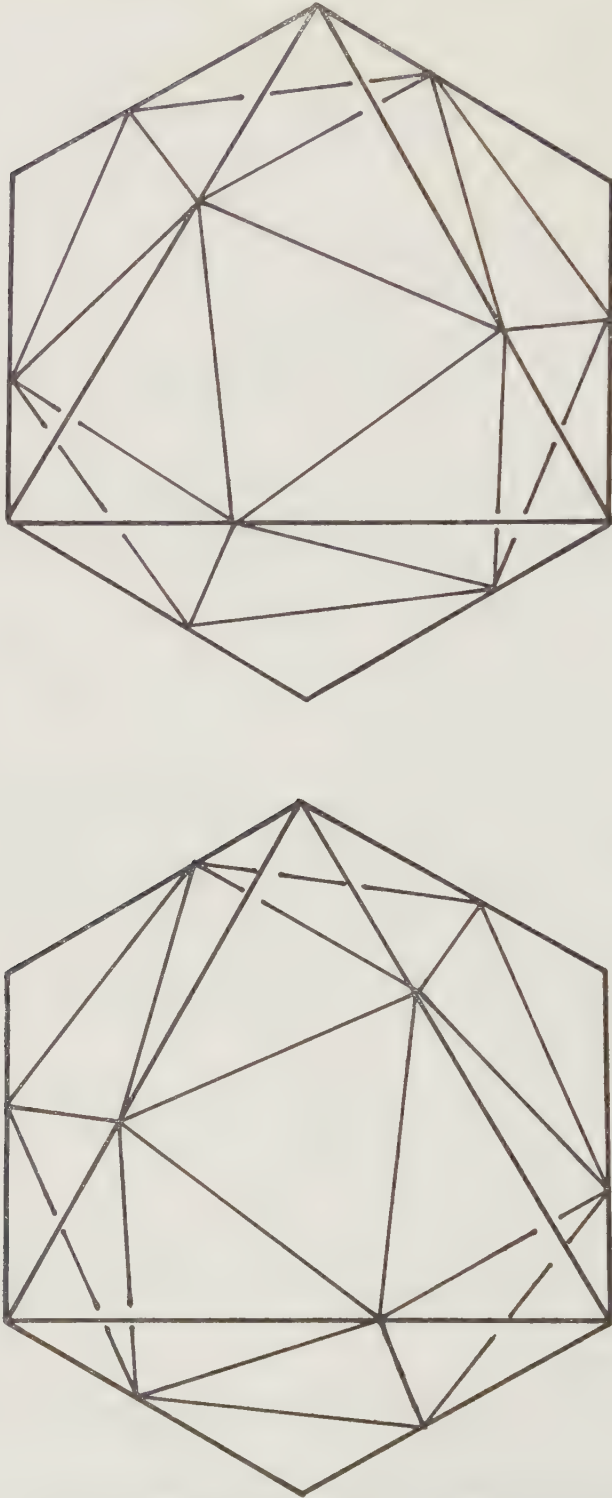


Fig. 21 — An "objective" Icosahedron above, and a "Subjective" Icosahedron below, drawn as they would appear within an Octahedron.

point which has no reality other than as a mathematical necessity may be plotted and shown on a chart.

We are tempted to ask: Are there two foci because the orbit is elliptical, or is the orbit elliptical because there are two foci? The question might have no meaning except for the possibility that the several foci (one for each planetary orbit) are clustered about the center of the Sun, which is the focal point that is common to all of the orbits, and the thought comes to mind that the Sun is a chain of Solar Globes, his children taking pattern after him. Could there be any relationship between these mathematical focal points and the Globes of the Sun Chain that might have a bearing upon the several planets?

The relationship between the real and the mathematical Icosahedron within the Octahedron may, again, be clarified by an illustration taken this time from the science of optics. It is well known that the properties of a lens-system in a movie projector, to take a convenient example, are such that the object (the film) throws an image of itself which may be focused upon the screen. This is known as the *real image*. There is also a *virtual image*, which cannot be thrown on the screen. So far as the audience in the theater is concerned, this virtual image is non-existent, and yet the properties of the lenses are so well understood by the manufacturers that the virtual image can easily be drawn on paper, and its size and distance may be known with great accuracy. Thus, in a sense a thing may exist and yet not have any substantial reality so far as our senses are concerned.

Now in the construction of the Maze, only one of these Icosahedra has reality. This is the one which is formed by the internally intersecting lines from the Dodecahedron, as explained before. The position of the other Icosahedron within the Octahedron is such that none of its points coincides with the figures which properly belong to the Maze, and for that reason it may be said to exist as a mathematical concept only, having no reality beyond that.

Although we might call these two Icosahedra the "real" and the "virtual" Icosahedra, it would be more accurate from the standpoint of our study in Symbolic Mathematics to use the terms "objective" and "subjective" respectively.

Now just as the objective Icosahedron is at the center of a "real" Maze, so we may rightly consider that the subjective Icosahedron is at the center of a subjective Maze; this could conceivably be drawn interpenetrating, as it must, the "real" Maze, were it not too confusing to do so.

The objective Icosahedron is common to all the five interpenetrating Octahedra in the Greater Maze; as explained in the previous chapter (see again Plate X), its vertices touch all five Octahedra at the 12 points where their edges intersect at their own points of the Golden Section.

Now it will become apparent that there will be a subjective Icosahedron within each of the interlacing Octahedra; and although these Icosahedra have no reality so far as the objective Greater Maze is concerned, nevertheless they may all be constructed. Plate XI shows a drawing of the five subjective Icosahedra (colored), clustered about the objective Icosahedron (white).

There is a rather complicated relationship among these five subjective Icosahedra themselves which is most interesting; however, it is different from their relationship

to the "real" Icosahedron. And yet, even though of a different mathematical character, their relation to the "real" Icosahedron is a constant. Each one of these subjective Icosahedra might be thought of as a center with its own *subjective Greater Maze* built upon it, so that clustered about the objective Greater Maze there will be five subjective ones. Imagine the complexity of this figure! However, there is yet more to come.

Although we have been speaking of five subjective Icosahedra, this is only from the standpoint of the objective or "real" one; but it is conceivable that any one of these could be an objective Icosahedron in its own right and from its own viewpoint. As such, it would have five more Icosahedra clustered about itself, which to it are subjective. From the standpoint of our original "real" one, these would be subjective in the second degree. Then, around each one of these would be five more, subjective in the third degree; and so on ad infinitum.

The picture is developed thus: Around the original Icosahedron there are clustered five subjective Icosahedra. Around these, in their totality (five to each), there would be 25 subjective Icosahedra of the second degree. Around all these, there would be 125 Icosahedra subjective to the third degree, and then 625 more, subjective to the fourth degree, and so on, each degree bringing in a higher power of the number 5 and a greater degree of subjectivity.

We should not think of these as increasing in size just because they are conceived to be in differing degrees of subjectivity. Actually, they are all of the same size as the original Icosahedron. Their relationship gives more meaning to the phrase, so often found in theosophical literature: "in coadunation, but not in consubstantiality."

This mathematical concept, quite in line with the laws of geometrical structure, gives us some clue as to the real nature of our Solar System. It is, indeed, the "Egg of Brahmâ," filled with invisible worlds whose number it is impossible to estimate, existing on all conceivable levels of consciousness.

Within the diagram of the Greater Maze are to be found innumerable suggestive relationships. For instance, the objective Icosahedron with its five subjective Icosahedra "clustered" about it, suggest the relationship of the Earth Chain to the Sacred Planets. Consider the Earth Chain as being the "real" planet—from our standpoint only—and clustered about it are the planetary chains of Mercury, Venus, Mars, Jupiter and Saturn, five in number.* These Sacred Planets bear a certain *subjective* relationship one to another that they do not bear to the Earth; *yet in a different capacity*, their subjective relationship to the Earth is constant for all of them. This is because they all contributed toward the building of the various Globes of the Earth Chain. Obviously, the physical Globes of the Chains are not here referred to.

Another aspect of the study which probes deeply into the mysteries of human consciousness suggests that the original "real" Icosahedron may represent the Monadic Essence within Man. Paradoxically, although this is the most subjective aspect of human consciousness, *from our personal standpoint*, it is actually the most real part of us—objective on its own plane. Thus reference to the objective Icosahedron is quite apt in this point of symbolism. The other Icosahedra clustered about it may

*A hint as to the existence of others on a more subtil level of consciousness is to be found in the fact that the Sun and the Moon stand, as symbols only, for two more, which are said to be "secret" planets.

well represent the manner in which the various Monads in Man are "clustered" about the Monadic Essence.

A deep meditation upon this theme leads us into still further interpretations of the symbolism involved, wherein we are led into further understanding of the mystic processes of Initiation. We learn that, just as we are trying to grasp the meaning of the subjective Icosahedra (representing the origins of so many subjective Mazes), so in Initiation, it is not the Spiritual Monad which is to be brought forth, but it is the latent *Mānasaputra within the disciple himself* which must be brought into fruition. That is the real secret that we are trying to discover: It is the hidden glory of the Initiator himself that must be brought forth, not that portion which has already achieved a high plane of spirituality.

This brings our present study to a close, but with no feeling that the final word has been said. If I were to elaborate all the points of significance that these geometrical figures hold for me, it might be interesting to some but less than satisfactory to others. By far the greatest value to the student will be found in the exercise of his own intuitions.

This study calls for more than the brain-mind approach. It demands and therefore calls forth the transcendental faculties of the spiritual intuition, which all possess and which must be brought into play by the earnest student. The rewards of this study are great indeed, and perhaps the first thing that the student may learn is that there is no stopping point at which, having reached, he will say: "I know all that there is to be known about it." The wonder of this study is that it will lead him ever on to new and richer understandings and experience.

APPENDICES

APPENDIX I

THE GOLDEN SECTION or THE EXTREME AND MEAN RATIO

Among the many relationships that exist between numbers, there are some that may be expressed as *ratios* and *proportions*. Thus when we say that the ratio of 3 to 12 is the same as the ratio of 12 to 48, we are recognizing the fact that there are 4 threes in 12, and that there are also 4 twelves in 48. This may be written in the form of a proportion, thus:

$$3 : 12 = 12 : 48$$

The numbers 3 and 48 are known as the extremes, and the number 12 is known as the mean. This may also be written in a fractional form:

$$\frac{3}{12} = \frac{12}{48}$$

The relationship becomes obvious when we reduce the fractions to $\frac{1}{4}$.

This is the simplest type of proportion because only three quantities appear: 3, 12 and 48, and it will serve our purposes adequately.

It is a property of all such proportions that the product of the extremes is equal to the square of the mean. Thus, we would find that the area of a square that is 12 inches on a side is equal to the area of a rectangle that is 3 inches wide and 48 inches long. Each would have an area of 144 square inches.

A proportion of this kind may be written algebraically by the use of the letters a, b, and c, thus:

$$a : b = b : c \quad \text{and} \quad a \times c = b^2$$

We may now develop a sequence of numbers based upon this pattern: 3, 12, 48, 192, 768, and so on, by simply multiplying each term by 4. Such a sequence of numbers is known as a geometrical progression, with a constant ratio between any two adjacent terms. In this instance the ratio is 1 : 4.

Another kind of numerical series is generated by a process of addition, wherein the series increases by a fixed increment. This is known as an arithmetical series. A good

example of this is seen in the column of a calendar. Take the column which reads 4, 11, 18, 25, wherein each term is merely the previous term increased by 7. Here there is no fixed ratio between any two adjacent terms. Thus, we cannot say that $4 : 11$ as $11 : 18$, nor as $18 : 25$.

Now we are in search of a series of numbers which will combine the properties of the arithmetical series with the geometrical progression. We shall reach a half-way point in our search if we consider the so-called Fibonacci Series, named after its discoverer, an Italian mathematician who was born about 1180 A.D. This series starts with 0, and the second term is 1. Thereafter, each term is the sum of the two preceding terms, thus:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, etc., etc.

This series of numbers has a remarkable property, for while there is not a fixed ratio between the terms, nevertheless if we take them two at a time, stating them as fractions, and find their decimal values, we shall discover that these values come closer and closer to a certain number, already familiar to the readers of this book. Carried to six significant figures, this number is .618034 Actually, it is an indeterminate decimal, and for most purposes it is sufficient to carry it to three significant places only, as has been done throughout this book.

Let us now make a table of fractions taken from the Fibonacci Series. The (+) and the (—) signs indicate that the value is either above or below the decimal .618034; but notice that these values converge more and more closely to that figure as the process is carried on. Actually, the final value is reached only when this series is carried to infinity:

1/1	1.000 +
1/2	.500 —
2/3	.666 +
3/5	.600 —
5/8	.625 +
8/13	.615 —
13/21	.619 +
21/34	.618 —

Figure 22 shows a graph of these values. Note the bold line indicating .618034 . . . and the manner in which the values approach it, until the eye cannot distinguish them from the line. However, if we wish to be very precise in our study, we must recognize that it is only when this series is carried out to infinity, as said before, that this ratio between the consecutive terms becomes .618034

We discover the series for which we are looking if we will take .618034 . . . as one of its terms, and subtract it from 1.000, giving us .381966 By adding any two consecutive terms in order to give us the following one, we shall find that the series grows as follows:

.382, .618, 1.00, 1.618, 2.618, 4.236, 6.854, and so on.

This series of numbers is an arithmetical series for the reason that it increases to the right by a process of addition. Thus, each term is the sum of the two preceding terms.

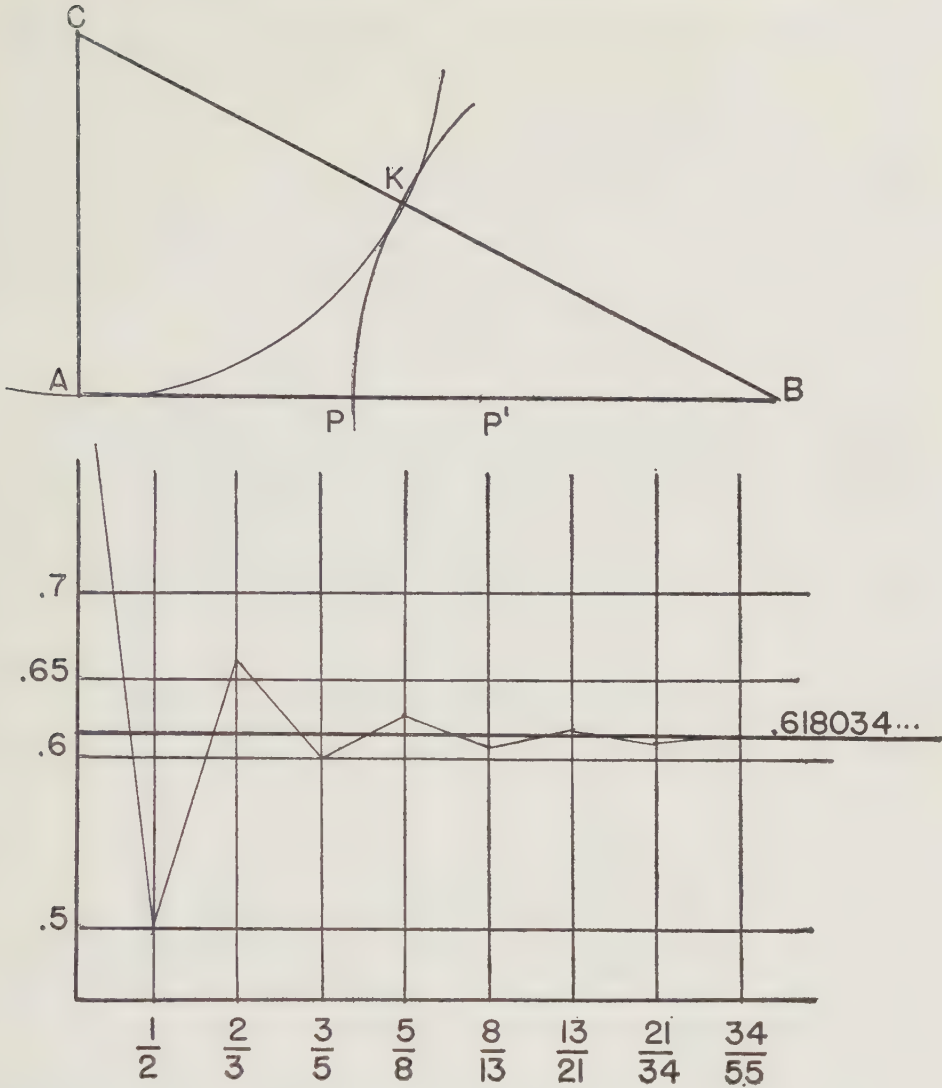


Fig. 22—The Golden Section and the Fibonacci Series.

It is also a geometrical progression for the reason that it is generated by a process of multiplication. The factor .618 is a constant. Thus, each term is .618 times the term to the left.

This is a series of numbers which extends infinitely in both directions, so it does not really start with .382. We may extend it indefinitely to the left. So it is now presented with a value 1.00 as occupying a central position:

.090	.146	.236	.382	.618	1.00	1.618	2.618	4.236	6.854	11.090
—5	—4	—3	—2	—1		1	2	3	4	5

The number under each term of this series indicates its place to the left or the right of 1.00. This is done in order to bring out a most curious property of this series.

To multiply two or more terms of this series, take the algebraic sum of their subscripts and locate the product above the new subscript. Two examples will make this clear: Multiply .236 by 6.854. Their subscripts are -3 and 4 , the algebraic sum of which is 1 . Locate 1.618 over subscript 1 .

Multiply .618 by .146. Their subscripts are -1 and -4 , the algebraic sum of which is -5 . Locate .090 above subscript -5 .

To find the square of any term, multiply its subscript by 2, and locate the answer. Thus the square of .382 is .146. The square of 1.618 is 2.618. Since each term is the sum of the two terms preceding it, the formula

$$a : b = b : c \text{ becomes } a : b = b (a + b)$$

We are ready to move into a geometrical consideration of the Golden Section; this should be introduced by stating that a rectangle constructed such that the height and width are any two consecutive terms of this series, will be proportioned as .618 : 1.00. This is held to be the most beautifully proportioned of all rectangles, and the Greeks recognized this. They used it widely in their architecture, their ornaments, statuary, vases and paintings. We shall henceforth refer to it as a Golden Rectangle.

In order that we may construct this rectangle and other figures, we must learn how to divide a line at the point of the Golden Section. See upper part of Fig. 22.

Upon a given line AB, erect a perpendicular AC at point A, equal to one half of AB.

Join BC.

With C as center, and with radius CA, describe an arc cutting CB at K.

With center at B, and with radius BK, describe an arc cutting AB at point P. P is the point of the Golden Section, and $AP : PB$ as $PB : AB$. Expressed in words, the shorter line segment is to the longer line segment as the longer is to the whole line. This satisfies the equation $a : b = b : (a + b)$.

To present the geometrical proof of this might be confusing to some readers, as a knowledge of several geometrical principles involving the relationship between tangents and secants to a circle would be required. This material is readily available in any standard textbook on Plane Geometry, and it is better to confine ourselves to a consideration of the numerical relationships which apply to the Golden Section of the line AB.

Let us consider that the perpendicular AC equals 1.00, and the line AB equals 2.00. BC is the hypotenuse of the right triangle ABC and is therefore the square root of the sum of the squares of the sides AC and AB, $1^2 + 2^2 = 5$. Thus, BC equals the square root of 5, or 2.236. BK equals BC — KC, or 2.236 — 1.00. This means that BK equals 1.236. Marking off this length on AB at the point P, gives us a ratio of 1.236 : 2. This reduces to .618 : 1.00, or the Golden Section of the line. This

is expressed algebraically as $\sqrt{\frac{5-1}{2}}$. AP must equal 2.00 — 1.236, or .764, and the

ratio of $.764 : 2.00$ reduces to $.382 : 1.00$. Thus we have three terms in the Golden Series: $.382$, $.618$, and 1.00 .

Now there is a second point, P' , which balances the point P . It may be found by erecting the perpendicular at B ; but for simplicity of explanation this point P' is shown without the construction which would only duplicate what has already been done. The point P' not only divides the line AB at the point of the Golden Section, but it also divides PB in the same manner. Thus we have four terms in the Golden Series, since PP' is $.236$.

If we wish to construct a Golden Rectangle, we have only to construct a square as in Fig. 23. M is the midpoint of the base of the square; with M as a center, and the length MC as a radius, describe an arc cutting AB produced, at the point E . Erect a perpendicular at point E , to meet DC produced, at the point F . Rectangle $AEFD$ is a Golden Rectangle, and the width (or height) EF is to the length (or base) AE as $.618 : 1.00$.

The diagonal of the Golden Rectangle, AF , is interesting. If we were to construct a circle with radius AE we would find that the diagonal AF is the length of the side of an inscribed regular pentagon. Also, the height of the rectangle, EF , is the side of an inscribed regular decagon. The smaller rectangle at the side of the square (standing on its shorter side) is also a Golden Rectangle, and therefore similar to the rectangle $AEFD$, and its diagonal, EC , is perpendicular to the longer diagonal AF .

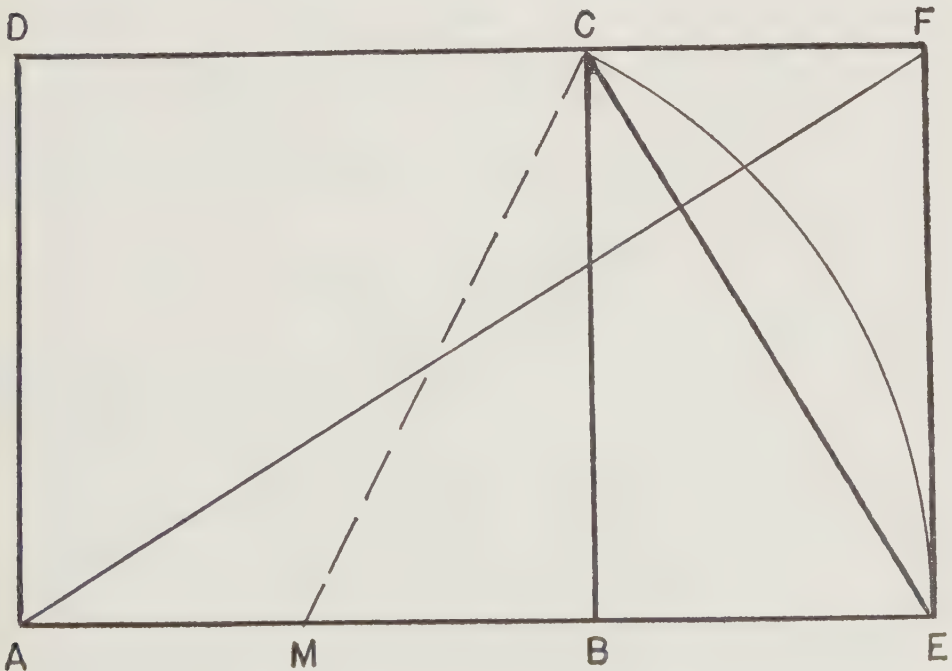


Fig. 23—The "Golden" Rectangle.

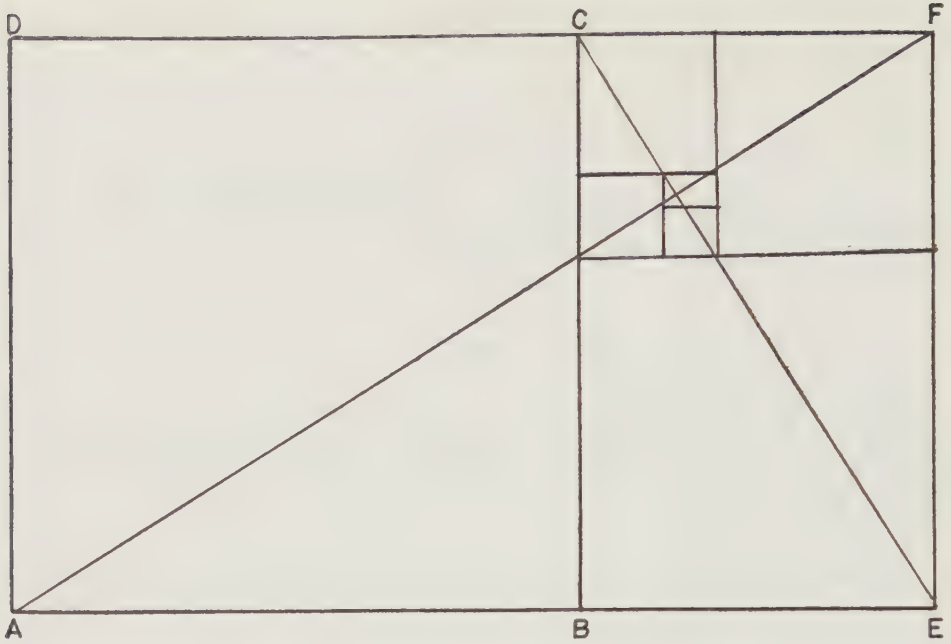


Fig. 24—The Rectangle of the Whirling Squares

Their intersection is the “eye” of an interesting series of squares which appear to rotate about it (Figure 24 shows this as a “rectangle of the whirling squares”).

Figure 25 shows one of the triangle segments of a regular Decagon, generated by the moving circle as in Chapter II. Its sides would be two of the radii of the circle, and its base is one side of the polygon. We demonstrated at that time that numerically its length is .618 of the radius, but the geometrical proof that it actually is a regular decagon was left to this later time. Thus we must prove that the angle at the apex of the triangle is 36° . Having done this, we shall not only find that the proposition of the moving circle is geometrically correct, but that we have here a triangle of truly remarkable properties.

Given isosceles triangle ABC such that AC and BC are equal, and the base AB is .618 of AC. To prove that the angle at C contains 36° .

With A as center, and with radius AB, describe an arc cutting BC at K. Join AK.

Triangle ABK is isosceles because AB equals AK. Therefore $\angle AKB = \angle ABK$. But $\angle CAB = \angle ABC$, as they are the base angles of the isosceles triangle ABC.

Therefore $\angle CAB = \angle AKB$, and the two triangles are similar.

Therefore $\angle KAB = \angle ACB$.

Since $AB : AC = .618 : 1.00$, $KB : AB = .618 : 1.00$.

Corresponding parts of similar triangles are proportional.

The Golden Series of terms that we have just studied shows us that $KB = .382$.

$CK = CB - KB$, or $1.00 - .382$. Therefore $CK = .618$.

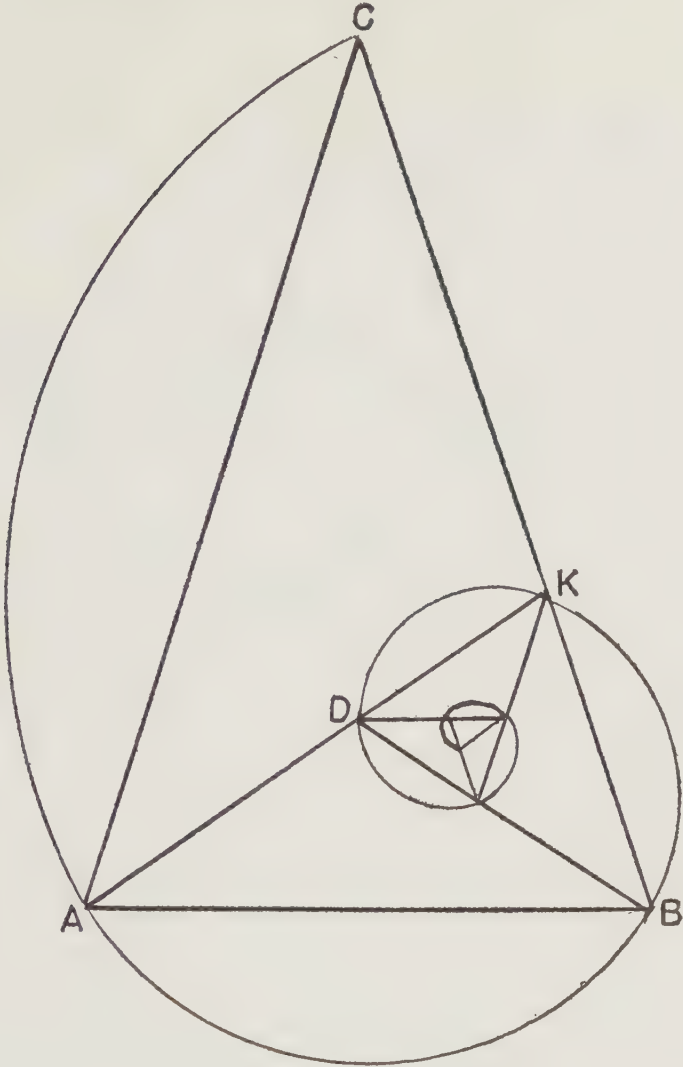


Fig. 25 — A "Golden" Triangle

But AK , being equal to AB , is also equal to $.618$; therefore the triangle ACK is isosceles with the sides AK and CK equal; the base angles ACK and CAK are also equal.

Therefore $\angle CAK = \angle ACK$, which also equals $\angle KAB$, and $\angle CAB$ is $2 \angle KAB$.

Therefore each of the base angles of triangle ABC is equal to $2 \angle KAB$.

But $\angle KAB = \angle ACB$, so that each of the base angles is equal to $2 \angle ACB$.

Therefore the sum of all the angles of triangle $ABC = 5 \angle ACB$.

The sum of the angles of any triangle is 180° . Therefore 180° is $5 \angle ACB$.

Therefore $\angle ACB = 36^\circ$, and the polygon within the circle is proven to be a regular decagon.

The base angles of triangle ABC are each equal to 72° . Much importance has already been attached to the number 72.

It is worth noting that in the original triangle, the base is to the side as $.618 : 1.00$, and in the triangle ACK, the side is to the base as $.618 : 1.00$. These triangles were held by the Greeks to be so important that they were named after the two stars in the sky associated with the constellation Gemini, the Twins: Castor and Pollux. These triangles are repeated many times in the five-pointed star diagrams that we have studied.

By repeating the process in the formation of these triangles from the original triangle ABC, we can subdivide endlessly, making a series of "whirling triangles," and we find that they form the basis of an interesting logarithmic spiral which is similar in shape to the shells of certain sea-creatures. Numerous instances can be found in nature, wherein the Golden Section plays its part in natural design.

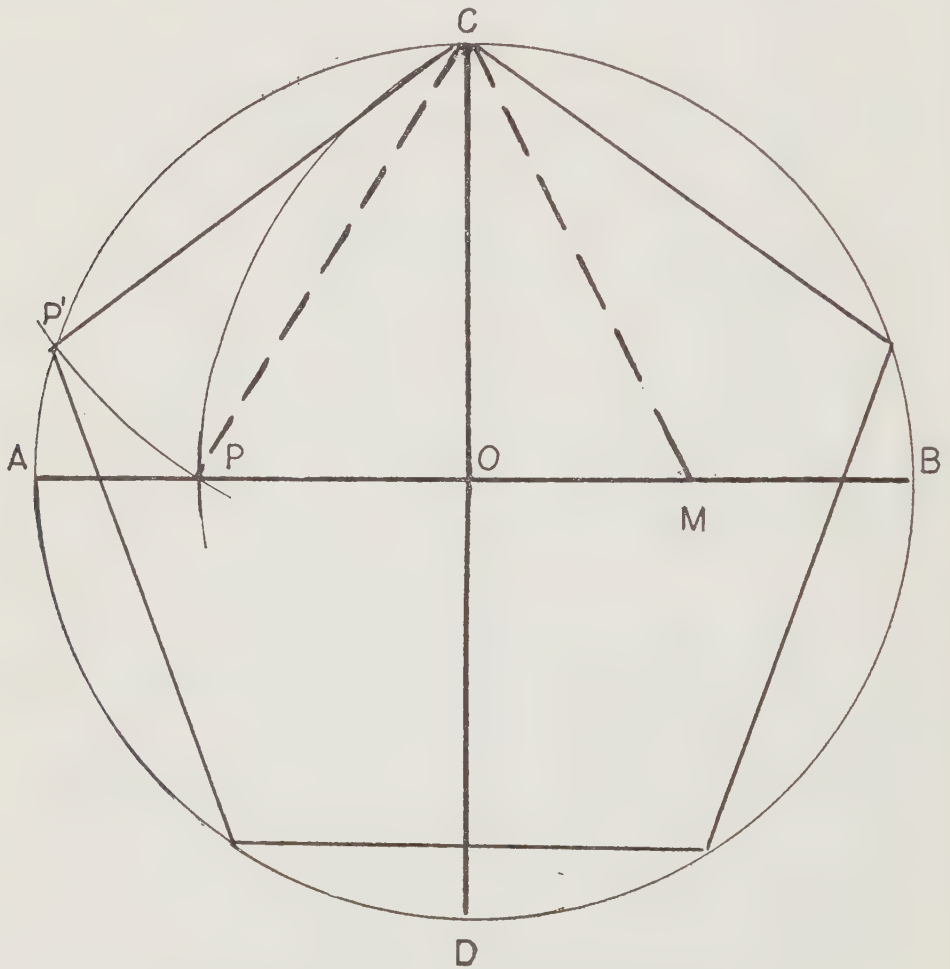


Fig. 26 — Constructing a Pentagon Within a Circle

Figure 26 shows how to construct an inscribed regular Pentagon within a circle. Given circle with center O, construct the diameters AB and CD mutually perpendicular.

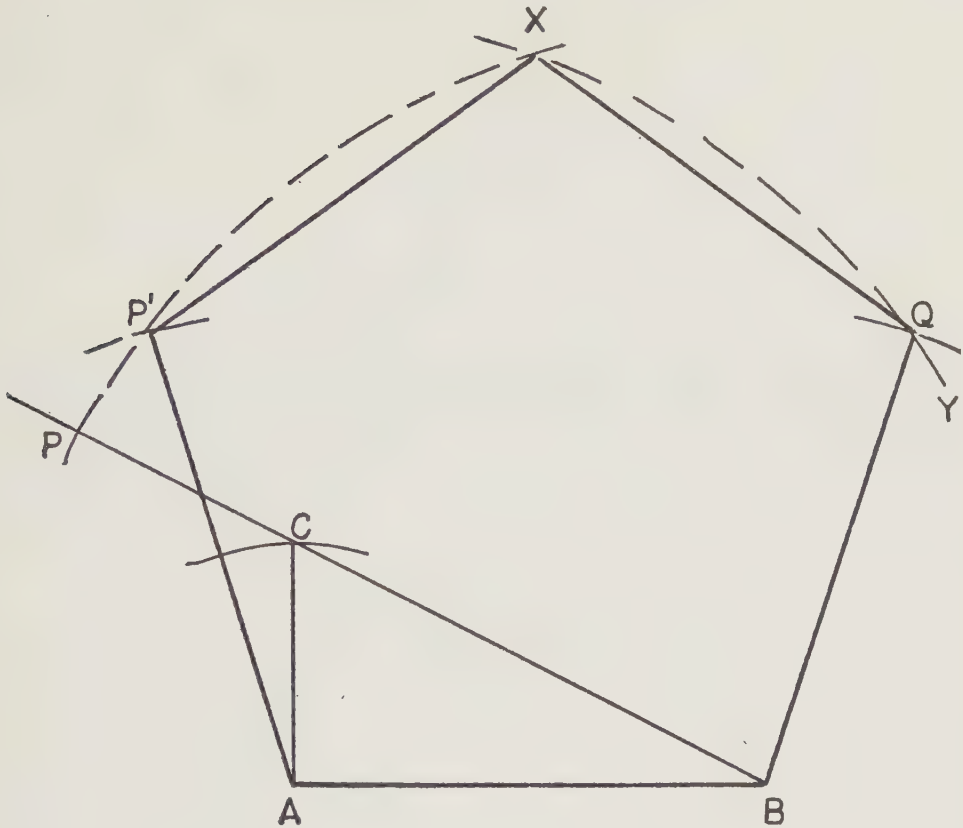


Fig. 27—Constructing a Pentagon, having given one Side.

M is the midpoint of OB , and with M as a center, and with radius MC , describe an arc cutting AO at the point P . With C as center, and with radius CP , describe an arc cutting the circumference at P' . CP' is the side of the inscribed pentagon.

Figure 27 shows how to construct a regular Pentagon having one of its sides given. Given side AB , on A construct a perpendicular AC equal to $\frac{1}{2} AB$.

Join BC and extend.

With C as center, and radius CA , describe an arc cutting BC extended at point P .

With B as center, and radius BP , describe an arc; and then with A as center, and with the same radius, describe another arc.

Point X is the intersection of these arcs.

With A as center, and with radius AB , describe an arc cutting arc PX at P' . With B as center, and with radius AB , describe an arc cutting arc XY at Q . Join points A, P', X, Q and B to complete the pentagon.

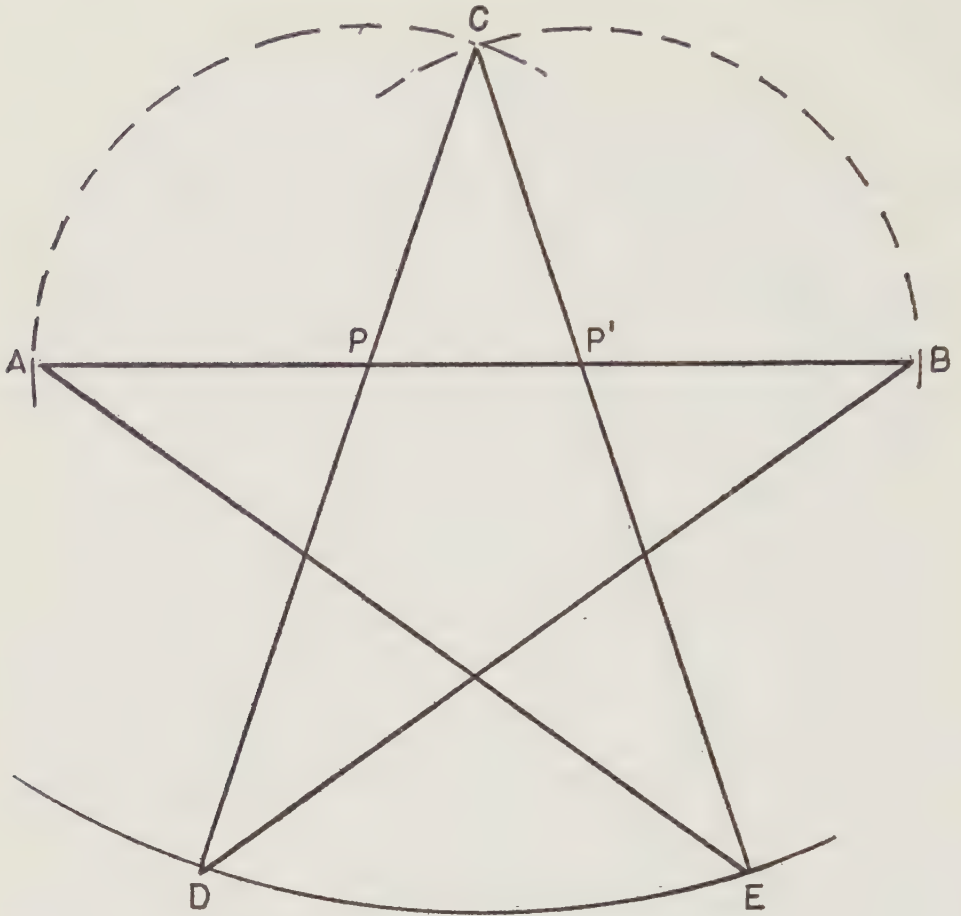


Fig. 28 — Constructing a Pentagram (Five-pointed Star),
having given one Side.

Figure 28 shows how to construct a five-pointed star, having given one of its lines, AB.

Upon AB locate the two points P and P' of the Golden Section by the method already explained.

With P as center, and with radius PA, describe an arc upwards.

With P' as center, and with radius P'B, describe an arc upwards. Locate Point C where the arcs intersect. Join CP and extend. Join CP' and extend.

Set the compass to radius AB. With C as center, describe an arc cutting CP extended at point D, and CP' extended at point E. Join AE and BD to complete the star.

APPENDIX II

THE PRECESSION OF THE EQUINOXES

In order to gain some understanding of the phenomenon known as the Precession of the Equinoxes, we must form a clear picture in our minds of the Celestial Sphere.

We must imagine that the Earth is at the center of a sphere which we call the heavens, and that the stars are points of light on the inside of this sphere. They appear to move only because of certain motions of the Earth of which we are not physically aware.

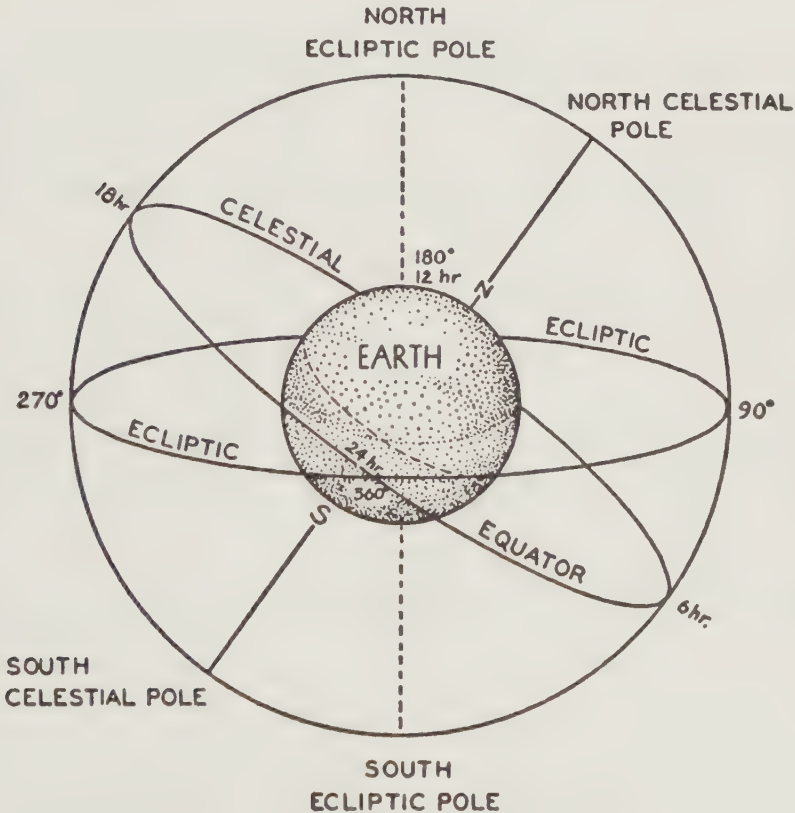


Fig. 29—The Celestial Sphere.

We must now imagine that there is a rod extending right through the center of the Earth, emerging at the North and South Poles and extending on indefinitely until it touches the Celestial Sphere. See Fig. 29. The two points in the sky identified by this

rod thus become the North and South Celestial Poles, and as the Earth actually does turn about its axis, the appearance is that the heavens turn about the Celestial Poles in the opposite direction. Since, then, the Earth rotates from west to east, the heavens appear to rotate from east to west. That is why the stars appear to rise in the east and set in the west.

Midway between the north and south Poles of the Earth, there is the Great Circle we call the Equator. It is so called because it divides the Earth equally into two hemispheres. The plane of the Equator is at right angles to the Earth's axis, and we should now imagine this plane to be extended indefinitely until it similarly divides the Celestial Sphere into the north and south hemispheres. The circle thus formed is known as the Celestial Equator. We have established parallels of latitude on the Earth so that we may measure distances north and south of the Equator. Thus we speak of so many degrees of North Latitude, or so many degrees of South Latitude. All these parallels of latitude are copied on the Celestial Sphere, but we use a different term for them. Instead of saying North or South Celestial Latitude, we speak of degrees of North or South Declination.*

An observer on the Earth, wherever he may be located, may imagine a Great Circle passing through the North Celestial Pole, through his Zenith, and then continuing on towards the South Celestial Pole. This is his own North and South Meridian, and while it is not strictly a part of the Celestial Sphere, it is nevertheless important because he can note the moment at which any given object on the Celestial Sphere crosses his North and South Meridian and make calculations based upon the *time* at which such an event may happen.

We have now brought in a most important aspect of the study of the Celestial Sphere, and that is *time*. Just as we tell time on Earth by our clocks which are regulated by the Sun, so we have a way of telling star time. This is known as *Sidereal Time*. One Sidereal Day is the time that elapses between any two passages of a given star across our North and South Meridian. This differs somewhat from the time we tell by our clocks. A day on Earth is reckoned as the time that elapses between any two passages of the "Mean Sun" † across the North and South Meridian. Due to the revolution of the Earth around the sun, the Mean Solar Day is slightly longer than the Sidereal day.

The calculating of Sidereal Time is based upon the concept that the lines of longitude on the Earth are copied onto the Celestial Sphere and become 12 Great Circles across

*Some students may have encountered the terms "Celestial Longitude and Latitude." This refers to another sphere in the heavens which does not coincide with the Celestial Sphere, because the Earth's orbit is its "Equator." Another name for the plane of the Earth's orbit is the Ecliptic, a matter which is explained in the text; it establishes the Ecliptic Sphere, with its own North and South Ecliptic Poles.

†The word "Mean" is almost synonymous with the word "average." The true Sun does not keep accurate time due to the changes of velocity on the part of the Earth as it travels on its elliptical orbit. Thus the Sun crosses the North and South Meridian a little earlier than noon during some months, and a little later than noon during some other months. That is why astronomers have established a mathematical Sun which keeps accurate time. This is known as the "Mean Sun" which again establishes the "Mean Solar Day."

the heavens from the North to the South Celestial Poles. Thus if they could be seen, they would be a copy of our own lines of longitude which pass through the Earth's North and South Poles. But we do not call them longitudes in the heavens. Again we use a different term and refer to them as Hour Circles. The reason is that due to the rotation of the Earth, these imaginary circles rise and set, and one hour elapses between the passage of one such celestial Hour Circle across our North and South Meridian and the passage of the next Hour Circle. These Hour Circles are counted East or West of a Prime Meridian which passes through a certain point on the Earth's orbit. This is the point that appears to be occupied by the Sun at the moment when we are experiencing the Spring Equinox. This corresponds to a Prime Meridian on the Earth which is known as the Greenwich Meridian, and our Longitude is measured East and West of this Greenwich Meridian. Whereas on the Earth we measure this in terms of Degrees, Minutes and Seconds of arc (angles), in the sky we measure the distance east or west of the Prime Meridian in terms of hours, minutes and seconds of *time*. This is what we mean when we speak of the position of a star in terms of its *Right Ascension* (R.A.).

The Earth's orbit does not coincide with the Celestial Equator, instead it is tilted at an angle of $23\frac{1}{2}^{\circ}$ due to the inclination of the Earth's axis. Thus the Earth's orbit, which establishes the *plane of the Ecliptic* intersects the Celestial Equator at two points, called Nodes, and one half of the orbit is north of the Celestial Equator, while the other half is south of it.

When we experience the moment of Spring in the northern hemisphere, the Sun appears to be right on the intersection of these two Great Circles, and since the Sun appears to travel along the Ecliptic it is pursuing its northern journey at that time. The Prime Celestial Meridian referred to in the preceding paragraph passes through this point of intersection of the Celestial Equator and the Ecliptic. Since the Prime Meridian is really a Great Circle, it also passes through the point opposite to that associated with Spring. This is the other point of intersection between the Celestial Equator and the Ecliptic. When the Earth is experiencing the Autumnal Equinox, the Sun appears to be on this point, pursuing its southward journey. These two points of intersection are now to be referred to as the Equinoctial Points. By far the more important is the Spring or Vernal Equinoctial Point.

Whenever we use the term Ecliptic, it shall mean primarily the plane of the Earth's Orbit, and since all of the planets of the Solar System move in orbits that are roughly in the same plane as that of the Earth, they are all said to move within the Ecliptic. Since there is a slight divergence among their orbits amounting to about 18° , the Ecliptic cannot be a line, but it is a belt about 18° wide extending around the heavens, within which the Sun, the Moon and all the planets appear to travel.

All of the stars which lie within this belt form twelve great constellations known as the Zodiac, or "Sacred Animals." Although they are not equal in size in the sky, these constellations nevertheless give their names to twelve equal divisions of the Ecliptic, each such division being an arc of 30° . These divisions of the Ecliptic are known as the *Signs of the Zodiac*. Whereas the stars, or the constellations, of the Zodiac remain fixed in the sky, the Signs are not fixed for reasons that are about to be explained. A clear understanding of this is required for a grasp of the phenomenon of the Precession of the Equinoxes.

The names of the Constellations of the Zodiac appear below, with their English equivalents, and also the signs are given. It must be borne in mind again that in calling these the signs, we do not mean that they are symbols for the constellations, *but they are actually twelve divisions along the Ecliptic*. They are denoted by the symbols which follow:

♈	Aries.....	The Ram
♉	Taurus.....	The Bull
♊	Gemini.....	The Twins
♋	Cancer.....	The Crab
♌	Leo.....	The Lion
♍	Virgo.....	The Virgin
♎	Libra.....	The Scales
♏	Scorpio.....	The Scorpion
♐	Sagittarius.....	The Archer
♑	Capricornus.....	The Sea-goat
♒	Aquarius.....	The Water Bearer
♓	Pisces.....	The Fishes

At all times we must regard the Zodiac as though it were the background across which the Sun appears to move. Except for the fact that under the right conditions a few of the brightest stars can be seen with a good telescope even during the daytime, these stars are invisible due to the scattering of the sun's light. An astronaut in a space vehicle can see the stars in the vicinity of the Sun, once he is above the Earth's Atmosphere.

Another phenomenon produced by the revolution of the Earth around the Sun, and due also to the inclination of the Earth's axis, is the sequence of the seasons. We must learn to think of the seasons in terms of the four points that the Sun appears to occupy when the Earth experiences the moments of Spring, Summer, Autumn and Winter. Thus, referring again to Fig. 29, we imagine the Sun moving along the Ecliptic, crossing the Celestial Equator at the moment of Spring and Autumn, and occupying its most northern position on the Ecliptic at the moment of the Summer Solstice, and, conversely, the most southern point at the moment of the Winter Solstice. These four points will be remembered by many students as identifying the "Sacred Seasons." The seasons come and go, and one might suppose that if there is anything certain and sure, the progression of the seasons would be as constant as the Pole Star itself.

Now the main points have to be explained. So far as any of us are concerned, the Earth's axis will continue to point toward the Pole Star (Polaris) during the span of one human life. Taking the larger view however, comprising many hundreds of years, we find that the direction toward which the Earth's axis is pointing does change. In fact, it is slowly describing a clockwise circle in the sky around the *Pole of the Ecliptic*, which is situated in the Constellation Draco at $66\frac{1}{2}^{\circ}$ North Declination and 18 hrs. Right Ascension. The center of this circle would be on a line passing through the center of our Earth and perpendicular to the plane of the Earth's orbit. Since the angle of inclination is $23\frac{1}{2}^{\circ}$, it follows that the circumference of this small circle is

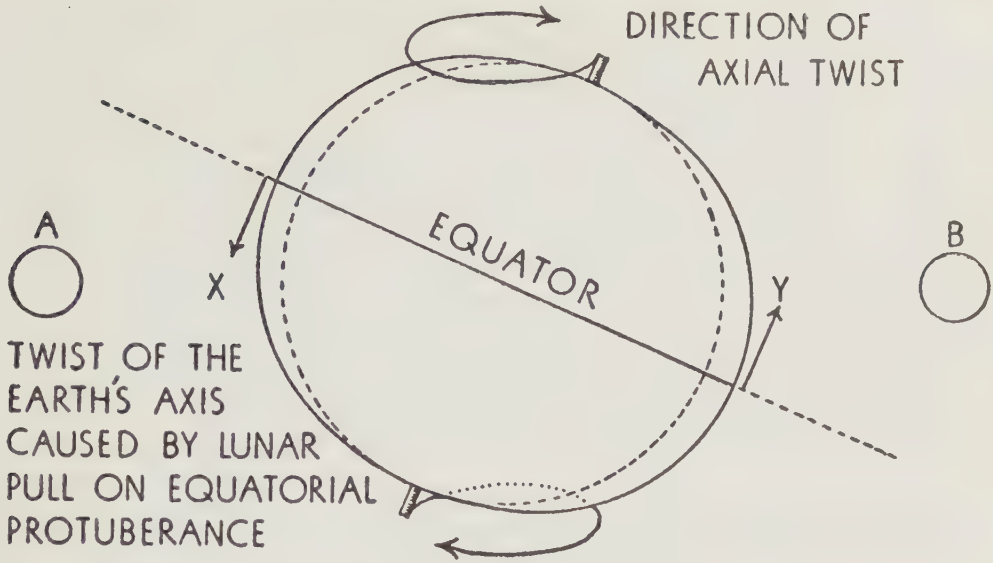


Fig. 30—The Precession of the Equinoxes.

$23\frac{1}{2}^{\circ}$ from the ecliptic pole, so that the circle subtends an angle of 47° . Imagine that you are able to draw this circle in the sky; then every star that is on the circumference of that circle will in turn become the Pole Star for a time. The North Celestial Pole takes a long time to trace this circle, nearly 26,000 years being required for the complete cycle.

The physical cause of this phenomenon is not easily explained in a few words. In brief, according to modern Astronomy, it is chiefly due to the pull of the Moon, and of the Sun to a lesser degree, upon the *equatorial protuberance* of the Earth. This equatorial protuberance is simply a bulge around the Earth at the Equator, due to the centrifugal effect caused by the inertia of the Earth's rotation. This means that the Earth is not exactly spherical in shape, but is slightly flattened at the poles. We find that the polar diameter is about 26 miles less than the equatorial diameter. Most of the planets exhibit this flattening at the poles. As a consequence of the equatorial bulge, there are times when the Moon pulls harder on the Equator than it does on the Poles, depending upon its position in its own orbit. If the Moon were revolving on an orbit that was in the plane of the Earth's equator, this would make no difference at all, but since the Moon revolves in an orbit which sometimes gives it a south declination, and sometimes a north, it will alternately pull downwards — as shown by the arrow X with the Moon at A (Fig. 30), and upwards, as shown by arrow Y, with the Moon at B — in an effort to bring the Earth's equator into line with its own orbit. The result of this is that the Earth's axis tends to become upright. Owing to the momentum of the Earth's rotation, it is impossible for the lunar and solar forces of attraction to change the inclination of the Earth's axis, but as they must produce some effect, they slightly twist the axis around in a new direction — as shown by the curved arrows at the two poles. This is called the *gyroscopic effect*.

The laws governing the motion of a rotating body are extremely complex, and there is no need to try to explain them here. It is sufficient to understand the accepted scientific explanation that the swinging around of the North Pole of the Earth is due to the pull of the Moon and the Sun in the manner just explained. The theosophical student is tempted to ask whether or not this is the actual cause, or is it possibly the regulating factor. As an argument in support of our teachings, we might ask: Is it the pendulum which causes the hands of the clock to turn, or is there a mainspring which supplies the energy, the pendulum merely acting as the governor, regulating the speed at which the clock is to run? In the case of the Earth's precessional movement, gravitation has always been regarded as the only scientific explanation, but we believe that the mainspring has not yet been discovered by science, even though some steps may have been taken in the right direction. Perhaps the regulator has been mistaken to be the actual cause behind the phenomenon. However that may be, the following is what occurs as the result of the gyration of the Earth's axis:

We have learned to regard the point occupied by the Sun at the moment of Spring as the zero point. Since the Earth revolves around the Sun in a counter-clockwise direction, the Sun will appear to move along the Ecliptic from right to left.*

Keeping in mind the fact that the ecliptic is a pathway that passes across the twelve constellations of the Zodiac, we shall now divide the Ecliptic into twelve equal parts, each part being an arc of 30° . These twelve parts of the Ecliptic take the same names as the *constellations* of the Zodiac, but they are not really constellations. *They are merely equal divisions along this great circle*, and they are called *Signs* of the Zodiac. The symbols for these have already been given.

The only things these Signs have in common with the constellations is the order in which they occur, and the fact that the Ecliptic passes across the faces of both Signs and constellations. Moreover, the signs and constellations do not coincide in position at the present time, nor have they done so for about two thousand years, as has been pointed out. While the Signs contain thirty degrees of arc, the constellations do not run equal in length, a distinction that should be clearly borne in mind. Just now, the First Point of Aries is not in front of the constellation Aries at all, but is actually not far from the border line of Aquarius.

A very important thing to remember is that whatever position the sun may occupy at the exact moment of Spring is the *First Point of Aries*. This position is determined by the direction toward which the North pole of the Earth is directed. Thus, the First Point of Aries is found to be movable, while the constellations remain fixed in the heavens.

Fig. 31 gives several positions of the First Point of Aries, with corresponding dates. This diagram is based upon the hints we have received to the effect that 1898 marked the close of the first 5,000 years of the Kaliyuga, also suggesting this time as marking

* This means, that if we were able to take up a position in space, high above the Solar System, the Sun would appear to be at rest in the center, and all of the planets would be following their orbits in a counter-clockwise direction.

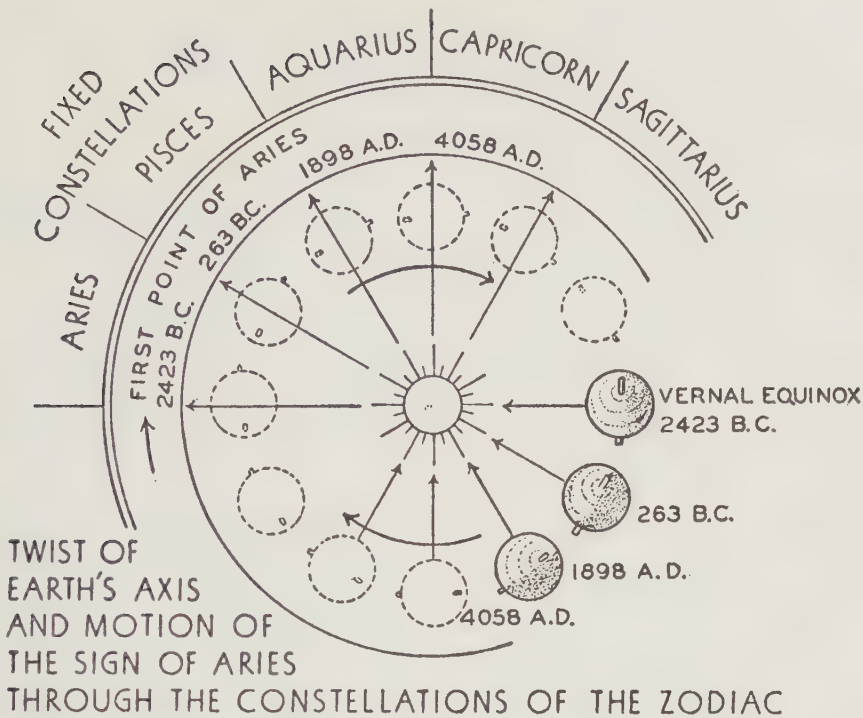


Fig. 31—Some Interesting Dates.

the beginning of the Aquarian age. In her remarkable essay on "The Esoteric Character of the Gospels" (originally published in *Lucifer*, Vol. I, 1887-88, and now in the *Collected Writings*, Vol. VIII), H.P.B. wrote as follows:

"There are several remarkable cycles that come to a close at the end of this century. First, the 5,000 years of the Kaliyuga cycle; again the Messianic cycle of the Samaritan (also Kabalistic) Jews of the man connected with *Pisces* (Ichthys or 'Fish-man' *Dag*). It is a cycle, historic and not very long, but very occult, lasting about 2,155 solar years, but having a true significance only when computed by lunar months. It occurred 2,410 and 255 B.C., or when the equinox entered into the sign of the *Ram*, and again into that of *Pisces*. When it enters, in a few years, the sign of *Aquarius*, psychologists will have some extra work to do, and the psychic idiosyncrasies of humanity will enter on a great change."

The dates as shown on Fig. 31 are the result of another student's research, and differ somewhat from those mentioned in the excerpt quoted above.

Note in the diagram where the position of the Earth is shown in 2423 B.C. at the Vernal Equinox. Here the first point of the movable sign of Aries, the zero point, is entering the fixed constellation Aries, as indicated by the point of the arrow to the left. 2160 years later, when the Earth reaches the position marked 263 B.C., the sign Aries is entering the Constellation Pisces, 30 degrees away from Aries; and so forth around the Precessional Cycle (shown by the dotted circles) or 25,920 years, during which it passes through all the constellations. The axis of the Earth has during that time made one complete swing in obedience to the pull of the Moon, as explained.

Owing to the limited data available, there is some difference of opinion with regard to the exact figures, but those given may be considered to be fairly accurate. The entrance of the zero point into the Constellation Aquarius in 1898-9, or thereabouts, is of especial interest to Theosophists, for it coincides with the close of the first 5,000 years of the Hindu cycle of the Kali-yuga, the "Black Age."

Thus we begin to see that while the constellations are fixed groups of stars, the Signs of the Zodiac are not fixed, but their positions are determined by the place occupied by the Sun as it appears at the moment of Spring, March 21; and therein lies the crux of what we have to explain.

We might very well call this zero point the equinoctial point, and perhaps it would be better to do so from now on, understanding that we mean the position of the Sun at the Vernal Equinox. The opposite point to be occupied by the Sun six months later is called the Autumnal Equinox. Here is the important fact that has now to be understood:

The Earth moves around on its orbit in a counter-clockwise direction making the complete circle once a year. The location of the equinoctial point will be determined by the position occupied by the Sun when the Earth passes through the Vernal Equinox. Now if the North Pole never were to vary from the direction to which it is now pointing, this location of the equinoctial point on the Ecliptic would also be invariable; but since the North Pole describes its own *clockwise* circle, the equinoctial point must necessarily advance along the orbit in a clockwise direction. This means that it will move *backwards* through the constellations. It moves slowly, to be sure, at the rate of 1° every 72 years — 25,920 years for the complete cycle, according to the occult reckoning.

The result is that we must combine the motion of the Earth in its yearly revolution around the Sun with the opposite motion of the equinoctial point. In the period of 72 years, the moment of Spring has progressed 1° earlier than it had been 72 years before. Translating this into an expression, it means that during these 72 years the equinoctial point has been creeping forward, so that eventually the moment of Spring will occur a whole day earlier than it was originally. The day will still be known as March 21, however.

We might continue our calculations and point out that during the course of each year, the equinoctial point has progressed $1/72$ of a degree, which means that the moment of Spring comes $1/72$ of a day, or 20 minutes, earlier each year. In other words, the moment of the Spring Equinox *precedes* the time when it occurred the year before by 20 minutes. That is why the phenomenon is called the *Precession of the Equinoxes*. The Equinox of this year preceded the Equinox of last year by 20 minutes. This will bear close study before it is entirely clear in the mind of the student; but anyone will be well repaid if he will take the time to understand it fully, for the Precession of the Equinoxes is of great importance to the student of the Ancient Wisdom.

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RULES FOR SANSKRIT PRONUNCIATION

The few rules given here are those which apply to the Sanskrit terms which are found in this book. It would be impractical to present all of the rules, so the interested student is referred to any Sanskrit Grammar which will deal more thoroughly with the complex rules which govern modern usage of the Sanskrit language.

The five most common vowel sounds are *a*, *e*, *i*, *o*, and *u*. These appear with and without accents, and their pronunciation will vary accordingly.

<i>a</i> as in Roman	<i>â</i> as in father
<i>i</i> as in it	<i>î</i> as in police
<i>u</i> as in push	<i>û</i> as in rude
<i>e</i> as in there	<i>ê</i> as in aisle
<i>o</i> as in so	<i>ou</i> as the ow in cow

Accents appear over and under some of the consonants, thus:

The *ś* has the sound of a very soft *sh*, more like the sound of the *s* in the German word *sprechen*; not the strong *sh* as in shall.

The letters *d*, *n*, *r* and *t* sometimes appear with the dot under them, thus: *ḍ*, *ṇ*, *ṛ* and *ṭ*. It is important to include these diacritical marks, because without them, not only the pronunciation, but the meaning of the word can be altered. The dots give a slightly softer pronunciation to the vowels. The softer sound may be made by placing the tongue toward the palate, rather than behind the teeth.

The *anusvâra* (*ṁ*) is a pure nasal and is sounded somewhat as the *n* in the French word *bon*. Instances of it are *Śaṅkarâchârya* and *Saṅskṛit*, as explained in the authoritative *Sanskrit-English Dictionary* of M. Monier-Williams. In common usage, the two words mentioned above have become *Shankarâchârya* and *Sanskrit*.

The *ñ* with a dot over it is the guttural *n*, and is sounded more or less as in the English words *sing* and *king*.

There are many aspirated consonants. While *sh* and *ch* are pronounced as in English, all other vowel combinations with the letter *h*, are aspirated. Examples follow:

- bh* as in abhor
- dh* as in sad hearted
- gh* as in big hearted
- kh* as in bank holiday
- ph* as in haphazard (never as *ph* in philosophy).
- th* as in pot holder (never as *th* in the word this).
- chh* as in staunch hearted.
- ñ* as in *jñâna* is given the *ñ* sound in canyon

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