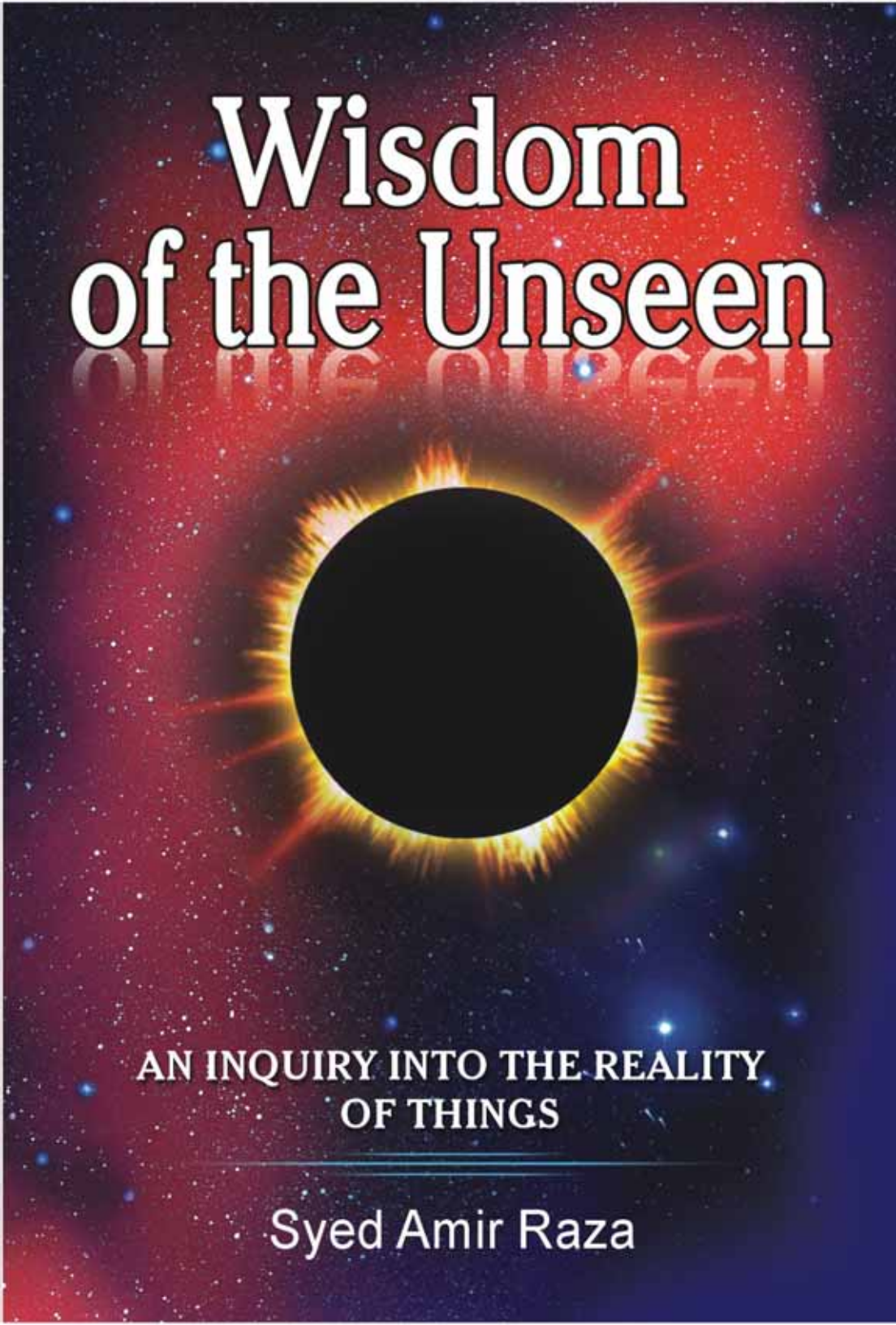
Wisdom of the Unseen



AN INQUIRY INTO THE REALITY OF THINGS

Syed Amir Raza

Wisdom of the Unseen

AN INQUIRY INTO THE REALITY OF THINGS

- Is this World a reality or just an illusion?
- What is the true reality of Space and Time?
- Is Space really limitless and what are the reasons for its limitlessness?
- Does Time really exist or does it only appear to pass in our minds?
- Is this World created by itself or by a supernatural being called God?
- What is the Proof of God's existence?
- Do Angels also exist? And how?
- How did God and Angels create this World?
- Do God and Angels affect the daily events of this world? and how?
- Where are God and Angels located?
- Why man cannot see God and Angels?
- What is the Purpose of the World's Creation?
- Does Man have a free will? And Is God the source of evils in this World?
- Will this World continue to exist for ever?
- What will happen after the end of this World?

These are some of the questions, this book answers logically on the basis of Mulla Sadra's ontology without denying the scientific and philosophical developments of the modern times.

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Price: US $58/=

ISBN: 978-969-9300-00-4

Published in 2008 by:

Wasila Society
8- Zafar Colony Samanabad Lahore,
PAKISTAN
Ph.: 0092-42-7583722
Email: wasilabooks@yahoo.com

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INTRODUCTION

We live in a world of things which spread around us. But we seldom think about the true reality of these things. From where do these things come? How they are created? How these things change to other things? Even our own very existence is a mystery for us. People also talk about many of the generally unbelievable things like angels, spirits, ghosts etc. Some people even believe in their existence. We believe in such things or not but a lot of questions arise in our minds about such things too.

In the history of human thought, philosophers, scientists, religious scholars and other intellectuals have been trying to answer all these questions in different manners since the time immemorial. A lot of theories, ideologies and schools of thought exist in this regard. Many of the works of ancient intellectuals might have not reached us. But the views of some of them are available completely or incompletely down to our times either as written texts or as verbal traditional teachings. Modern science and philosophy which are more completely available to us have their own standpoints regarding these questions.

If we put a generalized glance at all of these thoughts, it may appear appropriate to divide them in two broad categories. One category may be considered to consist of the *traditional thoughts* and the second one of the modern ideas. Although, it is difficult to draw a very clear line between what is traditional and what is modern, the thoughts which emerge and spread before Renaissance may be considered to be traditional even if the thoughts are repeated or supported by some scholars after it. On the other hand, modern thoughts are the ones which spread and generally recognized after the Renaissance even if they are indicated by some thinkers before it.

Thus the thoughts emerging from the ancient civilizations such as Chinese, Egyptian, Hindu, Greek and Islamic may be considered to be traditional thoughts even if they are presented and supported in the modern times. But the molecular or atomic theories, evolutionary theories, modern philosophies etc. may be considered *modern thoughts* even if their deepest roots appeared in older times.

Traditional thoughts may further be subdivided into three broad but loose categories. The first category is that of the ordinary religious thoughts, the second is that of the esoteric religious thoughts and the third one is that of the traditional philosophical thought. An extremely summarized description of the ideas of these three sub-groups of the traditional thoughts regarding the reality of things is as follows:

1. Ordinary religious thoughts: According to this approach, the whole of the physical world is created by God or gods perhaps billions of years ago and it will come to an end one day. The followers of this approach based their beliefs on some divine texts. Since belief on divine texts is a matter of faith, the logical bases of these thoughts are usually questioned by philosophers and thinkers. Adherents of these people are also not very clear about the questions like where God is located, how God created the world, why we cannot see God. Most of the people having such thoughts perhaps do not think very deeply about such questions but they have the view that there must be some creator of this world. Many of the ordinary followers of world religions like Christianity, Islam, Hinduism, Judaism etc may be enumerated under this sub-category.

2. Esoteric religious approach or spiritual approach: The esoteric sections of the traditional religions adopt spiritual and mystic approaches to know about the reality of things. They claim that they know the reality of the things and their link with their creator through spiritual experiences. Most of these intellectuals cannot provide a very solid logical foundation for their claims. Such an approach includes mysticism, Islamic Sufism, Taoism, Hinduism and other traditional teachings spread in different parts of the world. Darvish and Sufis in the Muslim world, Yogis, Pundits and

Gurus of the Hindu world, Chinese Taos and Bhikhshus in the Buddhist World may be enumerated in this sub-group.

3. Traditional Philosophies: They give a more logical exposition of the relationship of God with the physical world. They present the idea of God as something beyond space and time. We have a wide variety of intellectual texts narrated by the philosophers and thinkers of different societies and civilizations such as Greek, Muslim, Hindu and Chinese civilizations. Some of these philosophers or some of their teachings, being linked to the spiritual tradition, may also be included in the second sub-category. Due to the absence of a proper printing setup in their times, many of the ancient texts may not be fully available to us. Whatever the writings we have at this time, have varying degrees of logical validity. The representatives and supports of such a group are found in the modern times too. For instance, the philosophers supporting the Church and religions, Goethe, Rudolf Steiner, Rene Guenon and many others.

Like traditional thoughts, modern thoughts may also be divided further into two sub-groups which may be described as follows:

1. Modern Science: It may include the science after Copernicus and Galileo. During its course, different theories regarding the physical world are being refuted by the subsequent ones because of which our worldview totally changed rapidly in last few centuries. The latest scientific approach concluded that most of physical things consist of very small particles called molecules which are composed of atoms and ultimately of electrons and quarks. Through further findings in this direction science concluded that the electrons and quarks are nothing other than extremely small packets of energy. Hence, modern science's conclusion is that the whole of the gross physical world consists of the lumps of energy. A lot of scientific and educational institutions in the world are striving to find the source of the physical world. These institutions generally employ two approaches in this regard. The first one being micro tries to find the reality of things in their smallest parts and the other is macro which is looking far into the space to find out some clue regarding the origin of the

physical cosmos. The discoveries related to Big Bang theory, black holes, hydrons, quarks, string theories, anti-matter etc. are some of the ideas which have been put forward under the modern scientific approach. Although, many people in the modern times believe in its validity, the modern scientific approach is also not purely logical and does not bring out certain conclusions because it is ultimately based on inductive logic.

2. Modern Philosophies: Among this group, the ideas of the philosophers and thinkers after Descartes (1596-1650) may be included. Many intellectual trends may be seen in this category. But in explaining the reality of things, this approach usually integrates the findings of science into philosophy and tries to explain the reality of things remaining within the boundaries of science. Theories included in this sub-category are more logical in approach but generally could not reach any solid conclusion. Among many modern schools of thought, three trends are dominant. One is that of agnosticism, the second is that of skepticism and the third is that of relativism.

All these categories and sub-categories are, of course, described in a very subjective way and are so broad that many of the opposing and conflicting ideas are included in the same category. They are also not well defined as many philosophers in one group may have some ideas which are characteristics of other groups. Moreover, some of the philosophers or thinkers may not be justifiably included in any of the group.

Sometimes, a single person may have the ideas which are mixture of two or more different trends. Many of the common people believe in many of the traditional ideas as well as many of the modern ones. Most of them even do not think about the contradictions arising from their combining.

But despite all these exceptions and shortcomings, the above-mentioned categories of worldviews cover most of the existing and past ideas about the reality of things. The object of presenting such a broad but short overview of these thoughts is to show that numerous ideas are already prevalent about the reality and origin of things but

perhaps none of them is fully consistent and thus cannot be held to be completely true.

The above-mentioned overview also shows that the main cleavage between *modern* and *traditional thoughts* lies in the conception of God. *Modern thoughts* generally repudiated the idea that this world of things is created by God. But the *traditional thoughts* generally revolve around this idea. Adherents of both categories of thoughts have many objections on each other.

Modern group after explaining many of the phenomena of nature from a materialistic perspective, has objections on the traditional group that their claims have no logical basis. They say that if God created the world, who created the God then[1]? If He really exists why we cannot see Him? Where He is located? Moreover, they also have many questions regarding the way God act on the physical world. Traditional group generally does not have very convincing and consistent answers to such questions.

But traditional group has its own objections against the ideas of modern group. They say that if the things around us are not the creation of God, from where they ultimately come. If the world came into being after the Big Bang blasting the Cosmic Egg, who ignited the Big Bang and from where the substance of the Cosmic Egg came? Perhaps the most logical approach from the modern group to answer such objections is the agnostic approach. The agnostics say that we cannot know the answer of these questions because science is presently in its infancy. But one day will come when science will be able to answer these questions too. But agnosticism is self contradictory if taken in its absolute sense without being restricted to any one specific subject such as science. Agnosticism says that truth is unknowable. But its own very claim goes against itself if we consider agnosticism spanning over our entire knowing capacity. If we are not able to know anything how can we know the statement that 'truth is not knowable'?

In the same way, relativism is also not consistent if taken in entirety. Relativist's claim that there is nothing absolutely true in this world,

1. This is the basic question on which Bertrand Russel based his argument against religion in his work: "Why I am not a Christian.

is also not right because this would mean that this very claim of the relativist is also not absolutely true. Skepticism is also not absolutely right if considered in entirety on the same line because if we would say that everything is doubtful, this would mean that this very claim itself is also doubtful. Thus all these three modern approaches have an internal contradiction when considered in entirety. They refute themselves through their own underlying principle and thus are only partially true. Hence, it is necessary to admit that there must be at least something absolutely true for us. In more careful words, we can say that we as human beings with their limited capacities can know the truth at least up to some extent. Now the question is what this extent is? We will learn in this book that this extent is much more than as is generally believed by modern relativists, agnostics and skeptics.

Since many objections may be raised on the logical validity of the modern ideas too, none of the groups presents a logically consistent and true world view. Specifically speaking, there may possibly be many of the intellectual worldviews which may have very strong logical basis especially in the ancient past but due to some reasons or the other, they could not be published or remained hidden from the world at large. But in general such a logically consistent worldview is presently not widely known. This is the reason that modern man is generally confused regarding the ultimate reality of things.

The main purpose of this book is not to point out the shortcomings or deficiencies of other philosophies because if we analyze and discuss the philosophy of even a single philosopher in detail, it may need the space of a separate book. The main purpose of this book is to search for a logically consistent and true standpoint regarding the origin and reality of things at least as far as it is possible for us as rational beings. In order to fulfill this purpose, our attention is first of all diverted towards the criteria of truthfulness. In other words, we should be clear about the approach the adoption of which will lead us to a logically consistent and true worldview.

From the study of the elementary logic we know that a theory is true when the following two requirements are met:

1. The statements of the theory should not have any internal contradiction i.e. it should be self-consistent. Such a theory is called formally true.
2. All the statements of the theory should also correspond to the facts. In such a case theory is called materially true.

A theory may be self-consistent and thus formally true but some or all of its statements may or may not agree with facts. Such a theory cannot be said to be completely true. To be completely true, theory should fulfill both of the above requirements. In other words, to be completely true, it should be formally as well as materially true.

These two requirements further require us that we should be clear about two more issues. First issue is that we should be clear as to what is the criterion of self-consistency. Secondly, we should also be clear as to what we exactly mean by the word 'facts' to which our statements should correspond.

Many of the elementary books on logic maintain that statements should be proved true on the basis of three fundamental laws in order to fulfill the criterion of self-consistency. These three laws are that of *Law of non-Contradiction*, *Law of Identity* and *Law of Excluded Middle*. Among these three, the law of non-contradiction is the most important as the other two laws are basically the other forms of the law of non-contradiction. The law of non-contradiction states that a thing P cannot be 'non-P'. In other words a thing and its own *contradictory complement* are mutually exclusive. A *contradictory complement* of a thing or a meaning is a set of those things or meanings which are outside the limits of that thing or meaning.

If we consider the *contradictory complement* of non-P, we come to the conclusion that the *contradictory complement* of non-P is non-non-P which is P itself because negation of a negation is affirmation. In this way, a thing is also the *contradictory complement* of its own *contradictory complement*. According to this law, the negation as well as affirmation of a meaning cannot exist together in one thing. In other words, the two *contradictory complements* are mutually exclusive.

Law of Identity states that a thing P is P. In other words, this law affirms a thing for itself. *Law of Excluded Middle* states that there is

nothing left apart from a thing P and its *contradictory complement*. In other words, the two *contradictory complements* are collectively exhaustive.

It is the requirement of the proof of a statement, that it should be based on some *evidently true laws* or axioms which themselves do not require any proof.[2] If there is no such law, no statement can be proved true because the flow of arguments will either end on cyclic closing or will continue indefinitely rendering the statement unproved.

Since we have concluded above that there must be some absolute truth which we can know, there must also be some *evidently true laws* on the basis of which different statements can be proved true and consistent. The *law of non-contradiction* is actually such an evidently true law. This law is the highest possible general truth from which other truths of lower generality may be derived. But this highest possible general truth itself cannot be derived from any other truth. Even there is no need to derive it from anywhere else because it is self-evident for us. In other words, it rests on its own evidence. There is neither a need to prove it nor it is possible to prove this law.[3]

The ultimate outcome of the law of non-contradiction is nothing other than to say that there should be no contradiction in any statement. Thus this evidently true law is the criterion of self-consistency. Although, every argument given in this book is not

2 This requirement arises to protect the process of proving the statement from indefinite continuity and/or cyclic closing. Actually, to prove a statement we give some arguments which are again some statements. Then these other statements may also be required to be proved. In this way, this proving process makes an inverted tree of successive statements which may continue till all the statements used at the last nodes of this tree are proved stopping the requirements of further proves. This proving process is considered invalid if the involved tree of statements has a cyclic closing or has an indefinite continuity.
Cyclic closing means the original or a previous argument comes again in proving a subsequent argument in its tree of arguments. This means that the proof is proved by itself and is thus considered to be an invalid proof. A proof is subject to an indefinite continuity when the succession of proves for the proof of a statement continues indefinitely and the requirement of further proves could not be stopped. In such a case, the original statement is considered to be unproved. In order to protect the proof of a statement from the above-mentioned two invalidities, its proving process is required to be stopped at a fundamental law which does not need a proof. In other words, it should be evidently true for us.

3 The law of non-contradiction cannot be proved true because whatever the argument we will employ to prove this law, it would either be affirmed or negated. In other words, we have to first take the decision that the argument exists or it does not exist for the validity of this law. The process of this decision cannot complete until we believe on the law of non-contradiction. If it is not decided about an argument that it exists or not, how it can be used to prove a statement. So before putting an argument we have to assume or admit that either the argument exists or the argument does not exist. In other words, we would already believe in the validity of the law of non-contradiction before trying to prove it because it is not possible that the existence of the argument itself is in doubt. Thus to prove the law of non-contradiction requires that we already believe in its validity and this is nothing other than a cyclic presentation of arguments. Due to these reasons, this law cannot be proved. Thus we have to admit that this law is evidently true and correct without being proved.

reduced to the law of non-contradiction, as this would make this book painfully voluminous, every argument is presented in such a manner that it can easily be validated on the basis of this evidently true law. However, several arguments in this book are based on some principles, which have been validated on the basis of this law.

Sometimes, different conclusions are drawn in the book using *division by dichotomy*[4]; which in turn depends on this law. In short, this law is at the base of the formal logic in this book in different ways.

Apart from these three fundamental laws of thought, one more law is also mentioned in the books of logic as axiom and which is commonly associated to Leibniz (1646-1716 AD). This is the *Principle of Sufficient Reason*. According to this principle anything that happens does so for a definite reason. Although, some philosophers consider this principle as an axiom, we will, however, see in Chapter 10 that there is no such need because it can also be based on the law of non-contradiction. For the time being, we may, however, consider it as a fundamental law.

Now we come to the issue of what we mean by the word 'fact' the correspondence with which is the requirement of the material truth. As we mentioned earlier, a theory is materially true when all of its statements and conclusions agree with facts. But what is a 'fact'?

If 'fact' needs to be proved true, we would have to correspond it to another fact and to arrive at the truthfulness of that other fact we have to correspond it to one more fact *ad infinitum*. In order to avoid indefinite continuity, we have to maintain that fact here means either an evidently true fact or a fact defined or proved on the basis of some other evidently true fact. An evidently true fact is a fact whose truthfulness is so evident that it does not need to be proved or

4 Division by dichotomy is a process of dividing different things or concepts on the basis of the meanings which are contradictory complements of each other. Such division or categories are termed in this book as contradictory categories. The meaning on the basis of which the division is made is called fundamentum divisionis. For example, if we divide a group of things on the basis of a meaning P, one sub-group will consist of the things having P and the other sub-group will consist of the things not having P. This application divides all the individuals of the group into two well-defined sub-groups. A certain thing A in the group would either be P or non-P. If it is proved that A is P, it is also proved that it is not non-P. In this way, different meanings are proved for different groups of things through division by dichotomy. Division by dichotomy is considered to be the most authentic way of making logical divisions because categories made on the basis of division by dichotomy are mutually exclusive and collectively exhaustive. Further details about division by dichotomy may be found in the books on Logic.

defined. We know such facts either through *extrospection* or through *introspection* which are explained as follows:

1. *Evidently true facts* known through *extrospection*: We know these facts through our senses. For example, whenever we see an object, the image processed by our eyes to our mind is an evidently true fact for us no matter the image seen is the true representative of the thing seen or not. We cannot deny the truthfulness of the formation of the image which is after all an evidently true fact. It may be possible that the image seen is not the true representative of the reality. But the seeing of the image is a reality in itself. For example, a straight stick dipped in water appears bent. Whatever is its appearance, it is a fact that it appears so. Its bent appearance is no doubt false with respect to the true condition of the stick. But as far as the image formation is concerned, it is a fact that it appears bent to us and this fact gives us the information about the difference in the refractive indices of water and air. Hence, the evident truthfulness of the extrospected evidently true facts does not mean that whatever we sense is ultimate reality. This only means that considered in itself, it is a fact which is evidently true for us. We cannot deny that we feel the things around us through eyes, ears and fingertips. Sometimes we sense the things through other means such as smelling by the nose, tasting by the tongue and through the skin of our body. We cannot negate these sensations if our senses are normal and healthy. These all sensations are after all evidently true facts which may be called *sensed evidently true facts*.

2. *Evidently true facts* known through *introspection*: We know theses facts through contemplation on our own self. For example, we evidently know through introspection that we think and that we exist etc. Primary concepts such as those of existence, necessity, knowledge etc. are also known introspectively. These primary concepts are understood clearly by adult human beings without being defined through other concepts. In other words, such concepts are evidently true concepts which are self defined. The need for such *self-defined evidently true concepts* is necessary for defining the

> secondary mediate concepts because if everything is required to be defined, we cannot save ourselves from cyclic closing and indefinite continuity in defining the things and concepts[5]. But these *evidently true concepts* themselves cannot be defined because they are already so general, that they cannot be defined in more general terms. The understanding of *evidently true laws* is also an introspected fact and is thus also an *evident truth*.

The jurisdiction of *evident truths* which comprises of *evidently true facts*, *evidently true concepts*, and *evidently true laws*, is our immediate knowledge. From this immediate knowledge we will try to discover the accessible mediate knowledge in this book as far as we can.

For this purpose, we will try to make the arguments presented in this book to agree with the *evident truths*. This may be made possible when all the key terms used in the arguments are either themselves *evident truths* or defined through *division by dichotomy* made on the basis of some *evident truths*. All further conclusions will be drawn on the basis of these definitions. In this way, all the sentences, on which the logic of the argument presented in this book is based, remain 'analytical' in the sense given by Wittgenstein[6]. This is one major way used in this book for arriving at the material truth.

In this process, we are inherently assuming that all the *evident truths* mentioned in this book are also evidently true for all the human beings. Due to this assumption, the above-mentioned material reasoning becomes inductive. Apart from this inductive aspect which

5 Like the proving process, defining process also proceeds in the form of an inverted tree because the definition of a word or concept may be composed of some further definable concepts, which may also require further definitions. In order to fully understand the original concept, all the concepts used at the last nodes of this inverted tree should be defined in understandable terms stopping the requirements of further definitions. The defining process is considered invalid if the involved tree of definitions has a cyclic closing or has an indefinite continuity.
Cyclic closing means the original or a previous definition comes again in defining a subsequent concept in its tree of definitions. This means that the concept is defined by itself and is thus considered to be undefined.
A definition is subject to an indefinite continuity when the succession of definitions for the definition of a concept continues indefinitely and the requirement of further definitions could not be stopped. In such a case, the concept in question is considered to be undefined.
In order to protect the definition of a concept from the above mentioned two objections, the presence of evident truths such as sensed evidently true facts and self-defined evidently true concepts are inevitable because such facts and concepts are not required to be further defined. If there would not be any such facts and concepts, no definition can be given without the objections of cyclic closing or indefinite continuity and this would mean that all the words of our languages remained undefined or invalidly defined.

6 Austrian Philosopher Ludwig Wittgenstein (1889-1951) divided all the sentences into three categories i.e. Analytical Sentences, Synthetic Sentences, and Nonsensical Sentences.

is impossible to avoid[7], the inductive reasoning is used very sparingly in the book. However, whenever it is used, it is further supported by drawing conclusions from the definition of the issues at hand. With such reservations, reasoning in this book is tried to be kept non-inductive as far as possible. Thus the conclusions of this book may be considered certain rather than probable as far as the underlying evident truths are considered certain. From this, it also follows that the book is not based on the law of Uniformity of Nature and the law of Causation on which the inductive logic is based and on which many objections may be raised from strictly logical standpoint.

The purpose of notifying about the *evidently true concepts* or *evidently true laws* is only to create awareness about their intrinsic presence in our minds. In actuality, no new information is provided by doing so. As a matter of fact, the *evidently true concepts* and *evidently true laws* are so evident to us that everybody knows them very clearly. Can there be a person in the world who does not know about the *existence* of things? Similarly, can there be a person in the world who can claim that a thing is 'A' as well as 'non-A'? Actually, such a claimant is considered to be inconsistent and self-contradictory. In short, we are subject to a kind of dogmatism as far as we believe in the validity of the *evident truths*. We cannot avoid such dogmatism otherwise we have to believe that nothing is proved and nothing is defined in this world and thus have to fall into the abyss of *nihilism*.

Anyone who do not believe in the validity of the *law of non-contradiction* or do not believe in the other *evident truths* may take them as our basic assumptions as many theories and philosophies are after all also based on some assumptions.

Much more is explained and discussed regarding the *formal* and *material* logic in the books of logic and epistemology. But we restrict our discussion of logic up to this point as the main objective of this

7 This induction is impossible to avoid because every human being understand and knows the concepts and things around him in his own mind. In other words, all concepts and meanings are only subjectively true for everyone. In such a state of affairs, a fact becomes an objectively true fact among two or more than two persons only when they agreeably verify its truthfulness. Such an agreement is not necessarily a formal agreement. The development of different languages among the members of different societies is also a kind of agreement which people unconsciously and informally make over the commonly understood meanings of the words and sentences of that language. Whenever two or more than two people successfully communicate with each other, they inherently agree on the meanings of the signs of communication such as words, body language gestures etc. Hence, the conclusions in this book would be objectively true for those people who agreeably verifies the truthfulness of the evident truths mentioned in this book.

book is not to write on logic or on epistemology which are, of course, separate fields of study. Interested readers may read good elementary books on these subjects for further details.

Since all the *evident truths* and conclusions drawn from them are after all some meanings, the theory presented in this book is a process of extracting different meanings from the *evidently true concepts* and facts associated with the things through the application of *division by dichotomy* or through other ways of applying the *evidently true laws* and of using these extracted meanings to make further conclusions. As far as the meanings associated with the things are concerned, it should be taken into account from the very outset that we understand two kinds of meanings which we get from a particular thing or concept. One is the *essential meanings* and the other one is the non-essential or the *attributive meanings*. Since they are *contradictory complement*s of each other, they cover all the meanings which a thing may have. *Essential meanings* of a thing are the meanings, which are necessary to consider that thing, and its *attributive meanings* are the meanings, which are not necessary to consider it.

For example, the shape of the chair is the chair's *essential meaning* as it is required when we have to consider the chair. It is the shape which tells us that this object should be called 'chair'. Contrary to this, the location of the chair is not its essential meaning because whenever we have to consider the chair we do not require considering its location. This is the reason that location of the chair is its one of the *attributive meanings*. Similarly, the color, size, direction in which it is placed, etc are also its *attributive meanings* and are not required to consider it. We can consider the chair without its *attributes*.

Chair is the name of a shape. Sometimes, the shape of the thing is not under consideration rather its physical *form* is under consideration. Especially, the liquids, gases and things in powder *form* are considered on the basis of their physical *form* rather than on the basis of their shape. For example, consider some water, which is in a glass. Its *essential meanings* are not affected if the same water is poured into a bowl where its shape is changed.

Similarly, the molecules, atoms and sub-atomic particles have their own *essential meanings* which have nothing to do with the shape. Apart from this the livings things like plants and animals have totally different *essential meanings*. In short, there are different kinds of *essential meanings* present in different things.

Same is the case with mental concepts. Some of the meanings associated with a concept are its *essential meanings* and some other may be its *attributive meanings*. The meanings which are necessary to consider that concept are its *essential meanings* and the meanings which are not necessary to consider it are its *attributive meanings*. From the definition of the *essential meanings* presented here, one principle may also be formulated which may be called the *Principle of Essentiality*. According to this principle, the *essential meanings* of a thing do not need a cause for its association with that thing because they are the thing itself. For instance, there is no need for a cause of the association of the meaning of 'chair' with a chair. No cause is required for associating redness to the red colour.

Employing the above-mentioned basic methodologies of logic, an inquiry into the reality of things is undertaken in this book by pointing out and analyzing the contradictions and paradoxes lying in the presently adopted modern worldview. These contradictions and paradoxes are then resolved through an ontology which is mainly drawn from the writings of Mulla Sadra (1571-1640 AD). This is the reason that Mulla Sadra's ideas are predominant in this book, though, this book is not devoid of the ideas of many of the other modern and traditional philosophers too. But despite this predominance, the worldview presented in this book cannot be said to be based merely on Sadra's philosophy as some of Sadra's concepts are sometimes modified and sometimes some of Sadra's concepts are ignored in order to present a logically consistent investigations of the questions at hand. Sometimes, new concepts are also introduced in this book in order to search for a logically consistent cosmological worldview understandable for the modern mind of the twenty first century.

Ontology of Mulla Sadra revolves around the primacy and ambiguity of 'existence' or 'being'. Many philosophers writing on metaphysics and ontology used the word 'being' in their writings. Considering both words synonymous, we are, however, using the word 'existence' throughout the book in order to avoid the confusions, which may

arise in the use of the word 'being' as it is also the infinitive of the auxiliary verb 'to be'.

The exact roots of the concept of existence are perhaps not known but ancient philosophies like Hindu philosophy of Vedas and Chinese Taoism are known to revolve around this concept. Quranic philosophy of creation also uses the Arabic term '*kun*' which means 'be'. Among the particular philosophers, the concept of existence is known to be first time used by Parmenides (5th century B.C.). After him, Anselm of Canterbury (1033-1109 AD), Ibn-e-Arabi (1165-1240 AD) in Islamic World, Saint Thomas Aquinas (1225-1274 AD) and many others applied this concept to understand and explain the reality of things in different ways till its reality and primacy is repudiated by modern philosophers like Kant (1724-1804 AD) and Bertrand Russell (1872-1970 AD). The idea of God actually got serious jerks in the modern times because of these repudiations.

In the first chapter of this book, things are defined and categorized into different groups. On the basis of this categorization, the group of the *physical things* is identified and defined in order to focus our attention on this very group because it is the only group of things the existence of which is generally and normally accepted by most of the human beings and thus this group presents itself as a good starting point for such a study.

In the next seven chapters, the primacy of existence of *physical things* is proved by analyzing and resolving the contradictions and paradoxes found in the *essential* and *attributive meanings* associated to the *physical things*.

In the ninth chapter, the contingency of the *physical things* are investigated and ultimately proved that their existence is not their own. In the tenth chapter the source of this existence is inquired into and thus the existence of a *metaphysical world* is proved which is providing existence to this physical world. In the eleventh chapter, the source of the motion of the *physical things* and its link with the *metaphysical world* are investigated.

In the twelfth chapter, the reasons of the human inability to distinctly know God and angels of the *metaphysical world* are explained. In the thirteenth chapter, *ambiguity* in existence is explained and the

relationship among different levels of existences is thus discussed and established. In the fourteenth chapter, problem of free will and that of theodicy are discussed and resolved In the fifteenth chapter, it is explained how the divine immutability is compatible with the mutability and changes of the physical world.

Before starting the main body of the book, the following points should also be taken into account.

- For a better understanding of this book, it is recommended that it should be read in the same order as it is written because the concepts developed in the initial chapters are necessary to clearly understand the subsequent chapters.

- It should also be taken into account that different terms used in this book should be understood only in reference to their definition presented in this book rather than in reference to the generally known definitions. For example, the words like *matter*, *form*, *quiddity*, *real existence*, etc. should be read strictly in the same sense as they are explained and defined in the book. A glossary of important terms is given at the end of the chapters for the ease of the readers.

- Every chapter in the book is subdivided into sections and subsections by allotting them different numbers in order to facilitate the cross-referencing to different paragraphs in the book.

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PART I

POSSIBLE KINDS OF WORLDS

Chapter 1

THINGS, PHYSICAL THINGS AND METAPHYSICAL THINGS

1.1
We see and sense a lot of things around us. Usually there are a lot of things in our houses. Even outside of our houses there is a wide variety of things in our town. But the presence of things continues beyond our towns too. There are many things in the forests, rivers, oceans and deserts. Even outside of our planet, there are many things like stars, planets, meteors etc. Even there may be billions of things on other planets too. These all may be called *physical things*. There are a lot of people in this world who speak about other kinds of things too like angels, spirits, ghosts etc. Many people may have doubts in the reality of such things. But we normally agree on the presence of the *physical things*. However, it may logically be maintained that there may possibly be the presence of some kinds of things which are other than the *physical things*. In other words, the *physical things* are only one kind of things. There may possibly be many other kinds of things too. Thus it seems prudent to identify different categories of things first. But before it we have to define the word 'thing' itself, so that it becomes clear what we exactly mean by this word.

1.2
The word 'thing' is essentially an extremely generalized word. This is the reason that it has to be defined in equally generalized terms. In the 'Introduction' we claimed that we will define all the key terms in the book on the basis of facts and concepts which are either themselves evidently true or will further be defined on the basis of some evidently true facts and concepts.

Keeping in view this claim, a question arises at this stage. Is there an evidently true fact or concept on the basis of which we can define the word 'thing'? In the 'Introduction' we learned that there are two kinds of evidently true facts; one is *sensed evidently true facts* and the others are *introspected evidently true facts and concepts*.

We cannot define the word 'thing' on the basis of a specific sensed fact because the word 'thing' is a very generalized word whereas sensed facts are by their very nature limited because our senses are stimulated only by limited amount of things. For example, we can see only a small part of the total universe at one time. We can hear only a limited amount of sounds at one moment. Thus if we define the 'thing' for instance by saying that 'thing' is that which appears red, only red things will be included in such a definition whereas non-red things will be excluded.

Even we cannot define the word 'thing' by saying that 'thing' is that which may be sensed by us. It is more generalized than the previously proposed definition but it is also a limited definition because there may be many things which we cannot sense. We cannot deny the possibility of the existence of such things.

In the same way, the definition of the word 'thing' using the terms which are further defined by the sensed evident truths, will also turn out to be limited because such terms will also be limited and thus will render a limited definition.

1.2.1
We can define the generalized word 'thing' only through an equally generalized concept. Introspected evidently true concept of 'existence' is such a concept which may serve this purpose because it is as equally generalized as the word 'thing'. This means that we can define 'thing' as that which has existence. Whatever does not have any existence would be nothing and thus cannot be called a 'thing'.

Now the question arises about the definition of the word 'existence'. The word 'existence' cannot be defined because to define a concept means to identify its limits whereas it is

not possible to identify any limit for existence as it includes everything and nothing is outside it. Moreover, we do not need to define it because it is also an introspected evidently true concept. Its meaning is inherently evident in our minds. It is very clear and evident for us to understand its meaning. We can clearly feel our own existence introspectively and we can understand the existence of all the things which we know either through our senses or otherwise.

Hence, it is an evident fact for us that different things exist notwithstanding the fact that how they appear to us. For example, the chair, table, bed and many other items in our houses exist. Moreover, the house itself exists. Outside of our house we see that trees exist, cars exist, shops and buildings exist. Thus all things, which we see or sense, have an existence. In addition to the sensed things, it is also introspectively evident for us that different ideas in our minds also exist. Hence, they are also a kind of things.

The word 'existence' through which we defined the word 'thing' above, is only a mental meaning or conception, which we associate to all existing things in general as many things share it. Actually, this concept of existence can be associated to all the things in the same manner.

But question arises: Is existence only a mental meaning as we described above or is it also a reality external to our minds? In other words, does a certain thing actually have something in it, which may be called '*existence* and which is also present in the world external to our minds? A lot of philosophers and thinkers in the history of philosophical thinking reply this question supporting either one side or the other. Muslim philosophers like Suhraverdi and western philosophers like Kant and Bertrand Russel do not consider existence as an external reality. On the other hand, Western philosophers like Parmanades and St. Thomas Acquinas and Muslim philosophers like Ibn-e-Arabi, Al-Farabi, Avicenna and Mulla Sadra believe that *existence* is an objective reality. Considered in this way, existence may be termed as '*real existence*' in order to differentiate it from the mental concept

of existence. But is *real existence* present in the world external to our minds?

Actually, the *real existence* of a thing is difficult to prove as an external reality because it is itself the external reality and proof of that thing. When we prove a thing X for a thing Y, we are actually proving the *real existence* of X for Y. Thus the difference between the proof and *real existence* is only verbal. In other words, the proof of X for Y is provided through its *real existence*. There is nothing left beyond *real existence* through which *real existence* itself can be proved. *Real existence* is actually proved by itself. This is the reason that it is difficult to prove it.

The main reason on the basis of which the philosophers like Kant and Bertrand Russell do not consider the existence of a thing as an external reality is the fact that a thing does not have any sensed meaning which may be called 'existence'. But inability to be sensed is an insufficient ground for negating the reality of an entity. There are many things like electrons, protons and other sub-atomic particles, which cannot be sensed directly. But modern science not only believes in their reality but also produce a lot of machines operating on the basis of their properties. As the presence of electrons is proved on the basis of their effects in scientific experiments, the presence of the *real existence* is also proved due to the things themselves; the things which we can sense around us. Hence it is true that *real existence* itself cannot be sensed but this does not mean that a thing does not have a *real existence*.

Moreover, it is also equally difficult to negate the *real existence* for a thing. The negation of the *real existence* for a thing would mean the negation of the thing itself and negation of an existing thing is evidently impossible because thing is after all a thing. Nobody can say that a certain thing is not a thing. For example, if we say about a certain chair lying in a room that it does not have any *real existence*, this would mean that the chair is not in the room. Since it is evidently wrong that chair is not in the room, it is also evidently wrong that chair does not have any *real existence*.

From this perspective we can conclude that each and every thing has a *real existence* and this existence is a reality external to our minds. This *real existence* is not a mental meaning or a concept, which is generally applicable to all the things equally, as used in the definition of the word 'thing'. This *real existence* is rather an external reality, which can never be shared by any other thing and is thus not general like the derived mental concept of 'existence'. For example, the *real existence* of a certain chair can never be shared by any other thing, not even by another chair of exactly the same appearance. Thus the *real existence* of the chair is exclusively related to that certain chair only. On the other hand, the mental concept of existence is general to all the things and is actually derived from the *real existence*.

At this stage one objection arises: How the existence of ideas, being only in our minds, can have an existence in the world external to our minds? The answer to this objection lies in the fact that the things like ideas have a kind of *real existence* which may be called '*mental existence*'. *Mental existence* of ideas may not be in the world external to the mind of the person having those ideas. But they do exist in the external world from the standpoint of people other than that person. From their standpoint, *mental existence* of ideas is a part of the *real existence* of that person who has those ideas. Hence, *mental existence* is also an exclusive reality like *real existence*. *Mental existence* of an idea is exclusively related to that certain idea only. Consequently, it is important to note that existence may be understood in the following three manners:

1. Derived mental concept of existence;
2. *Real existence*;
3. *Mental existence*.

1.2.2

Hence, each and every thing has a separate and exclusive *real existence* which is related to that certain thing only as is the case with the chair in our above example. In other words everything has its own *individuality*. This is also the requirement of the law of non-contradiction. According to

this law a thing P cannot be other than P. In other words, everything has its own separate individual existence. Hence *real existence* is also the source of the *individuality* of the things. This means that all things have one more meaning, which is universally present in them, and this meaning is that of '*individuality*'.

We can define *individuality* as that aspect of a thing, which cannot be shared by other things even in imagination. Sharing in the imagination is also denied in the definition because every imagined thing has a *mental existence*. Thus even an imagined thing has an aspect, which cannot be shared by any other imagined thing. In short, everything has an aspect, which cannot be shared by anything other than itself. Anything cannot even be imagined to share this aspect, which is exclusively reserved for the thing under consideration.

1.2.3

The division of all things into a thing 'P' and its *contradictory complement* 'non-P' also suggests that everything has one more meaning associated to it. This meaning is that of *unity* or oneness as 'P' is one whereas 'non-P' consists of all the things minus P.

But what we mean exactly by the word '*unity*'? Like existence, the word '*unity*' too cannot be defined. If we try to define *unity* as that aspect of a thing which is not multiple, the word 'multiple' is required to be defined. When we try to define 'multiple', we have to use the words, which have the meaning of *unity* in them. For example, *multiple* may be defined as that which is divisible and divisible may be defined as that which may be turned into units. In this way, any wording trying to define unity becomes a cyclic definition. Actually, *unity* should also be taken as an evidently true concept. We know exactly what we mean by *unity* or oneness without any need of a definition.

Thus when we say that everything has some aspect of *unity* in it, this means that everything is one or a unit at least in some respect. Although, it may be possible that it may be many or

> multiple in other respects because multiplicity is not the *contradictory complement* of *unity*. The *contradictory complement* of *unity* is non-unity or 'absence of unity'. This is the reason that multiplicity may be present in a thing along with unity. For example, we can see many things, which have some parts in them. Such a thing has the aspect of multiplicity as far as its parts are concerned but it must have the aspect of unity as far as it is considered as a whole. Yet it may be possible that each part of such a thing has its own unity when it is considered as a thing separate from the whole thing. In short, the whole has its own unity and each part has its own.

We can notice that all these three meanings of *existence*, *individuality* and *unity* emerge from the *real existence* of things as it is very evident that a thing begins to give these meanings as soon as it gets its *real existence*. Moreover, a thing also loses all these three meanings as soon as it loses its *real existence*. For example, when a chair is turned into pieces, it not only loses its *real existence* but also loses its *individuality* and *unity*. From here we can conclude that all these three meanings emerge from the same aspect of a thing i.e. from its *real existence*.

After identifying these three meanings associated with every thing, we can define the word 'thing' as that which has the meanings of *existence*, *individuality* and *unity* in it. On the basis of this definition, nothing lies outside the limits of the word 'thing'. Its limits are too wide to exclude any thing. Not only the things like chair, man and house are things but even ideas in our minds are also a kind of things. Moreover, angels, souls, ghosts and demons are also things notwithstanding the fact that it is not yet proved whether such things have an *existence* in reality.

1.3

After defining the word 'thing', we can identify different categories or kinds of things through the application of *division by dichotomy* in order to study their reality in more detail and in order to see which category the *physical things* belong. One major division of things may be made on the basis of the concept of multiplicity which, as we know, is one of the essential features of the *physical things* because we feel the multiplicity of spatial extension and temporal succession

in the *physical things*. The sensation of space and time is among the sensed evidently true facts.

We have proved that everything has some aspect of unity in it. But it does not mean that all things do not have any aspect of multiplicity. There may be many things, which are a unit in one respect but multiple in another. Thus we can divide the things into two *contradictory categories*. The first of them consists of the things, which do not have any aspect of multiplicity, and the other consists of the things, which have some aspect of multiplicity.

The *physical things* cannot be among the things which do not have any aspect of multiplicity. They must be in the other category. But this category is also too broad to have only the *physical things* because the multiplicity may be of any kind whereas the *physical things* may have only a specific type of multiplicity. One fact is clear for the things having some aspect of multiplicity that they must have some parts in them because they have multiplicity. The *physical things* in front of us also have some parts in them.

Since we can evidently sense the spatial extension and temporal succession, it is very clear for us that multiplicity of the *physical things* is of such a kind that their one part is absent from every other part. We feel the absence of their parts from each other in the form of spatial extension as well as temporal succession. There may possibly be many other things which have the multiplicity but their parts are not absent from each other. Thus we can divide 'the things having some aspect of multiplicity' on the basis of whether their parts are absent from each other or not. Here it should also be taken into account that the process of *division by dichotomy* for a group of things with parts always gives three *contradictory categories* if the applicability of the *fundamentum divisionis* of such a division may possibly be partial[8].

This is the reason that if we divide the category of 'things having some aspect of multiplicity' on the basis of whether their parts are

8 It is because a third category also comes into being in which the fundamentum divisionis is applicable in some parts of the things and not applicable in others. For example, if we divide all the solid things through division by dichotomy on the basis of black color, the following three exclusive categories will be formed because the applicability of the black color may also possibly be partial.

a. The solid things with all the black parts.
b. The solid things with some black and some non-black parts;
c. The solid things with all the non-black parts.

absent from each other or not, such division will give us three further *contradictory categories*. The first category consists of the things whose all the parts are not absent from each other. The second category consists of the things whose some of the parts are absent from each other and some are not. The third category consists of the things whose all the parts are absent from each other.

This third category may again be divided into three sub categories on the basis of whether absent parts co-exist or not because in spatial extension the parts can co-exist whereas in temporal extension the parts cannot co-exist. The first such sub-category consists of the things whose all the parts which are absent from each other in this category of things, co-exist. The second sub-category may consist of the things whose some absent parts co-exist and some do not. The third sub-category will consist of the things whose all the absent parts do not co-exist.

Thus all the categories which may logically be created in this way from the things are graphically depicted in Fig. 1 and are summarized as follows:

1. All Things:
    - 1.1 Not having any multiplicity i.e. *pure unitary things*
    - 1.2 Having multiplicity:
        - 1.2.1 No parts are absent from each other;
        - 1.2.2 Some parts are absent and some are not absent from each other;
        - 1.2.3 All parts are absent from each other:
            - 1.2.3.1 All the absent parts co-exist;
            - 1.2.3.2 Some absent parts co-exist and some do not;
            - 1.2.3.3 No absent part co-exists with any other part.

The category number 1.2.3.2 is actually the category of the *physical things* i.e. the things whose some parts are absent from each other due to spatial extension and some are absent from each other due to temporal succession. The category 1.2.3.1 consists of the things with spatial extension but surviving for a single instant of time. These may rightly be called the *physical events* as they survive only for an instant. A spatial point flowing in a temporal duration is an example

of the category 1.2.3.3. Hence it consists of nothing other than the *location points* flowing in the succession of time.

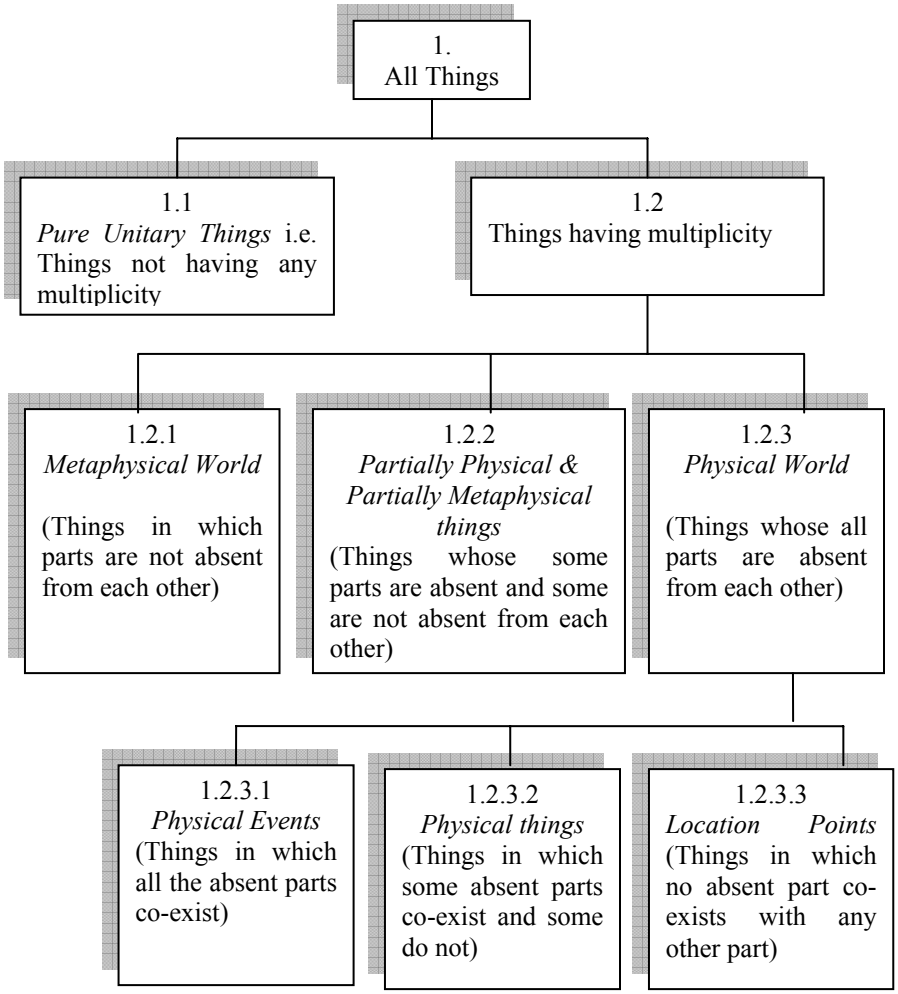

Fig. 1: Different kinds of logically possible groups of things

In contrast to the *physical world* of category 1.2.3, the category 1.2.1 may be named as the *metaphysical world*. Category 1.2.2 is partially

physical and partially metaphysical. We know the existence of the category of the *physical world* through sensed evidently true facts.

In the above categories, we can also notice that the existence of the *partially physical and partially metaphysical things* is also logically possible. Our own very existence as human beings also comes under this category because our body which is only a part of the whole human being is purely physical whereas our *psyche* considered for an instant is metaphysical. Our *psyche* or soul considered for an instant is metaphysical because the multiplicity of ideas in the *psyche* are not absent from each other. *Mental existences* of different ideas are actually part of the human psyche.

Other animals with a physical body and a metaphysical *psyche* may also be included in the category 1.2.2. However, the physical parts of the things of this category are like the *physical things* and the metaphysical parts are like the meta*physical things*. Whatever is true for the *physical things* is also true for the physical parts of things of this category. For example, human body acts like a pure *physical thing* if only physical body is considered ignoring the human psyche. This is the reason that physical parts of things included in this category may also be divided into three sub-categories as is done for the category of physical world. If such a categorization is performed for category 1.2.2, the sub-category corresponding to category 1.2.3.3 will include the *psyche* flowing in time as we evidently notice introspectively that our ideas are continuously changing in our psyches.

As far as the categories 1.1 and 1.2.1 are concerned, we do not yet know that things of such categories actually have the *real existence* or not because we cannot know them as evidently true facts. But it is proved at this stage that their existence is at least logically possible.

1.3.1
According to the above divisions, we can define the *physical things* as the things which have some aspects of multiplicity and whose one part is absent from the other. On the basis of this definition, we can say that galaxies, stars, earth and the different things on the earth such as rocks, houses, furniture, animals, water, air, minerals, organic and inorganic materials, living beings, etc all are *physical things*. In short, all solids,

liquids and gases are the *physical things*. Moreover, the waves like those of light, sound, heat etc. also come under the category of the *physical things* as all these things have some aspect of multiplicity and their one part is also absent from the other. This absence of parts appears to us as spatial and temporal extension. Similarly, the empty space between the celestial bodies is also a *physical thing* because it has an existence too, it has some multiple aspects and its one part is absent from the other.

We can notice that the definition of the *physical things* given above is far wider than the definition of the *physical things* inherent in the modern science. For instance, modern science does not consider empty space as a separate thing having some existence. This is one of the major realities ignored by the modern science despite the fact that the *existence* of the empty space is not difficult to prove.

If there were no existence for the empty space, this would mean that it is nothing. If space is nothing, then there should be no need for a thing to move from one point in space to another point. To understand this more clearly consider a thing A which is initially at point X and then moves to another point Y at some distance from X in such a manner that there is an empty space between X and Y. If space between X and Y does not have any existence, this would amount to say that there is nothing between X and Y and thus there should be no need for the motion of A from X to Y. Since A has to move from X in order to arrive at Y, it is proved that space between X and Y has some existence. The multiple aspect of the empty space is also very clear to understand as we can mark different points in a piece of space. Thus the multiplicity of the points present in the space is its aspect of multiplicity. Moreover, it is also easily understandable that its parts are also absent from each other.

1.3.1.1
It is, therefore, very clear that empty space or vacuum whatever we call it, also has a kind of existence and comes under our definition of *physical thing*. Although, this is another fact that the empty space is

not that much empty, as we apparently feel, thanks to the claims of the modern science that there are usually a lot of electromagnetic waves, heat waves etc. at the place where we think that space is empty. Anyway, the question of its emptiness can better be answered by a physicist. But even if it is empty, it is a separate *physical thing* according to our definition of the *physical things*. Thus keeping in view of its separate existence, we can call empty space hitherto after as *space-object* in order to differentiate it with the concept of space or spatial extension, which is only a *quantitative attribute* of the *physical things* and which we measure as length, area and volume occupied by a certain *physical thing*. The difference between the *space-object* as a *physical thing* and the space occupied by a *physical thing* as a *quantitative attribute* will be clarified further in Chapter 3 where it is further substantiated that there is no absolute space in this cosmos and things are not placed and floating inside that space as is apparently felt. Rather, all the other *physical things* are placed side by side co-existing with the *space-object* in such a manner that the whole of the physical cosmos may be considered as one gigantic *physical thing*.

If the molecular and atomic theories are correct, we can say that this *space-object* is not only present between the stars and the celestial bodies but is also a part of the most of the *physical things* being present between molecules within a physical body, between atoms within a molecule and between proton, neutron and electrons within an atom. So there is no empty place in this physical cosmos and in this perspective, the whole of the cosmos may also be considered as one gigantic thing whose parts are different *physical things* including *space-object*.

From here we can also conclude that every *physical thing* is a continuous entity rather than a discontinuous one because even if there is no molecule or atom at a certain place at a certain moment of time within a *physical thing*, there will be

space-object over there. No part within a *physical thing* thus can be truly empty or nothingness. In short, there is no discontinuity of any physical thing between any of its two points. Traditional philosophers in Greece, India, China as well as in Muslim world also generally believe that *physical things* are continuous and cannot be discontinuous. Nothing is wrong in this view even if the atomic theory of modern times and that of Democritus is correct because what atomic theory tells us is only the fact that extremely small particles are present in solids, liquids and gases as their parts. But from this it cannot be concluded that such physical things are discontinuous because *space-object* is also a part of such physical things and it is present wherever any molecule or atom or any other smaller particle is not present.

We have introduced some kinds or categories of things in this chapter. But we have not yet proved the existence of all of them. The only kind of things whose existence is evidently affirmed by most of us is the category of the *physical things*. This is the reason that we will focus mainly on the *physical things* in the next seven chapters. In these chapters, we will analyze different aspects of the *physical things* and try to find out their reality. Especially we will try to examine whether the *physical things* have *real existence* or not.

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PART II

UNSEEN ASPECTS OF THE PHYSICAL WORLD

Chapter 2

ACTUALITY AND POTENTIALITY IN PHYSICAL WORLD

In the previous chapter, we mentioned that *real existence* is a reality external to our minds. Although, the reality of *real existence* for a thing is very much evident through the thing itself, it needs to be further verified on more solid grounds so that the doubts, arising in it due to its being unperceived, can be removed. Since *physical things* are the most evidently known things to us, it seems prudent to verify the reality of the *real existence* by investigating whether *physical things* have *real existence* in them or not.

This verification cannot be done except through the analysis of the meaning associated with the *physical things* because it is only the meanings through which we know the things. For example, how a certain thing appears to us, how is its touch, its hardness, its shape, its weight etc.. In short, a thing is nothing other than the meanings it has. This is the reason that we have to go into the details of the meanings found in a *physical thing* in order to find out whether the *physical things* have *real existence* or not. From Introduction of this book we know that meanings in a *physical thing* would either be essential or non-essential. In this chapter, we will analyze only the *essential meanings* inherent in the *physical things*. We will analyze the non-essential or attributive meanings of the physical things in the next chapter.

2.1

As we know, modern science, especially modern particle physics, tells us that a *physical thing* which in its opinion may only be among solids, liquids and gases, consists of very small particles called molecules. These molecules are further composed of atoms and

ultimately of electrons, protons, neutrons and other sub-atomic particles. Through further findings in this direction, the modern scientists concluded that the sub-atomic particles are also nothing other than extremely small packets of energy. The latest theories termed quarks, strings or superstrings to be the basic building blocks of our physical universe. This approach of the modern science towards smaller and smaller constituting elements which are similar to each other raises the question about the source of differences among the *essential meanings* of the *physical things*.

We know very evidently that many physical things are different from each other. For example, a man is different from an elephant and an elephant is totally different from water which is again totally different from a chair. Different things have totally different *essential meanings* in them. If all these physical things are made of the same constituting particles, they should also have the same *essential meanings*. How this contradiction may be solved. In other words, what is the source of differences among the *physical things* having different *essential meanings*?

Take a specific example. Consider a lion and a table such that both are equal in weight. Since both the lion and the table have exactly the same weight, they both will have the same number of elementary constituting particles (say 'n') and hence they both should be the same thing.

In other words, the lion is exactly what the table is. Since this last conclusion is evidently wrong, there must be some gap or error in the above mentioned approach of the modern science. Moreover, the question also arises whether there is any difference between elementary particles such as quarks and a table or between quarks and a lion apart from their multiplicative differences. In other words, the question arises about the source of differences among the *essential meanings* of the *physical things* in the wake of the modern science's conclusion that they are made from the same building blocks. The question about this source is actually the requirement of the *principle of sufficient reason* because according to this principle anything that happens does so for a definite reason. Thus there must be a reason for the differences among the *essential meanings* of the variety of *physical things* spreading all around.

2.2

A similar contradiction also arises when we go outside a *physical thing* by associating its *essential meanings* to different groups and sub-groups. For example, when we consider a lion, we also get a meaning of a mammal from him because lion is from the group of mammals. But the meaning of mammal is a general meaning which is also shared by dogs, cats, horses etc. Then there is another more general meaning in the meaning of lion such as the meaning of animal. In addition to the mammals, reptiles, birds, insects, etc. too share the meaning of 'animal'. This process of generalization can proceed further in such a way that we also find the meaning of 'living being' in the meaning of lion. Now even the plant kingdom is also included in this new meaning. The subject of biology studies these groups and sub-groups in detail. But this process of generalization may be continued beyond the biological realm ending at the more general word '*physical thing*' which includes all the *physical things* in it.

Similarly, table belongs to the group of things called 'furniture'. Being a member of this group it has some *essential meanings* in it. The group of furniture is a sub-group of the 'non-living *physical things*' and ultimately, belongs to the same group of '*physical things*' to which lion also belongs. At this point, a contradiction arises like the above-mentioned contradiction: If all the *physical things* belong to the same one general group, why do many of the *physical things* differ from each other? What is the source of differences among them?

2.3

In short, inside as well as outside sources of the *essential meanings* of the *physical things* raises similar questions about the source of differences among them. In order to answer these questions in detail, we will look into the *essential meanings* of the *physical things* from the following two perspectives:

- From an inward perspective of the way the parts of a *physical thing* are combined to make the whole thing;
- From an outward perspective of the way a *physical thing* is associated with different groups of things.

We will deal with the *essential meanings* of the *physical things* from these two perspectives one by one in the following two sections:

2.3.1

In considering *physical things* in the first perspective, we will focus our attention to the definition of the *physical things* given in Section 1.3. By definition, a *physical thing* has multiplicity of parts all of which are absent from each other but some of them co-exist and some not. The co-existing parts of a *physical thing* may possibly be combined together in different ways such as in different proportions and in different directions. In addition to this, a *physical thing* is simply dividable into its parts forming more than one different things or whole of the *physical thing* may also combine with some other things to make a third thing. This is the reason that a *physical thing*, by its very definition, is always something and may always turn into another thing. Due to this fact the *essential meanings* of a *physical thing* may be analyzed in the following two aspects:

- The aspect which is the source of meanings existing in *actuality*;
- The aspects, which have the *potentiality* of other meanings too, in addition to the meanings existing in *actuality*.

Before going into the details of this analysis, we have to first determine what we mean by the words ‘actual’ and ‘potential’ here. When a thing has an existence, it is said to be in a state of *actuality*. Thus actual thing, or the thing having *actuality*, is that which exists in reality.

On the other hand, when a thing may possibly get existence but does not yet have an existence, it is said to be in a state of *potentiality*. A thing having *potentiality* of other things is that which may turn into those other things.

For instance, a thing A has some parts which can be attached to each other in a different way too to *form* another thing B. In such a case, we can say that these parts have the *potentiality* of becoming A as well as B. They have equal

relationship with both A and B. If these parts are attached to each other in such a manner that the thing A is actualized, we would say that the thing A is in *actuality* and the thing B is in *potentiality* in them. Conversely, when these parts are attached to each other in such a manner that the thing B is actualized, the thing B is in *actuality* and the thing A is in *potentiality*.

Since it can be derived from the definition of the *physical things* that they have the aspects of *actuality* and *potentiality*, these two aspects are the real aspects of all the *physical things*. The aspect of *actuality* cannot become anything other than itself whereas the aspect of *potentiality* is the description of the fact that the thing under consideration may change into many of the other things too. The first aspect among these two may be called the *form* of that thing and the second as the *matter* of that thing. This means that the *form* of a *physical thing* is its such an essential meaning, which exists in *actuality* and the *matter*, is its that aspect, which has the *potentiality* of the existing *form* along with the *potentiality* of non-existing *forms*.

These conceptions of *form* and *matter* are prevalent among the traditional Greek and Muslim philosophers. But with the passage of time the definition of these terms gradually changed till the modern times when the philosophers and scientists have now totally different conceptions of these words. We will use the words of '*form'* and '*matter'* in this book in the senses explained above.

In these senses, we can identify the *form* and *matter* of different kinds of *physical things*. But before doing this we will categorize different kinds of *essential meanings* associated with the physical things. The *essential meanings* of the *physical things* may first be divided into perceivable and unperceivable meanings. Then perceivable meanings may further be divided into the meanings with spatial shape and meanings without spatial shape.

Thus the following *contradictory categories* of the *essential meanings* may be produced:

1. All essential meanings of the *Physical things* from an inward perspective

1.1 Unperceivable Meanings such as molecules, atoms, electrons etc.
1.2 Perceivable Meanings:
1.2.1 Shape Forms i.e. meanings with a spatial shape such as house, table, animal bodies, plant bodies
1.2.2 Non-Shape Forms i.e. meanings without a spatial shape such as wood. water, light waves etc.

These all categories are shown graphically at Fig. 2.

2.3.1.1
We can start our analysis from the category 1.2.1 i.e. the perceivable meanings having spatial shape. This category of meanings may be called *shape forms* as they emerge from the shape of the thing. In this regard, consider a wooden table. As far as the table is concerned, being the name of a certain physical shape, its shape is its *form* and wooden pieces are its *matter*. Its shape is its *form* because it is actualized and cannot become anything other than the shape of the table itself as far as it is the table.

But the wooden pieces are its *matter* because they can be joined together in other shapes too. In other words, the wooden pieces have also the *potentiality* of producing shapes other than the table. As far as the wooden pieces are concerned, each of them has its own actualized *form* and in this respect it obstructs to become any other thing.

The *matter* of any of the wooden pieces is the constituting molecules and the *space-object* between them because the same molecules may possibly be united with the same amount of *space-object* producing a wooden piece of totally different shape.

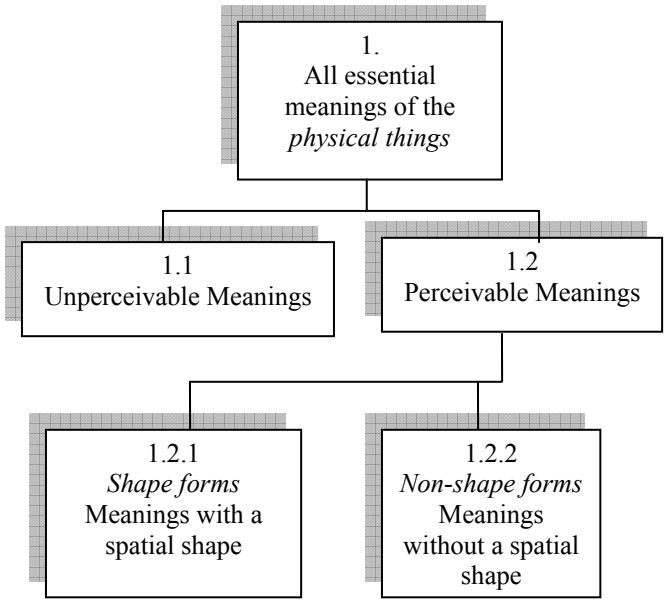

Fig. 2: Different categories of the physical things' essential meanings from an inward perspective

2.3.1.2
Now if we consider a typical hydrocarbon molecule in a wooden piece, the set of its chemical properties may be termed as its *form* whereas the atoms of hydrogen, carbon etc present in the molecule are its *matter* because these atoms have the *potentiality* of uniting with each other or with other atoms to *form* the molecules of other compounds too. Since molecules and atoms belong to the category of the *physical things* with unperceivable meanings (category 1.1), we can say that the *physical things* of this category also have some *forms* and *matter*.

This is the reason that protons, neutrons and electrons are the *matter* of hydrogen and carbon atoms because they have the *potentiality* to become other atoms too.

But when they are considered in themselves they have their own *forms* and their own *matter*. Their *matter* is the smaller constituting particles like quarks. These quarks have the *potentiality* of becoming energy waves when combined with anti-*matter* particles. In this aspect of *potentiality*, a quark has the *matter* in it but in itself it is also an actual aspect which is its *form*. All the *form*s of the invisibly small particles as envisaged by the particle physics are included in the category of the *unperceivable forms* because they cannot be unperceivable meanings.

From the above analysis, we can also conclude that the *form* of the *physical things* with a spatial shape have a lot of *unperceivable forms* of the category 1.1 inside them provided the findings of the modern particle physics are correct.

Even the *space-object,* which is found between the molecules or within the atoms and which is also a part of the *form* of the whole *physical thing*, has its own *form*. *Space-object* like all other things is also changeable and thus also has two aspects of *form* and *matter*. Any of its specific shape is its *form* and its *potentiality* to turn into other shapes is its *matter*. This is the reason that it may denotatively be included in the category of *shape form*. But connotatively, it is included in the category of *non-shape forms*.

In the above example of the table and its parts, we learned about a number of *forms* of *matter* starting from the shape of the table to the simplest level of the *space-object* and of the smallest known particles like protons, electrons and quarks etc. At each level, physical parts become the *matter* for the whole thing whereas the *form* represents the whole thing itself.

2.3.1.3

The examples of the *physical things* having *essential meanings* without any shape are the liquids, the gases and the solids like steel, soil, wood, copper, etc. Such

things are considered without any shape. In such cases, the essential physical and chemical properties of the thing become its *form* as we consider the thing through the combination of these properties. For example, when we consider some liquid, which is in a container, its *form* is its specific physical and chemical properties. This *form* is not affected if the same liquid is poured into another container where its shape is changed. Same is the case with gases and things in powdered *form*. Actually, the shape becomes only an attributive meaning in the case of such things. The *form* of such cases may be termed as *non-shape forms*.

If we consider the table or its wooden pieces as wood, the shape of the table or those of the wooden pieces become only *attributive meanings*. In this case, the *essential meaning* is the *non-shape form* of wood. Actually, both the *shape* and *non-shape forms* may be present in the perceivable *physical things* but one becomes attributive or essential depending on the way we consider the thing in question.

The *physical* things like light, heat and other perceivable waves may also be included in the *non-shape forms*. Such *forms* also have some *potentiality* in them because they may change to other *form*s of energy. This *potentiality* is their *matter*.

A *non-shape form* like wood, liquids, gases and other materials has also its own *matter* which is its aspect of turning into other *form*s. For example, hydrogen and oxygen is the *matter* of water as these two gases have the *potentiality* of forming other compounds when combined with other chemicals. The *form* of each of these gases has the *matter* of their respective molecules, atoms and *space-object*. Hence, *non-shape forms* also contain the *unperceivable forms* inside them as is also the case with the *shaped forms*.

The objective of giving all these examples is to show that *physical things* have two aspects in them. One aspect is that of *actuality* and the other aspect is that of *potentiality*. This conclusion is proved for all the *physical things* because it is ultimately derived from the definition of the *physical things*.

From the above discussion, we can also conclude that a *physical thing* may contain many levels of *forms* starting from the *forms* of the smallest known particles to its most outward and whole *form* in such a manner that each level of *forms* becomes the *matter* for the next level of *form*. In other words, a stacked sequence of *matter-form* composite may be envisaged in a *physical thing*. This sequence starts from the *form* of the smallest known particle and ends up at the most outwardly known *last form* through which the thing in question is identified and differentiated from the other things.

Thus table, water molecule, hydrogen atom, proton, electron, light waves, *space-object* etc. etc. all these things have their own *last forms* through which they are identified, although, some of these things may become the *matter* of some other things as far as the potentialities in them allow.

If we consider all the layers of *matter* collectively without the consideration of any *form*, we can envisage indefinite potentialities which may be called the *prime matter* as this is the name given to it by the Greeks. *Prime matter* does not have two aspects of *actuality* and *potentiality*. It is totally potential and has nothing in *actuality* other than its own *potentiality*. The *prime matter* is actually another name of all the potentialities without any *form*, not even of a *space-object*. This is the reason that it is also known as *formless matter*. Since every physical thing may be considered as a stacked sequence of *matter-form* composite, *prime matter* may also be envisaged as a kind of a stacked canvass. Like canvas has unlimited potentialities for accepting different paintings on it, *prime matter* also has unlimited potentialities for accepting different *forms* on it.

Not only the *form* of animal bodies, *shape forms* and *non-shape forms* are actualized on this canvas of the *prime matter*

but the *form*s of *space-object*, quarks, energy waves and even the so-called[9] anti-matter particles are also actualized on it.

Here it should be notified that the parts of a thing act as *matter* in the following three ways:

1. When the parts may become other things without any reduction or addition in them;
2. When the parts may become other things with the combination of the other things;
3. When the parts may become other things with some reduction in them;

On the other hand, the last *form* may appear in the following three ways:

- By combination of two or more *form*s into one or more *form*s;
- By disintegrating one *form* into two or more *form*s;
- By changes in the same *form* due to the actions of other *form*s;

Here we can easily notice an important point that *last form* of the whole thing is always additional to the *last form* of parts which are acting as *matter*. To understand this point more clearly, consider some parts which have the *potentiality* of becoming a thing A such that they also have the *potentiality* of becoming another thing B. But at a certain instant of time, these parts can become either A or B because *form*s potentially present in a thing are mutually exclusive. As parts of both the things, they have equal relationship with both A and B.

If these parts are attached to each other in such a manner that only the thing A is actualized, there must be some factor

9 We called the anti-matter particles as so-called because according to the conception of matter and form given in this chapter, an anti-matter particle is also one of the forms of matter. It never destroys matter. It only destroys the form of certain sub-atomic particle. As far as the matter is concerned, being the other name of potentialities it can never be destroyed. It only accepts different forms including the forms of energy, space-object, quarks etc. From here, the validity of the law of conservation of matter can also easily be understood, though, this law is considered invalid by the modern science because of having new understanding of matter.

which is added to them to produce A. This additional factor must be specific to A only. If we suppose that A is actualized from these parts without the addition of this factor, the question arises as to why the thing B is not actualized from those same parts at that time. Similarly, a totally different factor, which is specific to B only, is required to be added to these same parts in order to produce the thing B from them.

This requirement of additional factor arises because parts which are acting as *matter* have the same relationship with all the *form*s for which that *matter* has the *potentiality*. Having the same relationship with all the potential *form*s, the *matter* alone is not sufficient to actualize any of these *forms*. This principle of the need of an additional specific aspect for the actualization of one possibility among the set of possibilities in a given *matter* may be termed as '*the principle of the additional actualizing factor*'.

If this additional factor were not required and only the *matter* were sufficient to actualize the *form*, all the *forms* potential in the *matter* would actualize at the same time in it. But on the contrary, we know evidently from our evidently true sensed data that only one *form* is actualized in the *matter* at one time. All other *forms* potential in *matter* remain potential in it as far as the actualized *form* remains intact. Thus we can say that the *principle of the additional actualizing factor* is based on *evident truths* and is thus a valid principle. The ignorance from this principle is the basic source of materialism prevalent in the modern times. Under the influence of this ignorance, even the conception of *matter* is totally changed now.

In the example of the wooden table, something is required to be added to the wooden pieces of the table to actualize the *form* of the table according to the *principle of the additional actualizing factor*. This additional factor is the arrangement of the wooden pieces as the shape of a thing is actually a specific arrangement of its parts. Thus *form* of the table is actually the specific arrangement of its parts or a specific spatial relational order among the parts.

If we consider only one wooden piece, it has its own specific shape. Something is added to its *matter* i.e. to its molecules and *space-object*, to get its specific shape. Otherwise the same molecules and *space-object* may exist in other *form*s of wooden pieces too.

Non-shape forms are also additional to their constituent *form*s. For example, the *form* of water is additional to the *form*s of hydrogen and oxygen. This is the reason that water has physical and chemical properties totally different from those of oxygen and hydrogen.

Molecules and *space-object* have their own specific *form*s. For example, the molecules themselves are formed with specific factors additional to their constituent atoms. Due to its specific *form*, the molecule is the source of its specific chemical properties. At this level too something is added to the parts. Similarly, atoms have their own last *form* which is additional to the electrons and the nucleus. This *form* is the source of its chemical properties. The nucleus of the atom has its own *last form* which is additional to the *last forms* of the protons and neutrons themselves[10].

On the same grounds, something must be added to the quarks to *form* a proton for example. This additional factor must be specific to the proton only. Similarly, some other additional factors are needed to *form* neutron or any other bigger particles from the quarks.

In short, we can conclude that a table is not merely a collection of quarks or any other elementary particle. It is much more than this. Many additional factors are required to be added to produce a table from the quarks. Looking in the reverse order, many additional factors have to be removed in order to get quarks from the table. In other words, quarks and a table or any other *form* between them all are different *form*s of *matter*. Quarks do not have any priority or specialty over other *form*s. Its only specialty is that it is the smallest known

10 This last form of the nucleus may be the source of the strong nuclear force needed to keep the protons and neutrons together. Since the modern scientists ignore the existence of the additional last form, the appearance of the strong nuclear force in the nucleus of the atom is still a mystery for them.

particle found in all solids, liquids and gases. But if we consider it as one of the *form*s of *matter*, it is on equal standing with other *form*s. Thus the additional actualizing factor rather than *matter* is actually the source of differences in the *physical things*. Everything has its own specific *form* through which it is actualized.

Actually, we take the *last form* for granted and ignore its separate existence. But after analysis, it came out that everything from quark to the perceivable things spreading around us is nothing other than the respective *last form*. *Matter* is only *potentiality* in them to become some other *form*.

2.3.2

Now we come to the *essential meanings* which are found in a *physical thing* due to its association with different groups of varying generality. The word 'thing' represents the most general group which includes all the things of different kinds. On the basis of different features we can make different sub-groups within this group. By dividing these sub-groups, we can make further divisions to make more sub-groups. We can notice from this process of divisions that the parent group has the *potentiality* of more than one sub-group in it. Whenever, we make a sub-group from the parent group among the set of potential sub-groups, we have to associate a set of additional meanings with the *essential meanings* of the parent group. These additional meanings are always required to make that specific sub-group. In other words, the *principle of additional actualizing factor* is applicable in this case too.

It is because the *essential meanings* representing the parent group are not enough to determinate each of the sub-groups in it. These *essential meanings* have the same relationship with all of its potential sub-groups. We have to combine some additional meanings with it to determinate a specific sub-group. In other words, the process of dividing a group into sub-groups requires a separate differentiating factor for each sub-group. The set of meanings found in the parent group is called *genus* and the set of additional meanings required to make the sub-groups is called the *differentia*.

Differentia put a limit for the creation of a particular subgroup inside the wider group created by the *genus*. When these two meanings are combined, a set of meanings representing a specific group of things is formed.

This process of particularization of the general meanings continues till we reach at the level of the subgroups whose members exist in *actuality* as individual things. These last subgroups are named as *species* such as cats, dogs, humans etc.

The individuals of one *species* are different from each other due to the differences in *attributes*. For example, the individuals of human *species* i.e. human beings are different from each other due to the differences in quality, quantity, location etc. as we see some men are tall, some are white, some are fat, etc. But they are same in the *essential meanings*.

We can notice here that this all process of particularization from the most generalized group to the individuals of the *species* takes place at the mental level only. Otherwise, the process of the extraction of all these meanings of *genus* and *differentia* from the individual things is in the reverse order i.e. from the individual things to the vaguest and most general meaning of the word 'thing'.

In short, *genus* of a group has the *potentiality* of many sub-groups whereas the *differentia* determines a sub-group among the set of those sub-groups for which the *genus* has the *potentiality*. In this way, the *genus* acts as *matter* and *differentia* acts as a *form* at the mental level. Like the parts act as the *matter* for the whole but have their own *form*, in the same way the meanings of a parent group acts as *genus* for its sub-groups but every parent group has its own *differentia* too. Only the most generalized group i.e. that represented by the word 'thing' does not have any *differentia*.

This analysis in *genus* and *differentia* is at the mental level only otherwise both are united in reality exactly like *form* and

matter can be analyzed at the mental level only, though, they are united with each other in the reality.

2.4

All the four meanings of *form*, *species*, *genus* and *differentia* are united with each other into a certain *physical thing*. But we can understand each of these meanings separately at the mental level. The aggregate of these meanings may collectively be called the *quiddity* of that thing. Since these all kinds of meanings include certain meanings and exclude some other meanings, *quiddities* are actually the meanings which define the limits of the *physical things*. Through *quiddity* or through these four kinds of meanings, we get the *essential meanings* of the *physical things*. The aggregate of the last *form* and the last *differentia* may be called the *last differential form*. A thing is actualized through its *last differential form*. *Matter* is only an expression of the fact that the *physical thing* is changeable to other *forms* too.

Like *matter* is undetermined and unformed without a specific *form*, the meaning of *genus* is also undetermined and ambiguous without the meaning of *differentia*. For example, the word 'animal' which is a *genus* is ambiguous. Only when the meaning of *differentia* is combined with it, it becomes determined. This is the reason that we cannot imagine an animal with determination without combining it with a *differentia* such as that of a 'horse', 'elephant', 'tiger' etc. Thus we can say that the meaning of the last *differentia* is additional to the meaning of the *genus* like the last *form* is additional to the *matter*. The reason is same. *Genus* has obscurity like the *matter* has. Both have some potentialities. One of such potentialities of *genus* and *matter* has to be actualized due to the additional factor of *differentia* and *form* respectively.

From here we can easily understand that the *differential* meanings cannot emerge from the meanings of *genus* by itself. For the emergence of such a meaning some additional factor is required. What is the source of such a factor is the question we should inquire into.

Hence, it may be true that the *last differential form* of a man was developed from the quarks through an evolutionary process[11]. But this evolution is not possible without the addition of additional factors. At each stage of the formation of a bigger thing from the smaller parts, something is added till the human psyche is added to the animal-like body. Man is differentiated from other animals through this *last differential form* of human psyche or *soul* as it is usually called.

At this stage, we are able to answer our basic query about the source of differences among physical things especially between a lion and a table of same weight. The last differential form of a lion, having a series of *differential form*s, is totally different from the *last differential form* of a table which has a series of totally different *differential form*s. Having different kinds of additional factors in them, they both are totally different from the quarks which lack those additional factors.

In short, the *last differential form* of everything is in addition to the *last differential form*s of its parts and it is the very source of differences among the things. In other words, the *last differential form* has an existence in addition to the existences of the parts and the source of this existence is not its *matter*. If this source were *matter*, all the *form*s potential in that *matter* would appear simultaneously in that *matter*. *Matter* only provides a kind of a platform on which the changes of one *form* after other occur.

Hence, the *essential meanings* of a *physical thing* emerge neither from its parts nor the groups it belongs to but from the thing itself. Hence it is wrong to say that all the things in this world are nothing other than the lumps of energy or quarks. On the contrary, every *physical thing* has its own *last differential form*. However, this may possibly be true that many of the *physical things* have the *potentiality* of giving out the smaller particles such as electrons, quarks, strings or energy quanta. But these smaller particles have their own *last*

11 According to the evolutionary theories, the most famous among which is that of Darwin, different things especially the living things appear in the matter due to the accidental factors happening in the past. For instance, the elementary living forms such as those of organic substances or single cellular organisms are formed as a result of accidental happenings such as the electro-magnetic storms or due to the meteoritic attacks on the earth. These elementary living forms evolved into complex living forms through genetic mutative processes selected by the survival factors as explained by the Theory of Natural Selection in the Darwin's evolutionary theory. These genetic mutations are again mentioned to be accidental happenings and are claimed to be justified on statistical grounds in the long spans of time.

*differential form*s like the bigger things have. They are the part of things but are only the parts and not the things themselves. Thus quarks have their own *form* and an elephant or a lion or a table has its own. Everything is a separate reality; a very simple fact which is perhaps being ignored by the modern physicists. In other words, this world is not the world of quarks, nutshells, strings or superstrings only. This world is, actually, the world of *differential forms*. Quarks strings, superstrings or nutshells, if they really exist, are only some of these *differential forms*. There is no priority of the *form* of these minutest things on any other *form*.

Moreover, it can also be understood from here that the process of the appearance of *form*s is not always through the uniting of the smaller *forms* into a bigger *form*. The process of appearance of smaller *forms* through the disintegration of the bigger *forms* is also on the same footing. There is no difference in these two kinds of processes because each level of *form* has its own reality. Thus to say that the *physical things* are made of quarks, is on same footing with the saying that the quarks can be obtained from a bigger *physical thing*.

We can list out the following kinds of *last differential forms* generally known to be found around us:

1. The forms of solid shapes
2. The forms without any regard to shape such as those of steel, wood, water, air etc.
3. The forms of unperceivable particles such as molecules, atoms, subatomic particles, anti-matter particles etc.;
4. The forms of animal species such as lion, cat, dog, horse etc.;
5. The forms of plant species.;
6. The forms of celestial bodies such as stars, planets, black holes etc.
7. The forms of waves such as light, heat, sound, X-rays etc.
8. The form of space-object

This list is, of course, not exhaustive as there may be many other *differential form*s in the physical world which are not included in any of the abovementioned categories. These are some of the *form*s with which we are generally familiar.

It is worthy to note here that the *potentiality* in the *form*s of living things like plants and animals is in those parts which do not co-exist

i.e. in those parts which spread in the temporal succession of their life-span. In other words, the bodies of these things act as *matter* because they present a *potentiality* of many possibilities of growth and motion during their life span. Within these possibilities, the plant bodies grow and animals move around during their lives. But what ever is actualized during this growing or moving process requires the addition of a factor which does not emerge from *matter* (i.e. from their bodies) but emerge from somewhere else. In other words, the *principle of the additional actualizing factor* also acts in the case of the actualization process during the life-spans of the living things too. We will elaborate this factor further in Chapter 11 where we the cause of motions in physical things will be discussed

2.5

The most important issue in the above discussion is the conclusion that each *differential form* is additional to *matter*. If this *differential form* exists, the thing exists. When this *differential form* collapses, the whole thing also collapses despite the fact that its parts may still survive with another *differential form* or separately with their own *differential form*s. It is also worthy to note that this *differential form,* rather than *matter,* is the source of all the specific properties and characteristics of a thing. This is the reason that the source of all the chemical and physical properties of water is its *last differential form* rather than hydrogen and oxygen. The source of strong nuclear force in the nucleus of an atom is also its *last differential form* rather than neutrons and protons.

But this does not mean that the thing is independent of *matter*. The table's shape, of course, cannot exist without the wooden pieces. It does require the wooden pieces for its existence. But important point is that it is not the wooden pieces only. It is much more than that. Similarly, water is not hydrogen and oxygen only. It is much more than that.

A *physical thing* is actually realized through its *last differential form*. Table is realized by its shape rather than by its wooden pieces. Its wood is realized by its own non-shape *form* rather than by molecules and *space-object* present in it. The wood's hydrocarbon molecules are realized by their own specific *form*s rather than by carbon or hydrogen. Going further, carbon and hydrogen atoms are recognized by their own *form*s rather than by the neutrons, protons or electrons

present in them. In short, every thing is realized through its *form* rather than through its *matter*.

Matter is only a requirement of the *form* for getting existence somewhat like a surface or a canvas is the requirement of a painting. The only difference between them is that the surface is separate from the painting in the external whereas the *matter* is separate from the *form* only in our minds. Such requirement is inevitable for a thing which has an aspect of *actuality* as well as an aspect of *potentiality*. A *physical thing* is such a thing because its parts are absent from each other by its very definition. Hence it is the absence due to which *physical things* have the aspect of *potentiality* in them.

Matter of a thing is only an expression of the fact that this thing may be changed into other *form*s too. *Matter* is nothing other than this. This changeability is due to the factor of absence in the *physical things*. The factor of absence emerges due to nothingness. In short, the *matter* is the representative of nothingness in a thing whereas the *form* is the representative of the existence. Thus, being associated to *matter,* the existence of the *physical things* is a weak existence which is very near to nothingness.

But why we usually consider *matter* to be more important and real than the *form*? It is because *matter* appears to our senses to have more stability and persistence than the *form*. When the *forms* are changed in a thing, the thing itself is changed whereas its *matter* survives because the *matter* has the *actuality* of potentialities and these potentialities survive even after the loss of one *form*. But what actually survives after the loss of one *form* is again another *form* with other potentialities. This process never ends as one *form* follows other *form* at the canvas of *prime matter*. Hence, the *law of conservation of matter* is true if we consider the word '*matter'* in the sense explained in this chapter. The conversion of some *form* of *matter* into energy, as is done in the fission and fusion processes, does not violate this law because energy is also a *form* of *matter* when the word '*matter'* is taken in the sense explained above.

2.6

Returning back to our original problem, we may repeat that *matter* alone is not enough to give existence to the *differential form* of a thing. Something must be added to the *matter* for this purpose. In

other words, the *differential form* is additional to *matter*. This last conclusion raises the following two questions:

1. When a whole thing is broken down into pieces, why and where the *differential form* of that whole disappears?
2. When a whole thing comes into being from where the *differential form* of that whole appears?

These two questions may be asked in the *form* of one question by asking: what is the source of the *last differential form* of things? *Matter* cannot be this source as we have proved above that *last differential form* is additional to *matter*.

But what is its source then? The only answer is that there must be some unseen aspect in the thing which is the source of these *form*s. This aspect must be the *real existence* of things because the *last differential form* appears as soon as the thing gets *existence* and it disappears as soon as the thing loses *existence*. This is true for all the *differential forms* starting from those of unperceivable things like quarks, electrons etc. to those of all the perceivable *physical things* because every *physical thing* and its *differential form* is one and the same thing. But what is the source of the *real existence* in the things? The answer to this question lies in the fact that *real existence* exists by itself. It does not need any source or any other thing to exist because existence is its *essential meaning* and *essential meanings* do not need a cause according to the *principle of essentiality*.

Since *last differential form* is a reality which we know evidently through our direct senses, the *real existence* also proves to be a reality. But as far as *real existence* is concerned, it is unseen and hidden from our senses. It only appears to us through the *last differential form*. Since the *real existence* is unseen and unperceivable, our mind ordinarily does not ask the question about the source of the *last differential forms*. For example, when water comes into being due to the combination of hydrogen and oxygen, we do not ask from where its *last differential form* appears. We take this for granted and thus considers the water only as an aggregate of hydrogen and oxygen. This ignorance leads us to ignore the primacy of the *real existence* too. In this way, we unintentionally ignore the fact that every *physical thing* which we can sense has a *real existence* of its own. We will see in the following chapters that the realization

of this fact may have very important repercussions on the way we think about this universe.

In the next chapter, we will further try to check the validity of this fact; this time through an analysis of the *attributive meanings* of the *physical things*.

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Chapter 3

TIME AND SPACE IN PHYSICAL WORLD

3.1
In the last chapter, we learned that the source of *quiddity* is an unseen aspect of the *physical things*. This aspect is actually the *real existence* of things. In this chapter, we will study the attributive meanings of the physical things and would focus on the issue whether the *attributive meanings* of the *physical things* also have some relation with their *real existence*.

We know that *attributive meanings* of a thing are the meanings which are not required to consider that thing. There may be two kinds of such meanings in the *physical things*. One is that which are required to be associated to a physical thing when that thing has existence. The other kind of the *attributive meanings* is the ones, which are not required to be associated to a thing when it has existence. Since these two categories are *contradictory complement* of each other, they include all the *attributes* of the *physical things* because *contradictory complements* are collectively exhaustive.

The examples of the second kind of *attributive meanings* are the possessive relations of a thing, its state of being acted upon, its qualities etc. because such *attributes* are not the necessary requirement of a *physical thing* in getting or maintaining its existence. It may be possible that a physical thing has an existence but does not have such attributes. Since we want to analyze the *attributes* of a *physical thing* and to find out their possible relation with its *real existence*, we will not discuss this kind of attributes. Rather, we will discuss only the first kind of attributes which are required to be associated to be associated to a physical thing when that thing has existence. The attribute of quality is considered by

many philosophers as among the first kind. But it may not be true for many of the *physical things*[12] as defined in this book.

The first kind of *attributes* may rightly be called *physical attributes* because a *physical thing* cannot get or maintain its existence without them. But what attributes of the *physical things* fall under this category. We can identify these attributes keeping in view the fact that some of the parts of a *physical thing* co-exist with each other and some not. Since the whole of physical world may also be considered as one gigantic physical thing, this fact is also true for the whole physical world in which different physical things co-exist as its parts. Due to their co-existence and due to the co-existence of their own parts, they must have the following three *physical attributes*:

1. The extension occupied by a physical thing must be quantifiable. In other words, each physical thing must have some quantity and it must be continuous as the physical thing is a continuous entity. This continuous quantity may be called space;
2. They must be at some distance and angle with the surrounding physical things. In other words, they must have the attribute of location as defined by its distance and angle from other things;
3. They must have a direction with respect to each of the surrounding physical things. In other words, they must have the attribute of direction.

Those parts of a *physical thing*, which do not co-exist, appear to us as making another *attribute* which is known as *motion*. Since many *physical things* co-exists with other *physical things* to make the whole of the physical world which may be considered as one gigantic *physical thing*, the motion of every co-existing *physical thing* may be compared to that of every other *physical thing*. Due to this

12 Quality cannot be considered to be a necessary requirement of the unperceivable things like atoms and sub-atomic particles, if they really exist, because any meaning which may be considered to be a quality for them is actually among their essential meanings. For instance, the negative charge of electron is an essential meaning of electron rather than an attributive meaning. However, the quality may be considered as the requirement of the existence of the perceivable physical things as these things always have some qualities such as color, hardness, temperature, etc. But their qualities cannot be considered as the requirement of their existence in the wake of the molecular and atomic theories of modern science. If these theories are correct, all these qualities are proved to be the result of molecular structures and molecular interactions. Molecular interactions in turn are the results of intermolecular distances and motions. Differences in colors are also not other than the differences in the wavelengths of the light waves. Hence, the qualities of things are nothing other than the feelings of some effects, which are quantitative at the molecular and sub-molecular level according to the modern science. Due to these considerations quality is here considered as that kind of attribute, which is not necessarily required, when a physical thing gets existence.

comparison of motions, *physical things* also have the following two *physical attributes*:

1. The motion of every physical thing compared against another motion must be quantifiable. This quantity is termed as *time*.
2. Every physical thing may occur at an instant of time produced as a result of the comparison. This attribute may be termed as *time of occurrence*.

In view of all this, all of the *physical things* being parts of this physical world and being co-existing with some others, must have the following *physical attributes*:

1. *Continuous Quantity* such as space and time occupied by a *physical thing*;
2. *Location* or the place where a *physical thing* is located;
3. *Direction* in which a *physical thing* is positioned;
4. *Time of occurrence* of a *physical thing*;

In short, these four *attributes* related to space and time may be derived from the definition of the *physical things* because the definition of the *physical things* given in Section 1.3 is derived from the conceptions of temporal succession and spatial extension which are evidently sensed by us. These *attributes* will be discussed one by one in the following sections:

3.1.1

Since space is one of the continuous quantities associated to the *physical things*, we may analyze the *attribute* of continuous quantity by analyzing the characteristics associated with the meanings of space. First of all we will inquire into the question whether or not the space is really a continuous quantity.

The space between any two points of a thing is a continuous quantity because if it were discontinuous, it would be in the *form* of some parts which may be infinitesimally small. In such a case, these parts would either be connected or disconnected. If they are connected with each other, the space

is again proved to be continuous. If these parts are disconnected, the question arises as to what is between these parts. It cannot be nothing because nothing is after all 'nothing'. If there were something between these parts, this something would also have some space. Hence, the continuity of space would be present in every case. In short, it may be maintained with certainty that space occupied by a *physical thing* is a continuous quantity.

The space within an atom can also not be proved discontinuous on the basis of the electron jump from one orbit to another in an atom as is shown by the modern atomic models. It is because the electron only disappears in one orbit and reappears in another. This behavior of electron does not prove that there is nothingness between the two orbits as *space-object* is present there and we have already proved that the *space-object* is not nothingness. It is after all something.

After establishing that space is a continuous quantity, we can identify some characteristics of this *attribute* which are as follows:

Since space is a continuous quantity, it can be divided indefinitely whether such a division is practically possible or not. In other words the process of division will never end in space. For example, we can divide a length of one meter into two parts getting two half-meter lengths. Then the half-meter length can again be divided into two parts. Such a process of division can be continued indefinitely because each quantity after getting the division will again be divisible. In other words the process of division will never end in continuous quantities.

This would mean that a certain length of space say between any two points X and Y, have an indefinite number of space particles in it. But this is also a fact that indefinite number of quantities cannot exist between two limits because aggregate of indefinite number of quantities should also be indefinite. Contrary to this our assumed length is limited between X and

Y. This assumed length cannot be definite as well as indefinite as this is against *the law of non-contradiction*. This paradox is the basic cause of the plurality paradoxes of Zeno of Elea.

How we can solve this paradox? This paradox may be solved by maintaining that the parts in a certain quantity of space do not exist in *actuality*. They exist only in a state of *potentiality*. In such a view of a quantity, the objection of the presence of indefinite number of divisions within two limits does not arise. In other words, one can get the parts from a certain quantity when it is divided in *actuality* or in imagination but the parts does not exist in *actuality* as far as the whole quantity exists. Thus every quantity exists with its own existence and with its own definite amount.

From such a view it follows that the existence of every quantity of space is a reality separate from the existence of any other quantity of space whether it is smaller or larger than the first one. This would mean that a spatial extension of one meter, for example, has an existence totally different from that of one centimeter. Both extensions exist on their own. One meter is not constituted by one hundred centimeters although it is totally a different fact that we can get one hundred parts of one centimeter each from a quantity of one meter through the process of division. In other words, the presence of hundred centimeters in one meter is in a potential state rather than in an actual state. They are actualized when we divide one meter length in hundred equal pieces either in actuality or in imagination. If we divide one meter length in one thousand equal pieces we will get one thousand pieces of one millimeter length each. Neither the one centimeter pieces nor the one millimeter pieces are present in one meter in *actuality* as far as one meter length is considered as a whole.

From the above discussion, we can conclude that each extension of space exists as a separate reality. Like the linear extension, the other spatial quantities such as areas and volumes of space also exist as separate realities with only the *potentiality* of smaller parts in it.

In other words, every continuous quantity is one separate unit rather than composed of some parts. This means that the lengths, areas and volume of a whole thing are quantities totally different from the lengths, areas and volumes of its parts notwithstanding the fact that the sum of these quantities in the parts is equal to the respective quantities in the whole. For example consider a cube of one cubic meter volume. The volume of cube is a spatial quantity and is thus associated to the cube as one whole aspect. This whole aspect is *attribute*d to the thing's *last differential form*, which is additional to the parts of the thing, and which is in this case is the shape of the cube.

Now it can be maintained that cube consists of the molecules contained in it plus the *space-object* in it. Molecules and *space-object* are its parts. But the cubic shape is added to these parts as one whole aspect. Now we can say that the cube is some molecules plus *space-object* plus its shape and this shape exists with a separate whole quantity of volume. While its parts such as molecules and *space-object* have their own separate whole volumes notwithstanding the fact that the sum of the volumes of its parts is equal to the volume of its whole shape. This is also the case with other things too even to the things whose parts are connected with screws, bolts or by any other means.

From the above discussion, it also follows that space does not have any absolute value and thus things are not floating in space as is apparently felt. Rather everything exists on its own with a quantity called space. Thus it is our misunderstanding that space exists on its own and the things exist and move inside it. Rather space is associated to them as an *attribute* of quantity. The empty space named as space-object in Chapter 1, is also a separate *physical thing* like others and is found between the stars and planets as well as within the boundaries of most of solid, liquid and gaseous *physical things* as one of their parts. Hence, things containing the *space-object* are actually placed side by side having spatial quantities as *attributes*. We can see the things placed side by side including the vast stretches of *space-object*,

galaxies and stars when we see towards sky in a clear dark night.

When a thing enclosed by another thing moves from one location to another, there is always a corresponding change in the internal shape of the enclosing thing too because enclosed and enclosing things both are placed side by side without any nothingness between them. For instance, when the planets move from one place to another, a respective change occurs in the shape of the enclosing *space-object* too. Similarly, the motions of molecules within a *physical thing* also cause a continuous change in the *space-object* within that thing. Such a change may be called the *internal motion of the space-object.* The shape of the Earth's air also changes as human beings and other things move on the surface of the Earth.

From the above discussion, it is concluded that space is not an absolute entity as is also proved by Einstein's theory of relativity. Rather it is associated separately to each and every *physical thing*.

The relativity of space can be proved valid from another perspective too. Actually, all continuous quantities are understood only when they are compared with each other. Otherwise these quantities do not have any meaning in themselves. For example, elephant is considered a big animal because it is bigger than a lot of other animals. If there were nothing other than elephant with which its size can be compared, its bigness would turn out to be meaningless. Thus size of a thing or any other continuous quantity associated with it has a meaning in terms of its comparison with other things. Considered in themselves such quantities are totally meaningless.

To understand this point further, consider the size of an atom and the size of our galaxy. Both these sizes are extremely small and extremely large when they are compared with each other or with many of the sizes between them. But if each of them is considered in itself separately without any consideration of its comparison with other sizes, there is indefinite number of sizes larger and smaller than each of

them because both can be divided as well as multiplied indefinitely. In other words, both of them are extremely large as compared to indefinite number of sizes and both of them are extremely small as compared to indefinite number of other sizes. Thus the size of an atom and that of our galaxy have the same meaning when they are considered on their own. They are big or small only when they both are compared together with each other or with any other size. Hence continuous quantities like space are only a comparative relation. Other than that there is no absolute meaning in them.

Similarly the time duration, being a continuous quantity, is also a comparative relation. We measure the duration of a thing's existence in units of time, which are actually the measure of the spinning and rotational motions of the Earth. The motion of the clock is actually adjusted with the motions of the Earth. Thus we get the duration of a thing's existence by comparing it with the corresponding duration of the Earth's motions. For the purpose of such comparisons, we select the Earth's motions because these motions appear to us to continue uniformly for fairly long periods in both the directions of past and future. Otherwise, there is nothing special in the Earth's motions. The duration of a thing's existence can be measured by comparing it to the motions of things other than Earth too. Hence, time is a comparative measure of a thing with a motion.

The fact that space is not absolute also follows from Newton's laws of motion whereas the relativity of space as well as that of time is established by Einstein's theory of relativity.

The same is the case with other continuous quantities too. In all cases, the existence of the whole quantity is different from those of the parts because in each case the paradox of the presence of indefinite number of parts existing within the two limits comes forward. Even same is the case with discrete quantities. The characteristics of the whole digits are totally different from its parts. For example, the digit 7 has characteristics totally different from those of 4 and 3. In other words, every digit has a unique existence.

3.1.2
When it is proved that things are not placed in space and they, rather, exist in themselves with an *attribute* of spatial quantity, it is easy to understand that the location of a physical thing is also not absolute. Since there is no absolute space, the location of every physical body is nothing other than a relationship of distances (spatial quantities) and directions with the physical things around it. Thus the concept of location for a *physical thing* is meaningless if any other *physical thing* is not around it.

For example, suppose the whole physical world is a big ball outside which there is nothing. The concept of location for this big ball would be meaningless because there is nothing outside it with which its relationship regarding its location is established. This is the reason that if we suppose that this big ball is moving, there would also be no meaning of its motion nor we can measure this motion because there is nothing outside it with which the change of its location could be observed. As a matter of fact, when a physical thing moves in location, its relationship with the surrounding things is actually changed. When there is nothing in the surrounding, the meaning of the motion itself collapses.

In short, the location of a thing is also a comparative relation with respect to other things around it. In other words, location of a thing is not an absolute reality. What is absolute here is nothing other than the comparative relationship of distances and directions among the things.

Moreover, the location of the whole is strictly speaking different from the locations of its parts because the parts do not have the same relationship of distances and directions as the whole has with the surrounding things.

3.1.3
Whenever a *physical thing* exists, it is always positioned in a certain *direction* with respect to the things surrounding it. This direction may be expressed by different angles with respect to different points around it. Since space is not

absolute, the *attribute* of direction for a thing, like the *attribute* of location, is understood only with respect to things surrounding that thing. If there were nothing around that thing, there would be no meaning of direction for that thing. We can understand this issue again with the same example of imagining the whole physical world as a big ball. If nothing is around this ball, the concept of direction for it is meaningless. Similarly, the change in this *attribute* which is called spinning or angular motion, is also meaningless and immeasurable because we would not notice such a motion as there were nothing around this ball with which we can establish its angular relationship.

In short, direction is also a comparative relationship with other things. In other words, direction of a thing is not an absolute reality. What is absolute here is nothing other than the angular relationship among the things.

Moreover, the direction of the whole is strictly speaking different from the directions of its parts because the parts do not strictly have the same angular relationship with the surrounding things as the whole has.

3.1.4

One important meaning associated to every *physical thing* is the time at which that thing gets existence or the time at which some event happens to that thing. As we know, we get the understanding about the time of occurrence of a thing or event, when we relate this occurrence to that flow of time which we measure through units of time such as years, months, days, hours, minutes and seconds. We also know that we generate these units by dividing the duration of Earth's spinning motion and rotational motion around the Sun.

Thus the time of occurrence of an event is actually a relation of that event with the motions of the Earth. As we already mentioned that Earth's motion is selected because of its apparently eternal continuity and uniformity in the past and future. Other than this, there is nothing special in Earth's motion. Any motion can be selected for this purpose. In other

words, the time of occurrence is actually a relation of a thing with a motion.

Actually, every *physical thing*, including human beings, is in a state of continuous change or motion because of the presence of some such parts which are absent from each other and cannot co-exist as explained in Section 1.3.1. Since these parts are absent from each other and cannot co-exist, they get existence one after the other in such a manner that each subsequent part annihilates the previous one. This process appears to us as a continuous motion of the concerned *physical thing* itself. Such a motion is also among *sensed evidently true facts* as we commonly observe continuous changes in the *physical things*. A small plant grows to a big tree. A small kid grows to an adult man. Non-living bodies are also subject to a continuous change. This motion is known as *trans-substantial motion* in the philosophy of Mulla Sadra[13].

Apart from *trans-substantial motion*, motions may also occur in three *physical attributes* of continuous quantity, location, and direction. The motion from one location to another or changes in the quantity of a thing are experienced by us in our daily lives. Similarly, we also commonly observe the motions in the direction of the *physical things* which may be termed as *angular motion*. Angular motion is called spinning motion if it continues for many rotations as is the case with the spinning of the Earth.

However, no motion or change occurs in the *attribute* of the time of occurrence itself because any one single instant of time for a thing remains only that instant of time for that thing. No change can occur in that instant of time.

When these changes appear to our minds together as motions, our minds create a comparison of these changes and call it ‘time’. Thus time is a comparative measure of these changes or motions. Time is nothing other than this. The comparative

13 We will use the concept of Trans-substantial motion (Harkat-e-Johria) in a way somewhat different from the way Mulla Sadra expressed it in his writings. The name of the motion is, however, kept as it is.

motions of any two physical things may produce such a thing. Since there are many moving things around us, there may be many times for us. Most commonly known among all such times is the time produced due to comparison of different motions with those of the Earth. But the most primary time for adult human beings, among all these times, is normally the one which is produced due to human being's own *trans-substantial motion*. This primary time is normally produced in an adult human being due to the comparison of his immutable knowledge of his own self with his *trans-substantial motion*.

We as human beings are actually subject to a change of *differential form*, which creates an internal sense of time in us when compared to our immutable knowledge of our own self. This change is quite evident as the change of ideas in our psyche. This is the reason that even if we are totally disconnected from outside world, we feel a sense of the passage of time because even then the ideas are changing within our psyche. We can know such a change as an introspectively known *evidently true fact*.

If we were living in a state of absolute simultaneity in such a manner that nothing changes around and within us, there would not be any sense of time in us. Hence sense of time, whether primary or not, is actually the outcome of the comparative measure of motions, which we feel within us and around us.

In short, time of occurrence is not an absolute reality. What is absolute here is nothing other than the relationship of different motions with each other. Perhaps, this is the reason that simultaneity is also proved to be a relative concept by Einstein's theory of relativity. Simultaneity is relative because everything is moving on its own. We will discuss the issue of motion in Chapter 6 in more detail.

3.2

We have discussed the four *attributes* of the *physical things*. From the discussion of these four *attributes* we come to two conclusions. First conclusion is that all these *attributes* are relative rather than

absolute. What is absolute in them is only a comparative relation. In other words, they do not exist as they appear to us.

The second conclusion is that the *attributes* related to the whole have an existence different from the respective *attributes* of its parts. When the whole is considered, it has its own *attributes* and when a part is considered it has its own *attributes*. We have noticed that such a conclusion is not true for time of occurrence because the time of occurrence of the whole thing is not different from the time of occurrence of the parts.

The reason of this exception in the case of time of occurrence is that the existence of time is not in the external. Actually, unlike space the parts of time do not co-exist because its one part replaces the previous part. Each instant of time annihilates the previous instant. Thus the flow of instants in time cannot co-exist like the flow of points can co-exist to make a quantity like space. This is the reason that time does not have an existence external to our minds. The only thing proved in the external in this regard is the continuous motion which is separate for the whole and for each part. As is explained above, time comes into our minds only due to the comparative differences in the motions of different things including ourselves.

If we consider time with respect to the motion of each part and with respect to the motion of the whole, the time of occurrence of the whole and of each part also turns out to be a separate and different reality in each case.

Hence, we can re-write the above-mentioned two conclusions regarding the *physical attributes* in the following way:

1. The *physical attributes* are only comparative relationship rather than they exist as they appear to us.
2. The *physical attributes* related to the whole *physical thing* have an existence separate and different from the *physical attributes* of its parts.

The second conclusion is similar to the conclusion we arrived at regarding the *differential form* in the end of the previous chapter. Likewise, the following two questions again arise regarding this conclusion:

1. When a whole thing is broken down into pieces, why and where the *attributes* of the whole disappears?
2. When a whole thing comes into being, from where the *attributes* of the whole come?

Again these two questions may be turned into one question in the form as to what is the source of the *attributes* of the *physical things*. The parts cannot be this source as we have proved above that the *attributes* of the whole are separate realities from those of the parts. One may answer that the source of the *attributes* is the *last differential form* of the thing. But the *attributes* are attributed to the *last differential form* when it gets existence and not before this. If we only imagine the *last differential form* itself, the *attributes* are not required to be considered. In other words, *attributes* are not in the definition of the *last differential form*. Thus *last differential form* itself cannot be the source of these *attributes*.

Hence we have to maintain that the source of the physical *attributes* of a *physical thing* is nothing other than the *real existence* of the *physical things* because these *attributes* appear as soon as a thing gets existence and they disappear as soon as the thing loses existence. For example, when we break a table into pieces, all the *attributes* of the whole table are lost whereas the *attributes* of its pieces appear. This all analysis again strongly suggests that the existence of things is not merely a derived mental meaning because if it would be only a derived meaning, it cannot be the source of these *attributes*. It is, rather, an external reality although it is unseen.

Now we can maintain that the *real existence* of a thing not only includes the *real existence* of different layers of *differential form*s but also includes the *real existence* of the *attributes*. In other words, the *real existence* of a *physical thing* is an aggregate of the *real existences* of different layers of *differential form*s and its physical *attributes*.

From the discussion of this chapter and the previous one, some questions regarding the unity of the *physical things* arise especially in view of the fact that the quiddity and attributes of *physical things* have an existence additional to that of their parts. We will discuss the

unity of things in the next chapter in order to see whether there is a consistency in the conclusions we have yet arrived at.

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Chapter 4

AMBIGUITY OF UNITY IN PHYSICAL WORLD

4.1
We learned in Chapter 1 that everything has a unity. This means that every *physical thing* should also have a unity. Unity appears to be an evident fact in case of many of the *physical things* but in case of many other *physical things* the unity is difficult to find. The difficulties regarding the unity of the *physical things* are basically of two types.

1. The first kind of difficulties is concerning the unity of a thing with respect to what is within that thing

2. The second kind of difficulties is concerning the unity of a thing with respect to what is not within that thing i.e with respect to the things other than that thing.

4.2
The first kind of difficulty emerges when the thinkers try to find the source of unity in the meanings sensed by us in a *physical thing*. In chapter 2 we learned that each *physical thing* appears to us as a bundle of a lot of essential meanings which are collectively called its *quiddity*. Moreover, it is also learned in chapter 3 that every *physical thing* is also subject to a lot of *attributes* including the four physical *attributes*. Despite all these so many meanings, we consider every *physical thing* as one thing. The concept of unity is very evidently associated to every *physical thing*. Even in our languages, every thing is pronounced as one thing. But one has to face a lot of difficulties when he tries to find out the source of this unity.

It is difficult to find out the '*thing itself'* whose *quiddity* and *attributes* we are talking about? Which one meaning represents the 'thing itself'. One answer may consider the *last differential form* as the representative of the thing. Of course, we recognize the thing through its *last differential form*. But *last differential form* is itself a collection of a lot of meanings. In this way, the difficulty reappears. Thinkers and philosophers faced a lot of difficulties in finding that single meaning which can be considered as the source of unity in a *physical thing*[14].

But this problem regarding the source of unity can easily be solved when we admit that every *physical thing* has an unseen aspect in it which is its *real existence*. This *real existence* is actually the source of its unity because as soon as a thing gets existence, it gets unity and as soon as it loses existence, its unity is also lost. Some of the philosophers solved this problem through an unknowable substratum in every *physical thing*. This solution is, of course, compatible with our solution if the *real existence* is considered as that unknowable substratum. But this solution is rejected on the ground that if this substratum is unknown to us, it is not present for us. It is no doubt that the *real existence* of a *physical thing* is unseen and unfelt but we have the capacity to know at least that it exists in the external. We do not know how it appears but we are able to know that it exists.

Even if we admit that the *real existence* is the source of unity in a thing, many other confusions still appear to perplex our minds. We have learned in the previous chapters that the existence of the *last differential form* of a whole thing is separate from the existence of the *last differential forms* of its parts. If unity of a thing also emerges from the *real existence* of the thing, we have to admit that the whole thing should have a *unity* separate from the unities of its parts. But when we see different things in the world from this standpoint, sometimes confusions arise regarding the unity and existence of the *last differential form* of the whole and regarding its relation with the *last differential forms* of its parts.

14 This difficulty perplexed many of the modern philosophers in recent centuries. The traditional concept of substance is put forward as the source of the unity of the physical things. But the substance itself cannot be sensed. Ultimately, the modern associationist psychology and phenomenological metaphysics concluded that man himself creates a unity in the physical thing according to his own interests. Some arguments are given to substantiate this claim in Chapter 4 of Book 2 of Elements of Metaphysics by A.E. Taylor This view may also be correct as the unity is a mental concept but comes in our minds due to real existence which is in the world external to our minds.

4.2.1
For example one such confusion arises about the words like 'army', 'herd' etc. as to whether such things also have the existence of a *last differential form* separate from that of their parts or not.

4.2.2
The second confusion arises when we feel doubts regarding the existence of the *last differential form* of many of the things being separate from the existence of their parts. For example, it is hard to believe that a table or a car or a computer has an existence which is separate from the existence of its parts although it is comparatively easier to understand that *last differential form* of water has an existence and unity which is separate from the existence of the *last differential forms* of its constituents oxygen and hydrogen. Moreover, it is also easy to understand the unity and existence of the human *last differential form*, which is the human psyche, separate from the unity and existence of human body.

4.2.3
Apart from this we also get doubts regarding the unity of the *last differential forms* of many other things. For example, consider a house as one whole thing. If this house is demolished and turned into a pile of debris, should the pile be considered as one thing? If it is considered as one thing, it should also have the existence of a *last differential form* in addition to the existence of its parts according to the *principle of additional actualizing factor*. If it cannot be considered as one thing, the question arises: what is the criterion on the basis of which a house is considered as a thing and a pile not.?

Actually, such confusions arise because of the ignorance of the fact that the unity as well as existence in different *physical things* has different intensities. This fact is deduced from the definition of the *physical things* presented in section 1.3 from where we know that *physical things* are among those things that have unity as well as multiplicity. Moreover, the parts in the *physical things* are absent from each other. Due to these two factors, the intensity of unity in

the *physical things* reduces. This reduction is also not uniform because the multiplicity and the absence of the parts may be of different intensities. More the multiplicity and such absence will be in a thing, the less intensity of unity would be in that thing. This is the reason that the *physical things*, rather all the things having multiplicity, have different intensities of unity in them.

Actually, multiplicity and absence of parts are the essential features of the *physical things*. Absence is the *contradictory complement* of presence and presence has a synonymous meaning with existence. This would mean that absence represents nothingness. Since nothingness is nothing, the presence of absence in a thing means less intensity of existence in that thing. Hence, the existence has different degrees of intensities depending on the intensity of absence mixed with it. This concept which is known as *ambiguity in existence* is a basic feature of the philosophy of Mulla Sadra. Due to this ambiguity in existence, unity also has ambiguity in it because the concept of unity as well as that of existence emerges from the same reality i.e. from the *real existence*. This means that the intensity of existence or unity in a things may be of any degree because the factor of absence present in that thing may be of any degree. In other words, the *physical things* may have varying intensities of existence and unity depending on how much the factor of absence is present in them.

Due to this *ambiguity in unity* of the *physical things*, we observe that the unity of the parts is sometimes more intense than that of the whole. Sometimes, the unity of the whole is more intense than the parts. Sometimes the unity is so weak that we understand it only at the mental level.

We can categorize the *physical things* with respect to some evidently true facts regarding the situation of unity in them. Firstly, the *physical things* may be divided into two complementary categories; one category may be of the *physical things* with unity due to something existing in the world external to our minds, and the other category is of the *physical things* with unity not due to anything existing in the external world. Unity not due to anything existing in the external is thus only a mental determination.

The unities due to something existing in the external world may be divided into two further complementary categories when we also

include *partially physical and partially metaphysical things* in our discussion. The first category consists of the things whose *last differential form* is abstract from its body. For instance, *last differential form* of human beings is his psyche or soul which is abstract from the body. All other animals, which have a body-abstracted psyche, may also be included in this category. Such a unity may be called *body-abstracted unity*.

The second category is of the things whose *last differential form* is not abstract from the body. The unities of such things may be called *bodily unities*. They may have the *last differential form* of their parts existing either in *actuality* or in *potentiality*. For example, the parts of a car, such as engine, nuts, bolts etc. exist in *actuality* but further parts which can be made by breaking a nut for instance do not exist in *actuality*. Such broken parts of the nut exist only in *potentiality*. Thus the car has some parts, which exist in *actuality*, and some other parts, which exist only in *potentiality*.

To further understand the existence of parts in *potentiality*, consider one more example. A piece of rock, on which a sculptor works, has the *potentiality* of indefinite shapes of sculptures. All these shapes do not exist in *actuality* in the rock. It depends on the sculptor that what single shape he selects to make. Since a rock may be cut at indefinite number of different angles, indefinite number of parts may be made from a certain piece of rock or at least may be envisaged if cannot be made practically.

Similarly the parts of molecules, atoms, and the subatomic particles also exist only in *potentiality* rather than in an actual state. This is the reason that we cannot feel the *last differential form*s of parts in such things until the whole thing remains in existence. For example, the chemical as well as physical properties arising due to hydrogen atoms as well as oxygen atoms are not present in water. Thus we can say that hydrogen and oxygen are not the parts of water in actual state. They are present in water only potentially. They can be achieved from water only after the decomposition of water molecules i.e. when the unity of water molecule is lost.

These all categories of unities may be summarized in the following outline format and graphically in Figure 3:

1. Unities in the *physical things* and in *partially physical and partially metaphysical things*.

    1.1 Unities due to mental determination only;
    1.2 Unities due to something in the external;

        1.2.1 Body-abstracted unity;
        1.2.2 Bodily unity

            1.2.2.1 Unities with all parts in *actuality*;
            1.2.2.2 Unities with some parts in *actuality* and some in *potentiality;*
            1.2.2.3 Unities with all parts in *potentiality*.

All these categories have different intensities of unities. The things with *body-abstracted* unity have the strongest unity among these because, being abstract from the body, their *last differential form*s are abstract from the divisibility of space and may subject to only the divisibility of time. The things having parts in *potentiality* have the unity stronger than the things having parts in *actuality* because parts in *potentiality* do not affect the unity of the whole. Most of the *physical things* with well defined bodies fall in the category 1.2.2.2 because some of the parts of most of the *physical things* are in *actuality* and some are in *potentiality*.

Apart from the differences in the intensity of unity in these categories, there may be differences of unitary intensities in different kinds of things in each category too depending on the strength of bond among different parts. In short, different things have unities with different degrees of intensities.

4.3

After getting this division of the *physical things* into different categories according to different degrees of intensities of the unity, we are now better able to give the answer of the confusions mentioned above:

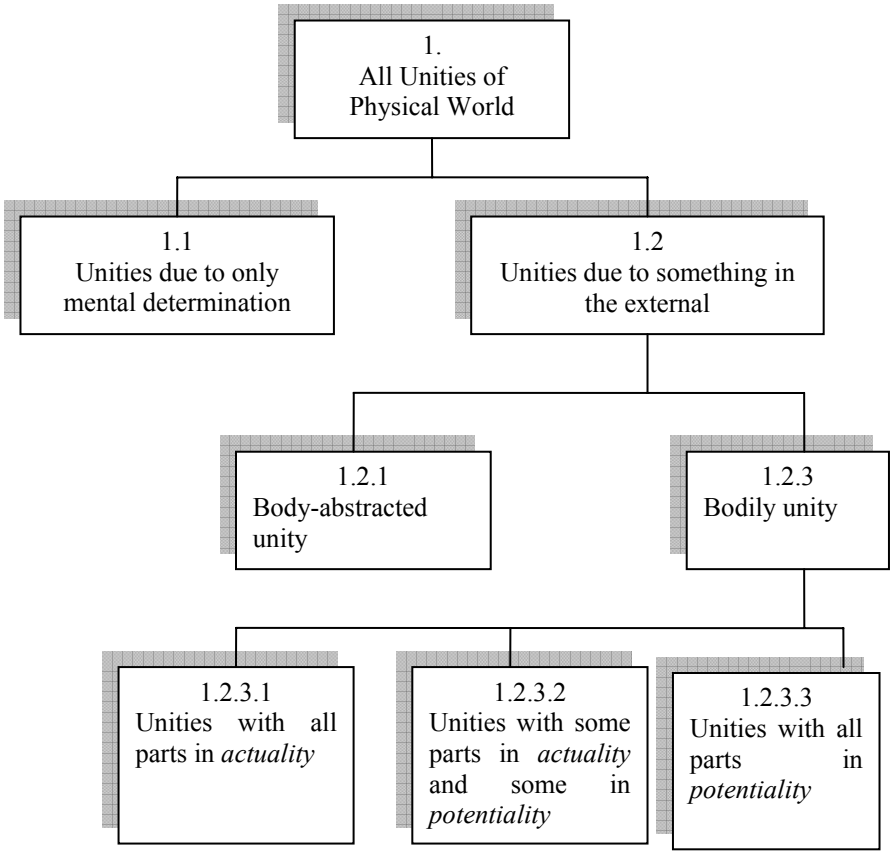

Fig. 3: Different kinds of logically possible Unities found in the Physical Things

4.3.1.
As far as the above-mentioned categories are concerned, the *things having unity due to only mental determination* have the weakest unity. The unity in the things represented by words like army and herd is actually determined by our minds only because the factor additional to the parts in these cases exists only at the mental level. The factor additional to the parts in the case of the army is the fact that the soldiers of the army

are related to a same central command. This relationship is understood only at the mental level. Similarly, the factor additional to the parts in case of herd is the shepherd's ownership which is again found as an understanding at the mental level. There is nothing in the external which represents the ownership of the individual sheep to a certain shepherd.

In short, the things like army and herd do not have any thing in the world external to our minds which is the cause of unity in them and thus also do not have any existence in the external world. Only the parts of such things i.e. soldiers or sheep exist in the external.

4.3.2
The things having parts in *actuality* have the weakest unity among the things with unities in the external. The things like car, computer and other machines are of this category because such things have many parts which exist in *actuality*. The unity in the things having parts in *actuality* is so weak that sometimes the unity of the parts is even more intense than the whole. In such cases, it becomes difficult to understand a unity and thus an existence of the whole separate from those of the parts. But in *actuality* some kind of existence and unity is always proved for the whole in this case too.

4.3.3
The difference between a house and the pile of debris is also due to the difference in the intensity of their unities. Since the parts of a house are attached to each other more strongly than those in the case of a pile, the unity in the house is more intense. But since the parts of the pile are also related to each other being placed in contact with each other in a certain fashion giving the pile a certain shape, there is some unity in the pile too. Thus pile also has an existence, *individuality* and unity additional to the existence of its parts although this unity is extremely weak. But since the unity of a house is more intense than the unity of a pile, the house appears to us as a full-fledged thing whereas we have doubts in accepting the pile as one thing. From here we can also conclude that the intensity of the unity of a thing may depend on the strength of

relationships among the parts because in this case relationship among the parts is the *additional actualizing factor*.

Here one may make an objection that every thing in the universe is after all related to each other in some manner. For example, every *physical thing* has a gravitational pull for the other thing no matter how small it may be. Moreover, everything has some kind of relationship of location and direction with every other thing. In such a perspective, one may say that the combination of any two things say 'A' and 'B' should also be considered as one thing.

This is correct that any combination of two or more than two things may be considered as one thing on the basis of a relationship among them. But a combination of weakly related things would have equally weak intensity of unity in it. This unity may be so weak that it only persists in our minds.

4.4

The second kind of difficulties which concerns the unity of a thing with respect to the things other than that thing mostly arises when we notice that the limits of the unity of many things are not clearly defined. For example, one may ask: what are the limits of the thing represented by the word 'car'? We can consider a car as one whole thing which consists of many parts. If any one small part of it such as its one of the back mirror is detached from it, its *last differential form* which is again the relational order among its parts, will change. Now the question arises whether the whole left behind is still a car or something else. Of course, we still call it a car. But this is also a fact that both the wholes are, strictly speaking, different from each other. The first whole has the back mirror in it but the second does not. But both are called a car. In other words, the confusion arises about the exact limits of the whole thing.

Such confusion is actually due to the constraints of our language. Strictly speaking, the car as one whole thing is changed whenever even a small thing is detached from it because the relational order among its parts is changed due to the detachment. But we use the same word for both the cases for our convenience. Thus the car with the back mirror has a *real existence* different from that of the car without the back mirror. But we use the same word for both the

existences mainly because the existences of the rest of the parts remain the same. Since the unity of the parts is more intense than that of the whole in this case, giving the same name to both the wholes seems appropriate because giving different names to such slightly changed wholes would create a jumble of different words in our languages.
Same is the case with the word 'earth' which we use in different meanings. Sometimes, earth means the aggregate of all the soils and rocks excluding the water bodies, air, plants, animals and man-made things. But when we consider the earth as a planet, it means the aggregate of all the sub-lunar things. But actually, both the aggregates have their own existences because in both the cases some kind of relations among the parts is established and this relation act as the additional actualizing factor. The confusion arises only due to the fact that we used the same word and do not use two different words for these two different existences.

Actually, we use the same word for many of the *physical things* with varying combinations of their parts. But this is the weakness of our languages. Otherwise, every different combination of the parts has a *real existence* different from other combinations even if some parts are common in both the combinations. But such confusions are usually more intense in those things where unity of the parts is more intense than the unity of the whole.

4.5
One more difficulty associated with the unity of the *physical things* arises due to the continuous motion or change of the *forms* of the things. According to modern science, the molecules in solids, liquids and gases are continuously vibrating or moving changing the shape of the *space-object* of the *physical thing*. The electrons in the atom are also continuously moving. Similarly, the electromagnetic waves between the molecules of a *physical thing* are also in a continuous motion. Moreover, these waves or the *space-object* is also continuously being absorbed or given out by different things. Due to such continuous changes, the meaning of unity associated with many things appears to be violated.

This difficulty arises due to the ignorance of the fact that the motion is an essential aspect of the *last differential form* of every *physical thing* as is explained in the previous chapter (Section 3.1.4). A

physical thing along with all of its changes is a unit because the changes are due to the presence of such absent parts which cannot co-exist. Hence the unity of the shape of a thing is not affected if the molecules in it are vibrating.

As far as, the changes due to the absorption or extraction of electromagnetic waves or *space-object* are concerned, the mixture of these things with other parts actually changes continuously. Such a mixture may have different *forms* at each instant of time and may be considered as one thing or a series of different things. But it never loses *existence* or *unity*. Here again the constraints of the language come into play as we cannot give different names to different *forms* arising at each instant of time. But this is a fact that at each instant of time, the whole thing has an *existence* and a *unity* no matter whatever the name we give to it. The only statement one can make is that we are using the same word for every emerging *form* at each instant of time in a *physical thing*.

In the same way, the unity of a man is not affected if his *psyche* changes with the change of his ideas. A certain man remains the same man even after such a change. Similarly, the unity of a plant is not affected if it is growing and getting bigger. A small plant is exactly the same plant even if it is grown up to a big tree. In all these changing *form*s, we sometimes use the same word in our language.

At this point, one objection may again be raised. If a certain plant has a certain *form* at an instant of time, it must have a *real existence* at that time but this *real existence* must be different from the *real existence* of the *form* when it is grown into a big tree. In view of such different *real existences*, how it can be maintained that it has the same *real existence*. This objection will be studied in detail in chapter 6 where the motion of the *physical things* will be analyzed. But before this we will inquire into the issue of the reality of the *real existence* from totally another angle in the next chapter.

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Chapter 5

INDIVIDUALITY OF THINGS IN PHYSICAL WORLD

5.1
We learned in chapter 1 that everything, in addition to having unity and existence, also has one more meaning which is called *individuality*. This means every *physical thing* must also have the meaning of *individuality* in it. The concept of *individuality* is proved on the basis of the law of non-contradiction when an existing thing is envisaged against its *contradictory complement*. For instance, consider a thing P. If all the things in the world are divided into P and its *contradictory complement* non-P, non-P will consist of all the things other than P whereas the other complement will consist of a single thing which is P itself. In such a case, all the things included in the complement of non-P cannot share the other complement which is P because the *law of non-contradiction* will not hold true otherwise. Even if we imagine a thing like P, it would fall into the complement of non-P as it is after all not P. Thus it is proved on the basis of the *law of non-contradiction* that everything has an aspect due to which that thing becomes an exclusive reality. Such an aspect cannot be shared by any other thing even in imagination. This is the aspect which is actually called the *individuality* of that thing.

5.2
In Chapter 1, it is also mentioned that the source of *individuality* of a thing is the *real existence* of that thing. Having learned about the *essential* and *attributive meanings* of the physical things in Chapter 2 and 3, it may possibly be thought that the *quiddity* instead of *real existence* is the source of *individuality* of the *physical things* because it is the *quiddity* through which we recognize a thing. But this apparently felt thought is not correct because the *quiddities* of the *physical things* are general meanings when they are considered in

themselves without having any existence. Here *generality* means that which does not prevent the sharing of others or which can at least be imagined to be shared by others. *Quiddity* becomes particular only after getting existence. It is sensed evidently that same aspects of a *quiddity* are usually found in many things. It is introspectively evident that we as human beings can imagine the *quiddity* of any *physical thing* without considering its existence.

Actually, when these *quiddities* are imagined considering them without any existence, many things may share them. For example, consider a *quiddity* Q. We can divide all the *physical things* in the world into two *contradictory categories* on the basis of this *quiddity*. One category will be the group of things having the *quiddity* Q and the other one will be the group of things not having the *quiddity* Q. The group of things having the *quiddity* Q may consist of more than one thing. Even if that group consists of a single member, we can at least imagine another thing having the *quiddity* Q in our minds and can include this imagined thing into that group without violating the law of non-contradiction because that imagined thing would also have the *quiddity* Q. This is the reason that all the *quiddities* and even their *attributes* are general when they are considered without any existence. They become particular only when they get existence.

For example, the cubic shape may be the *form* of a *physical thing*. But this shape may be the shape of many other things too. Thus it is general when it is considered in itself. It becomes particular only when a certain thing with a cubic shape actually exists. Similarly, the green color being an *attribute* of quality may also be the *attribute* of many things. Thus green color is a general aspect of a thing when it is considered in itself. It becomes particular only when it gets existence.

In the same way, all the meanings of *quiddity* and its *attributes* are general when they are considered in themselves because nothing prevents them from being shared by many things in this perspective. Even if a thing is unique in some aspect of *quiddity*, another thing having the same aspect may at least be imagined. Nothing prevents us from imagining such a thing. For instance, the Earth may be a unique planet in the world. But nothing prevents us to imagine another planet exactly identical to the Earth. It is also introspectively

evident that we have the capacity to associate any *quiddity* to any imagined thing in our mind.

In short, *quiddity* is a general concept as far as it is imagined and considered in itself without having any existence. It becomes particular only when it gets existence. In other words, it is the existence which protects the *quiddity* from generality and gives it a particularity. The *attributes* of a *physical thing*, like *quiddities*, are also general and become particular only after getting existence.

5.3
Now when it is clearly understood that *quiddities* are general, it may be maintained that *quiddity* of a thing cannot be the source of its *individuality* because generality is that which is shared by many whereas *individuality* is that which cannot be shared by any other thing even not in imagination. We elaborate this conclusion further with the help of examples.

Consider a thing with a spherical shape. This spherical shape cannot be the source of its *individuality* because many other things may be spherical in shape. Similarly, if a thing is at a temperature of say 20 C, this aspect of the thing can also not be the source of *individuality* because many things in the world may be at this temperature. In the same way, every aspect in the *quiddity* of a *physical thing* and its every *attribute* is general and thus cannot be the source of the *individuality* of things.

At this point, one may say that the *individuality* does not come from a single aspect of *quiddity* but comes from the aggregate of all of the essential and *attributive meanings* present in a thing. For instance, a man has a special face, a certain height, a certain skin color and many other distinguishing features. We identify the man on the basis of the aggregate of all these meanings.

5.4
But this view is also not correct because the aggregate of generalities is also general. Hence, the aggregate of *quiddities* and *attributive meanings* present in a thing must also be general. This is the reason that even if a man were produced through a cloning process, he would have the *individuality* totally different from the *individuality* of the original man despite the fact that they both would be exactly

identical. Actually, the concept of identity is here confused with the concept of *individuality*. Identity is totally different from *individuality*. Through the identity we can differentiate one thing from the other. But *individuality* is that exclusive aspect of a thing due to which no other thing can be that thing. Even if two things are exactly identical, they both have their own separate individualities. A thing may lose its identity but can never lose its *individuality* as far as it exists.

For example, consider two balls, which are perfectly identical or at least appears to be identical. Name the balls as A and B. Since these balls are perfectly identical, they may be identified from each other only on the basis of their different locations.

Now if the balls are intermingled with each other, say, by shaking them vigorously in a container, they will lose their identity. Now we cannot tell which ball is A and which one is B. Thus both balls have lost their identity into each other because both are identical. But the *individuality* of both the balls still survives. The ball A whichever it is, is still the ball A and the ball B is still the ball B. Thus identity is a relative aspect and may be lost. But the *individuality* is an absolute aspect of a thing and is not lost until the thing in question does not lose its existence.

Same is the case with many of the modern industrial products, which are produced identically. Each item of such products has its own *individuality* because each item is that item only. No other item can be that item no matter how much identical it may be with the first one. The same principle can also be applied to the molecules, atoms, sub-atomic particles and even to the energy waves like light and heat. Every molecule has its own *individuality* which is not shared by any other molecule even of the same kind. Every ray of light has its own *individuality* and its every photon has its own.

Here one can say that if the location and time is also included in the aggregate of *quiddity* and *attributes*, the two identical things cannot have the same location at the same time. Due to the differences in location and time, the aggregate of *quiddities* can never be general. This view is correct but a thing cannot get its *individuality* from the location or from the time of its occurrence. Here again the identity is confused with *individuality*. The identical things are identified from

each other on the basis of different locations at a certain time. If they occupy the same location, they can do so in different times. In such a case, they will be identified on the basis of different time of their occurrences. But the individualities of things cannot emerge from the location or from the time of occurrence because the same thing having the same *individuality* can occur at different times and can be located at different locations.

5.5

One more view about the source of *individuality* may be that the *individuality* of a thing may come from the *matter* of the things. For instance, one may say that the *individuality* of the balls in the above example comes from their *matter* because each ball has a different *matter*. But this view is also not correct.

If two things emerge from the same *matter* at different times they will have different individualities despite the fact that both have the same *matter*. For instance, consider a sphere which is formed from the plasticine at a certain time. Then at another time the same plasticine is turned into a cube. Now the *matter* of both the sphere and the cube is same but even then both have different individualities. Here again the identity is confused with the *individuality*. Actually, the difference of *matter* may be the source of identity but cannot be the source of *individuality*.

Those, who are not satisfied with the above example of cube and sphere, may consider the individualities of the body of a man and the food eaten by that man in his past life. We know that his body is developed by absorbing the food particles from all things eaten by him. Now can somebody claim that the *individuality* of his body is exactly the same *individuality* as those of milk, bread, meat and all those products that he ate in his past life? From here, we can easily conclude that *matter* can also not be the source of the *individuality* of a thing.

5.6

From all the above discussion, it can be maintained that the things are identified sometimes through *matter*, sometimes through aggregate of *quiddities*, sometimes through *attributes* and sometimes only through a location or time of occurrence. Actually, we identify

two things at the first instance through the differences of *quiddities* such as in *species*, *genus*, *differentia* or *form*. If two things are similar in these meanings, the difference in them can be identified through the differences in the *attributes* other than location or time of occurrence. If two things are similar in *quiddity* as well as in such *attributes*, they may be identified through differences in their locations or *matters* in case they co-exist. But in case they are located at the same place or are made of the same *matter* at different timings, they would be identified through the difference of their time of occurrence.

But all these factors are the bases for the identity of things and not for their *individuality*. Identity is that by virtue of which a thing is different from other things. But *individuality* is that by virtue of which a thing is *not* another thing. “To be not another thing” is a phrase totally different from the phrase “to be different from another thing”. Neither of the above-mentioned seen and felt factors is the source of the *individuality* of a thing.

5.7
Thus we have to admit that there must be an unseen aspect in every *physical thing* which is the source of *individuality* of that thing and which must be something other than its *quiddity* and *attributes*. When this aspect is neither *quiddity* nor *attributes*, it must be the *real existence* of the thing in question. This view proves correct because a thing gets its *individuality* as soon as it gets existence and its *individuality* always disappears with the disappearance of its existence. In the example of the two identical balls, if both the balls are smashed into powdered form and mixed into each other, the individualities as well as the existences of both the balls disappear simultaneously into the *individuality* and the existence of the powder. Hence, *existence* and *individuality* come and go together. Actually, they are the two different names of the same reality. The third name is *unity* as we learned in the first chapter and also in the previous chapter. Muslim philosophers Mulla Sadra and Al-Farabi also consider *real existence* as the source of the *individuality* of a thing.

5.8
At this stage, someone may put up an objection that the meaning of existence also has the same generality as the *quiddity* has. In other words, the meaning of existence is general when considered in the

mind and becomes particular when it exists externally. In such a case, it should also not be the source of the *individuality* as the *quiddity* is not. Answer to this objection lies in the fact that only the derived meaning of existence is general. As far as *real existence* itself is concerned, it is neither general nor particular. It is not general because it is a reality exclusively related to the thing in question. It is not particular because it exists by itself and not through anything additional to its own self. On the other hand, the *quiddity* is particularized not through its own self but only through the *real existence*.

It is introspectively evident for us that we, as human beings, are even unable to imagine a thing having the same *real existence* that is already owned by another thing existing in actuality. But we know introspectively that we are able to imagine a thing having the same *quiddity* or *attributes* that are owned by another thing existing in actuality. For instance, we can imagine a planet just like the Earth. We can imagine a house which is exactly like our own house.

In short, it is confirmed that the *real existence* is the source of *individuality* of the *physical things*. Reciprocally, this means that there is an unseen aspect in every *physical thing* which is its *real existence*. This is in line with the conclusions of the last three chapters which also concluded that the *real existence* is an objective reality. Let us see what we will conclude regarding this issue in the next chapter where we are going to analyze the motion and change in the *physical things*.

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Chapter 6

MOTION AND CHANGE IN PHYSICAL WORLD

6.1
We have yet analyzed the *physical things* considering them mainly in a static state by viewing the things cut in a x-section in the flow of time. But we know from Chapter 3 that the motion, or 'change' as it is commonly called, is also an important *attribute* of the *physical things*. In this chapter, we will analyze the motions in the *physical things* in order to inquire into the validity of our claim that the *real existence* in the *physical things* is an objective reality.

The motions in the *attributes* of continuous quantity, direction and location of a thing occur in our daily lives. We see them or feel them through our senses very evidently as is also explained in Chapter 3. Apart from the motions occurring in these three *attributes*, motions also occur in the *physical things* themselves as it is also the requirement of the definition of the *physical things* given in Section 1.3. Such a motion, which is known as *tans-substantial* motion, is sometimes evident through the changes occurring in the *last differential form* of a thing and sometimes not.

Although, even the living things appear stable instantaneously, *trans-substantial motion* is very evident when we imagine their full life spans. For instance, the *last differential form* of an animal changes throughout its lifespan from its birth to its death. A man moves from a tiny embryo to a well developed adult and ultimately turned into an old man. A plant grows from a seed and gradually moves to become a big tree. It is not right that motions in such cases occur only in the *attribute* of quantity. Motions also occur in the thing itself, as we can evidently see that the *differential form* of the newly born plant is totally different from the *differential form* of a tree. The *form* of the

newly born baby is totally different from that of the adult not only in his body but also in his psyche.

The *trans-substantial motions* also occur in the visible non-living *physical things* too. For example, consider the boundary conditions of a cube. According to molecular theory, not only its boundary but also its interior is continuously changing due to the continuous vibrations of the molecules changing the shape of the *space-object* of the cube. Thus the *last differential form* of the cube itself is continuously changing. It is only apparently stable.

The things recognized through the *non-shape forms* also change continuously as a thing at a certain time t1 is not the same as it is at another time t2, although, their *forms* do not appear to change. Moreover, changes due to the molecular, atomic and electronic motions and due to the continuous absorption and giving off of the energy waves also occur in the bodies of such things.

The *form*s of molecules and atoms themselves are also changing continuously due to the electronic motions within an atom. Motions in the *form*s of the sub-atomic particles are also not hidden from the modern particle physicists. The spatial motion is also the essential aspect of the *differential form* of the energy and other waves.

In short, four types of motions may be associated to the *physical things* at the level of their existence. The first is the motion in the *attribute* of location. This may be termed as *spatial* motion. The second is in the *attribute* of direction and may be termed as the *angular motion* The third is in the *attribute* of continuous quantity and may be termed as *quantitative* motion. The fourth is the motion in the thing itself which is known as *trans-substantial motion* as is also mentioned in Chapter 3. Some of the motions or changes in the physical things may be of types other than these four. For instance, the ownership of a thing may change from one person to another. But such changes are not directly related to the existence of the *physical things* and are thus out of the scope of this study which is related to the reality or existence of the *physical things*.

Moreover, motion in some meanings is the outcome of the above-mentioned four basic motions. For instance, the motion in the

quality[15] is considered by the modern science as the outcome of the molecular *spatial motions* and interactions. Hence, we can conclude that there are four kinds of basic motions related to the existence of the *physical things*.

6.2

After finding out that there are four kinds of basic motions associated to the *physical things*, we can now try to find out some essential facts about the motion.

6.2.1

The first fact which we can identify about the motion is that it consists of a series of different states of meanings. We can evidently feel that a moving *physical thing* passes through different states of its meanings during its motion. Each state of meaning is different from the next meaning. The sense of difference is present in our minds on the basis of the law of non-contradiction. We can differentiate one state or limit of a meaning with another state on the basis of this law. When a change of state occurs in a thing, we say that it is moving. For example, we see the changes in the locations of a thing. We can differentiate one location from the other on the basis of the law of non-contradiction. On the same lines changes occur in the things themselves as well as in their meanings of quantity and direction.

6.2.2

The second fact about the motion is that each subsequent state of a meaning is potential at an instant when the thing has a certain state of meaning in *actuality*. For example, the thing at a certain location A has only the *potentiality* of the next location say B. This fact may also evidently be noticed.

6.2.3.

The third fact we can notice about the motion is that it is always continuous. Since a *physical thing* cannot exist without its *form* and spatial *attributes*, the motion in these meanings cannot be discontinuous. If motion were

15 According to Mulla Sadra, motion also occurs in the attribute of quality. Contrary to Sadra's view, we exclude such a motion here because we do not consider the attribute of quality as a physical attribute.

discontinuous, the moving thing would be without any state of a meaning in which the motion occurs at some instant of time. Such a case is impossible because a *physical thing* cannot be devoid of the meanings of quantity, location or direction. The thing can also not be devoid of its *form* at any instant. Discontinuity in these meanings for a *physical thing* would mean that the thing has to be recreated in the subsequent instant after being extinguished in the previous one.

6.3

After identifying these essential facts about the motion, we are now in a position to define it. On the basis of these findings, we can say that a thing is said to be in 'motion' when different states of meanings potential in it, are actualized one after the other continuously. Or we can say that a motion or change is the actualization of different potential states of a meaning in a thing in a continuous series.

From this definition, we can notice that, motion can occur only in those things in which some aspects are in *actuality* and some are in *potentiality*. Such things are only the *physical things* because they are actualized as well as have some *potentiality* due to the absence of their parts from each other as explained in Section 2.3.1. Hence, motion occurs only in the *physical things*. Neither the things with full *actuality* nor the things with full *potentiality* can have any motion.

The *metaphysical things* whose parts are not absent from each other as defined in Section 1.3 cannot have any *potentiality* and thus cannot have any motion. Similarly, motion is also not possible for the *prime matter* which is totally potential and does not have any aspect of *actuality*. It only acts as a kind of a canvas on which the motion of different *forms* occurs. *Prime matter* is an essential requirement of all the *physical things* and is an expression of the fact that all the *physical things* are changeable and movable. But it is itself not a changeable or moveable thing.

Human soul considered for an instant is metaphysical but is physical when considered in the flow of time as is also mentioned in Section 1.3. This is the reason that it also moves during this flow.

6.4

After establishing that every motion is a continuous actualization of the potential states of a meaning, we can notice some contradictions in our concept of the motion of the *physical things*.

6.4.1

The first such contradiction may be expressed as follows:

Since the motion is continuous, it must also be indefinitely divisible. This means that its each part is also divisible no matter how small it may be. We also know that its parts cannot co-exist as one part is the extermination of the previous part. In other words, its each part exists after the other one has passed away. In such a case, if we consider any one existing part of the motion, the question arises whether this part is divisible or not. Since no part of the motion can be indivisible, this part should also be divisible. Now if it is divisible, its one part should also exist before or after its other parts. This would amount to say that the originally considered part has not yet existed completely. This conclusion would also be valid for any considered part of the motion. This means that no part of the motion can exist completely because each part is divisible. If it were true, this would mean that the thing cannot have any state of the meaning in which that thing is moving. For example this would mean that a thing would not have any location during its whole spatial motion. But no *physical thing* can be without a location as location is the *physical attribute* of all the *physical things*. Thus when we analyze the motion, we end up into the conclusions, which are totally self-contradictory. The paradoxes of Zeno of Elea are also the result of such contradictions.

6.4.2

The second contradiction, which may arise on the motion of the *physical things*, is that the different states of meanings through which a thing passes, are present in the motion in

such a manner that one state is connected to the next one. But such connection is not possible according to a principle which may be termed as the *principle of impossibility of connectivity of instants*. According to this principle, in the entities like time and motion whose one part cannot exist with the other, no two instants of such entities can touch each other because the quantity between any two such instants, no matter how small it may be, is always divisible as is the case with all the continuous quantities. There must be some quantity of such an entity between any two instants no matter how close they are. In other words, two instants in the flow of motion or time cannot touch each other.

This contradiction may better be explained through the example of a growing plant. Consider the motion of *form*s in the development of a plant. A plant grows from the seed to a big tree after passing through a series of *form*s. At each instant of time during this period, plant must have a *form* otherwise we have to admit that the plant disappears at some instant. Since at no instant of *time*, plant is without any *form*, we also have to admit that each *form* is connected to the next *form*. But according to the principle of the impossibility of the connectivity of different instants, no two *forms* can touch each other. How this contradiction can be solved?

6.4.3

The third contradiction is as follows: If the moving meanings would have an external reality, an indefinite number of such meanings would be present between any two points of the motion. But this is impossible as indefinite number of things cannot exist within two limits.

For example, consider a spatial motion of a thing. When that thing moves from one point of space to another, it makes a line. If we consider this thing to be at a point say A on this line, it has the location at A. At another instant, this thing may be at another point B. Since there may be indefinite number of such points on the line between A and B, the presence of indefinite number of locations will be proved for the thing during its motion from A to B. This would amount

to say that an indefinite number of locations are proved between two limits and this is impossible.

6.5
These three contradictions show that there is some falsity in our understanding of the motion. The source of this falsity is that we understand the motion as the sum of different states of a meaning. But in *actuality* this is not true. A motion is, rather, a single continuously changing unit in which different states of meanings are only potentially present. These states of meanings can be understood by our minds only when we put an assumed limit in the process of motion. In other words, motion is not constituted by different instants. Rather, motion occurs in one whole durational unit.

Thus in a spatial motion for example, the existence of only one continuous durational unit of different locations has to be admitted for the thing during the whole of its motion from one location to another. So whenever a motion occurs, it occurs in a single continuous durational unit rather than as a sum of different instantaneous units. Now we can understand easily that during the motion of a thing, different states of meanings are not associated to it one after the other. Rather one continuous durational unit of changing states of meanings is associated to the thing. The instantaneous states of meanings exist only in *potentiality*. They exist only in our minds when we consider the state of meaning of a thing at a certain instant of time during its motion.

6.6
Since in the case of *trans-substantial motion*, the *physical thing* is itself in motion, we have to admit that the *physical thing* itself occurs in a whole durational unit rather than instant by instant. This means that the source of motion and the moving thing must be some aspect other than instants. What aspect of the *physical things* it may be? This aspect cannot be other than the *real existence* of the *physical things* because *trans-substantial motion* appears to start as soon as a *physical thing* gets existence and appears to end only when the thing in question loses existence. This answer is same as is in Chapter 2 for the source of the *last differential form* and as is in Chapter 3 for the source of the *physical attributes*. In short, the above mentioned conclusion regarding the *trans-substantial motion* proves that every

physical thing has an unseen and unfelt aspect which is its *real existence* and which is spread in the whole duration of the lifespan of that thing.

6.7
As far as the motion in three *attributes* is concerned, a similar conclusion may be drawn for their case too. Since the attributive motion also does not consist of the instants, its source must also be the *real existence* of the *physical thing* as is the case with *trans-substantial motion*. Here one objection may be raised. This objection arises due to the fact that the case of attributive motion is different from the *trans-substantial motion* in occurring intermittently. The *trans-substantial motion* of a thing is one unit which continues for the whole of the lifespan of the thing and is thus can be related to the *real existence* of the moving thing. On the other hand, attributive motions do not usually continue for the whole of the lifespan of the thing[16]. Rather, it usually occurs intermittently. There may be many units of attributive motions during the lifespan of a *physical thing* along with many states of rest between them as we commonly observe. In such a state of affairs, how we can relate these different motions and the states of rest to one *real existence* of the moving thing?

Actually, the *attributes* of location, direction, and quantity are associated to a thing when it gets existence. This is the reason that the changes in them should be the result of something at the level of existence. As far as the different states of motions and rest of a single thing are concerned, they may be envisaged collectively as one chain of changes or as one total motion because any such two consecutive states are connected to each other forming a whole one unit of total motion because the states of motion or rest neither have a beginning nor any end.

6.7.1
To understand how the states of motion or rest neither have a beginning nor any end, consider a ball which starts its motion from a state of rest. The very last instant of time when this

16 The spatial and angular motions of planets and many of other celestial bodies are usually not intermittent. However, the case with the continuous spatial motion of electromagnetic and many other kinds of such waves is totally different. Actually, their spatial motion is included in their essential meanings because whenever we consider electromagnetic waves, we have to consider them in motion. In other words, spatial motion in case of such waves is not their attributive motion.

ball is at its state of rest may be called instant A. Similarly, the very first instant at which this ball is said to be in a state of motion may be termed as instant B. What is the state of the ball during the time between these two instants? Is it in a state of rest or in a state of motion?. It cannot be said that the instants A and B are connected as it is against *the principle of the impossibility of the connectivity of instants*. Thus there must be some duration between these two instants. It also cannot be claimed that the ball is in both states at one instant as it is against the *law of non-contradiction* because we have to then admit that the ball is moving as well as at rest at this instant.

A common instant of time can also not be possible on the one side of which the ball is at rest and the other side of which the ball is moving as we see the common lines between two surfaces in space. Actually, such common limit is possible only in case of space whose parts can co-exist. But such common limit is not possible in the flow of time because different parts of time cannot co-exist. Each instant of time is the extermination of the other. Therefore, it has to be concluded that there is no beginning for a certain motion and exactly in the same way there is also no end for it. Similarly, there is also no beginning and end for the state of rest which is found between any two motions.

In such a state of affairs, we have to admit that the chain of all states of rest and motions are connected with each other in such a manner that there is only one continuous durational unit of the total motion during the whole lifespan of a thing. The source of this total non-uniform motion is the real existence of the moving thing in the same way as it is also the source of its *trans-substantial motion*.

6.8

At this stage, one may say that we evidently know that *physical events* also occur in the lifespan of a thing and they are also logically possible as proved in Section 1.3. During the life spans of continuously moving *physical things*, how such events take place. Actually, there are different ways in which the physical events or things may occur. We can divide all the *physical things* and *events*

into two *contradictory categories* with respect to their instantaneous or non-instantaneous occurrence.

They may occur either instantly or not instantly. The non-instantaneous events or things can be divided into further two *contradictory categories* one of which may be gradually occurring events or things and the other may be non-gradually occurring events or things. Thus there are the following ways in which a physical event or thing occurs in time:

1.1 Instantaneous events or things;
1.2 Non-instantaneous events or things;
    1.2.1 Gradual events or things;
    1.2.2 Non-instantaneous non-gradual events or things;

The touching of the two surfaces with each other for an instant is the example of the category 1.1. Motion is among the category 1.2.1. The extermination of the instantly produced events is the example of the category 1.2.2. These different kinds of events/things are connected to each other to form the total motion in such a manner that two *instantaneous events* cannot combine with each other as it is against the *principle of the impossibility of the connectivity of instants*. Whenever an *instantaneous event* occurs it is preceded and followed by either a *non-instantaneous non-gradual* occurrence or a gradual thing. In this way all the changes in a thing are integrated into one total non-uniform motion of a thing. In this way it is proved that a *physical thing* is subject to one total non-uniform motion in each *attribute* and the source of each total motion is the *real existence* rather than the instants during the motion.

But the total non-uniform motion of a thing is also not the only thing to be considered as one unit. Rather whole of the cosmic motion proves to be one unit as every motion has neither a beginning nor an end and this requires that everything's coming into existence should also not have any beginning. Similarly, everything's losing existence should also not have any end. This means that whole of the physical cosmos also turns out to be one unit and is subject to one big *cosmic motion*. This *cosmic motion* integrates all the motions of all the physical things. Only the *trans-substantial motions* of *psyches* are beyond it. For instance, the *trans-substantial motion* of the human

psyche is beyond this *cosmic motion* and is the cause of the sense of our *primary time* as explained in Section 3.1.4.

6.9
There is one more issue in which the attributive motion is different from the *trans-substantial motion* and this issue should be understood clearly so that it would not cause any confusion. A *physical thing* moving in an *attribute* may be subject to different intensities of motion with respect to different things at the same time. Since *attributes* are comparative relations, their motions should also be comparative to the *attributes* of other things. This is the reason that a thing, for instance, may be spatially at rest with respect to another thing but may be at the same time moving with respect to some other thing. This means that a moving thing is subject to different kinds of parallel changing comparative relations in the *attributive meanings* at the same time.

But such is not the case with *trans-substantial motion*. It is not the motion of comparative relations and is thus not associated to the thing in different ways with respect to different things. Every *physical thing* is subject to *trans-substantial motion* on its own.

In case of attributive motions, the total chain of attributive motion may consist of multiple units of motions running in parallel. At this, the objection arises: how the *real existence* may be the source of these multiple parallel motions. The answer to this objection lies in the fact that existence of the *essential meanings* is essential and that of the *attributive meanings* is attributive to the essential existence of the essential meanings. As the *essential meanings* of a thing are the meanings required to consider that thing and all other meanings are *attributive*, the *real existence* of the *essential meanings* is also the essential *real existence* of that thing and the *real existence* of its *attributive meanings* is only attributive to that essential *real existence*. This *real existence* of the *attributive meanings* may be of different comparative relations with respect to different things around the thing in question. This is the reason that attributive motion of a *physical thing* may have different degrees of intensities with respect to different things around it contrary to the case with *trans-substantial motion*. But the source of the attributive motions cannot be other than *real existence* as is also the case with *trans-substantial motion*.

The results of Morley-Michelson experiment[17] in 1887 are also in conformity with the above explanation. This experiment shows that the spatial motion of electromagnetic waves remains constant for all the other *physical things* without any regard to the fact that those other things are moving towards or away from the source of electromagnetic waves. Keeping in view the above explanation, the reason for the results of Morley-Michelson experiment is very easy to understand. Since the spatial motion of electromagnetic waves is in their *essential meanings*, it remains constant for all the other physical things. If this motion were in the *attributive meanings* of electromagnetic waves, it would change with the changes in the motion of the other things.

6.10
All the above-mentioned analysis shows that the source of all the four kinds of motions is the *real existence* of the moving thing. Since the source of the *trans-substantial motion* is *real existence* and the whole of the *trans-substantial motion* of a thing is one unit, it may be concluded that a *physical thing* is one unit of *real existence* from the start to the end of its *trans-substantial motion*. In other words, the *real existence* of the *physical thing* completes gradually during its lifespan and the motions are the outcome of this graduation.

This gradually completing *real existence* is not only the source of *trans-substantial motions* but also the source of the motions in the *attributes* of the *physical things*. Since the *attributes* of a *physical thing* appear as necessary outcomes when its *differential form* gets existence, the changes in *attributes* is also the outcome of this gradual existence. In short, the whole lifespan of a *physical thing* is one unit of *real existence*, which completes gradually. In other words, during all the motions of a thing, its *real existence* remains unchanged. It is only completed gradually in such a manner that it appears to us that thing is in motion.

This continuous graduation of existence may also be considered to be the source of the motions of molecular, atomic and sub-atomic particles envisaged by the theories of the modern particle physics.

17 The results of this experiment later became the basis for Einstein's theory of relativity in early twentieth century: a theory which proved the relativity of time and space in more clearly understandable quantitative terms.

The growth of plants and animals also appears to us due to this graduation. The actions and motions of the animals, be it deep into the sea or on the earth surface, appear to our minds as the result of the graduation in their respective *real existences*. Similarly, this graduation may also be considered to be the source of the *angular* and *spatial* motions in the celestial bodies such as stars, planets and meteors. On the same line, the motions of electromagnetic waves etc. or *internal motion*[18] of the *space-object* are also due to the continuous gradual completion in their *real existences*. In short, graduation is a necessary aspect of the existence of the *physical things*.

But why the existence of a *physical thing* completes gradually. It is because it is attached to the *prime matter* which is the weakest level of existence and thus does not have the capacity to accommodate the total existence simultaneously. Due to this intrinsic weakness, the things actualizing in it cannot complete except in a gradual way.

Like in Chapter 2, 3, and 5, in this chapter too we have concluded that *quiddity* including the *quiddity* of the motions is only in our minds while the *real existence* is the actual reality of the *physical things*. In this chapter, we also happened to learn that the *real existence* of the *physical things* completes gradually.

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18 Internal motion of the space-object is the change of space-object resulted due to the motion of physical things in touch with it as explained in Section 3.1.1

Chapter 7

KNOWLEDGE AND PHYSICAL WORLD

7.1
In some of the previous chapters we learned that *quiddities* associated with the *physical things* are only appearances and do not exist when they are considered in themselves. What actually exists in a thing is only its *real existence* from which we get the meanings of *quiddity* in our minds. We proved that *quiddities* do not have any reality if considered in themselves by proving that the *real existence* of things is the actual reality. In this chapter, we will analyze the knowledge of the *physical things* in order to see whether the *quiddities* of these things are only appearances in our minds or they do exist in the world external to our minds exactly as they appear to us.

7.2
Before starting this analysis, it has to be taken into account that here the word 'knowledge' is taken as a mental occurrence notwithstanding the fact whether such a mental occurrence is true or false, whether it is verifiable or not. Since we are concerned only with the knowledge of different things, we will consider only such mental occurrences which are regarding different things. We will not go into the details of those mental occurrences which happen due to our emotions, desires etc. such as the mental occurrences related to fear, love and rage. Such emotional mental states, though, may affect the knowledge of things but are themselves not knowledge of anything.

If we try to define knowledge we come to the conclusion that knowledge cannot be defined because like existence it is also the kind of entity on which no limit can be put. Its definition through a more famous word is also not appropriate because no other concept or word having this meaning is more apparent and famous than knowledge itself. It is the knowledge through which we know a thing. If we want to know knowledge itself, nothing is left beyond knowledge through which we can know it. We cannot therefore know or define knowledge through words or meanings other than knowledge itself. Due to these reasons, knowledge is also one of the evident concepts, which neither can be defined nor need definition. Everybody knows the meaning of knowledge evidently in his mind.

7.3

Although, we cannot define knowledge, we can understand some realities about it. The first reality is that at the time of knowing we feel to have something as a mental occurrence. This feeling is introspectively evident and is thus not required to be proved.

The second reality is that the knowledge is an actual existence. If we admit that knowledge is not an existence, it would amount to say that knowledge is nothingness. If knowledge is nothingness, it is meaningless to say that we have something at the time of knowing something because what we have is nothing. Since we know evidently that we have something at the time of getting knowledge, knowledge must be some kind of existence.

7.4

In order to understand knowledge more comprehensively, it would be better to categorize all the mental occurrences arising within us regarding different things. We can evidently notice that some of our mental occurrences are associated to some of the *physical attributes* of *physical things* whereas some other mental occurrences are not associated to any of such *attributes*. For instance, when we see a chair, the percept of the chair has the *attributes* of quantity, location, time of occurrence, direction etc. On the other hand, the knowledge of the formula of a circle is not associated with any of such *physical attributes*. It is not located anywhere. It does not have any quantity or direction etc..

On the basis of these considerations, we can divide mental occurrences regarding different things into two broad *contradictory categories* arising from its association with some of the *physical attributes* of the *physical things*. One category is that in which the mental occurrences are associated to some of the *physical attributes* of the *physical things* and the other category is that in which the mental occurrences are not associated to any of the *attributes* of the *physical things*.

When we consider the mental occurrences with some of the *physical attributes*, we can also notice that sometimes the sense organs are required to be stimulated by the thing causing the mental occurrence either directly or through something emanating from the thing causing the mental occurrences. Such is the case when we know a *physical thing* as the result of the stimulation of our sense organs. But sometimes there is no requirement of stimulating the sense organs as it happens when we imagine a thing. Thus the mental occurrences associated to some of the *attributes* of the *physical things* may further be categorized in two contradictory sub-categories.

Keeping in view all these categories, mental occurrences regarding different things may be divided into the following *contradictory categories*:

1. All mental occurrences regarding different things.
1.1 Mental Occurrences which is not associated to any of the *physical attributes* of the *physical things*. This category may be termed as the *intellectual knowledge*.
1.2 Mental Occurrences which is associated to some of the *physical attributes* of the *physical things*;
    1.2.1 Mental occurrences which are associated to some of the *physical attributes* but the sense organs are not required to be stimulated. This is called the *imagined knowledge*. It is the knowledge which we get through our imagination.
    1.2.2 Mental occurrences which are associated to the *physical attributes* and the sense organs are required to be stimulated. This is called the *sensed knowledge*. This is the knowledge which we get through our sense organs.

All these categories are shown graphically in Fig. 4.

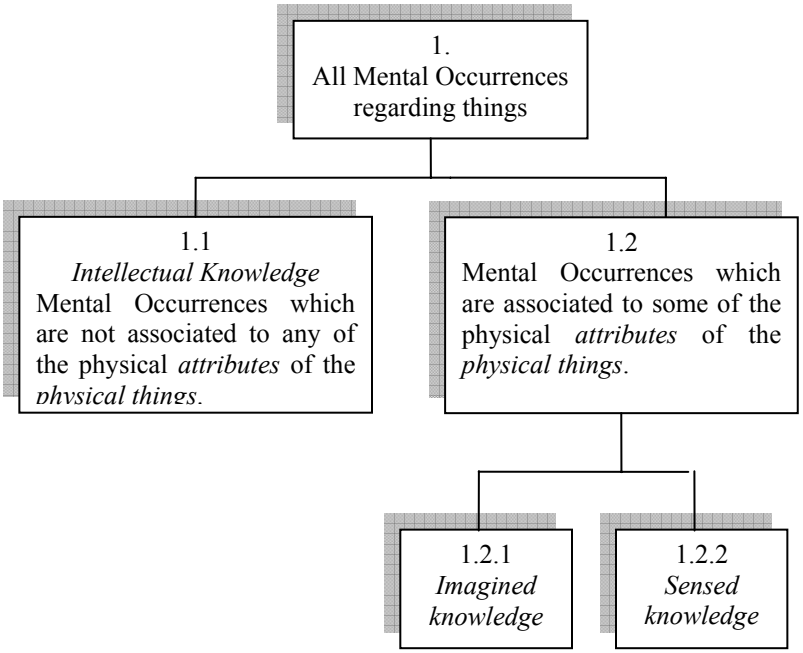

Fig. 4: Different kinds of logically possible mental occurrences regarding things.

From this analysis, we can conclude that human knowledge of things is of the following three types:

1. *Intellectual knowledge*;
2. *Imagined knowledge*;
3. *Sensed knowledge*;

These three kinds of knowledge will be discussed one by one in the following sections:

7.4.1
From the definition of the *intellectual knowledge* it follows that we get the *intellectual knowledge* when all the *physical*

attributes are abstracted from the known thing. For example, when we abstract the *attributes* of quantities, location, direction, time of occurrence etc. from the meaning of 'man', what we get from this meaning after abstraction, is the *intellectual knowledge* of 'man'. After such abstraction, this meaning is equally applicable to every individual of mankind.

For example, we know general rules about man's bodily parts. We also know the general rules regarding man's psychological and sociological nature etc. Such knowledge is discussed systematically in detail in the subjects of medical and social sciences. *Intellectual knowledge* about other *physical things* is studied in other physical sciences. All such kind of knowledge is general only, though, these subjects may use particular cases to elaborate the general principles. The professionals like designers, architects, scientists, sociologists, psychologists etc. use this kind of knowledge to apply on particular cases. Statistical procedures are used to find out the probability of the validity of the knowledge of these subjects as most of such knowledge is derived from inductive inferences which may be probable rather than certain.

Thus the knowledge of general *quiddities* and relations among them falls in this category of knowledge. Apart from this, the knowledge of the meanings like existence, unity, generality, *actuality*, *potentiality* etc. is also among this category as such meanings also does not have any physical *attributes*. These all have an existence which is only in our minds and are totally abstract from the physical *attributes*. It appears that there is nothing like them in the world external to our minds. Such an existence which is only in our minds is called *mental existence* as explained in Chapter 1. Hence, it can be maintained that *intellectual knowledge,* as described above, has only a *mental existence*.

At this point an objection arises on the knowledge of indefinite[19] entities such as numbers. Being abstract from the

19 We used the word 'indefinite' here instead of the word 'infinite' which is commonly used by many modern writers. In our opinion, the word 'infinite' means that which does not have any limitation. The entities like numbers, space and time being limited to their quiddity cannot be infinite no matter how indefinite they may be in their extension.

physical *attributes* of the *physical things*, such knowledge should be *intellectual knowledge*. The question arises: how such knowledge of indefinite entities can have an existence in our limited minds. Actually, the concept of indefinite entities is only a concept which we imagine as one unit otherwise there is no such indefinitude in *actuality* in the mind. For example, we can count the number up to a very large extent or we can have knowledge of an extremely large number. But this extent or extreme can never be indefinite. We have to after all stop somewhere due to our own physical limitations. It is only a concept that numbers can extend up to indefinite. As a concept it is just one unit concept and thus can have a *mental existence*. In the same way, the knowledge of other indefinite entities may have their own *mental existences*.

Similarly, we can also have the knowledge of the impossibilities by assigning a title to an impossible thing or event. For example, the 'square circle' is a title to an impossible figure which cannot be produced. We can have an *intellectual knowledge* of such impossibility with this title. Such knowledge can have a *mental existence*, though there can be no such thing in the external.

Since the *physical attributes* of a *physical thing* emerge in that thing because of the absence of its parts from each other, these *attributes* may be considered to be the representatives of absence found in the existence of that *physical thing*. Absence is the *contradictory complement* of presence and presence has a synonymous meaning with existence. This would mean that 'absent' is that which does not exist or we can say that absence and nothingness are synonymous. This means that the *intellectual knowledge*, being abstract from the *physical attributes*, is also abstract from the nothingness inherent in the *matter* of the *physical things*.

7.4.2

Imagined knowledge is that knowledge in which the mental occurrence is not totally abstract from the *physical attributes* but the sense organs of the knower are not required to be stimulated. For example if we imagine a horse in our minds, the imagination of that horse is the *imagined knowledge*

which we acquire without the requirement of the stimulation of any of our sense organs. This horse may have some *attributes* of quantity, location and direction in the scene imagined by our mind.

Dreams also come under the category of *imagined knowledge* because they happen without any requirement of the sense stimulation. Knowledge of our physical experiences stored in our memory also belongs to this category of knowledge. We use our memory to know or estimate about that part of the physical world which cannot be sensed. For instance, we can imagine during the day time that there are a lot of stars in the sky even if we cannot see them at that time due to sunshine. Sometimes, we are sitting in a room and may see only its walls and roof. But with the help of imagination, we may know what is outside that room if we have experience of that. We also use this kind of knowledge to know the *physical things* which are not directly visible such as molecules, atoms and sub-atomic particles.

The knowledge of potentialities present in a physical thing is also through imagined knowledge. Hence, the concept of *prime matter* also exists in imagination.

Since stimulation of the sense organs by the known is not required, it is easier to understand that the existence of this kind of knowledge must also be only in the mind. In other words, it also has only a *mental existence*.

It is an introspective evidently true fact that imagined things do not need any space of the physical world. Hence, they are abstract from *spatial attributes* of the physical world. This is the reason that the *imagined knowledge* is also abstract from the factors of nothingness inherent in *matter*. But its abstraction from nothingness is less than that of *intellectual knowledge* as it is subject to the *temporal attributes*. It is because time after all passes for an imagined thing too. With the passage of time the imaginations in our minds change. Such is not the case with *intellectual knowledge*. For instance, i*ntellectual knowledge* of the formula of a circle cannot

change. The *intellectual knowledge* of 'man' cannot take another *form*.

The *mental existence* of the *intellectual* and *imagined knowledge* is easier to understand. But the question arises about the *sensed knowledge* whether it has an existence external to our minds or only a *mental existence*.

7.4.3

As far as the existence of *sensed knowledge* is concerned, it may be concluded that *sensed knowledge* is also abstract from the factors of nothingness inherent in *matter* and has only a mental existence. It is because whenever we get some knowledge of a *physical thing* through senses, we get only the sensation of that thing rather than the thing itself. For example, when we taste a sweet thing, we only get the sensation of sweetness in our psyche rather than the sweetness itself. If we get the sweetness itself, our tongue should also become sweet at this time for another person. In the same manner, when we see say a blue color thing, only the sensation of blue color comes into our eyes rather than the blue color itself. If we got the blue color itself, our eyes would have turned blue at the time of getting this knowledge.

We can consider some other examples too. For example, when we see a chair in front of us, we get its *form* in our minds rather than the chair itself. Our eyes get in touch with the image of the chair formed by the light rays. In this process of forming the image of the chair on the retina of our eyes, the *form* of the chair is abstracted from its *matter* up to some extent. In this way, we get the *quiddity* of the chair in our minds. Similarly, when we touch this chair with our hands we sense the hardness of its surface which is again the *form* of the material used to make the surface. In this process too, the sensation of the surface is abstracted from the surface itself. Thus we have a sensation in our minds not the surface itself. Thus we can conclude that the *sensed knowledge* of the *physical things* is a *mental existence* which is abstract from nothingness inherent in *matter* at least up to some extent.

Thus the existence which actualizes in our psyche is totally different from the existence actualized in the external. Moreover, the sensed *actuality* achieved in our psyche is also different from the *actuality* which is achieved in the external. For instance, we see the fire in our psyche but it does not have any capacity to burn anything. On the other hand, the fire in the external can burn many other things. All these facts suggest that the existence of *sensed knowledge* are only at the mental level and abstract from nothingness inherent in *matter*.

Some of the examples mentioned above can be proved to be correct easily. For example, if the colors of things exist in the external exactly as they appear to us, they should appear to us even if there is no light. But we see that everything is dark without the light. This means that colors are only appearances and only some kind of existence is in the external which have an effect on us in the form of the appearance of colors in the presence of light. In purely scientific terms, we can say that the color of a thing means that there is something in that thing which absorbs the lights of all wavelengths except light of the wavelength of that specific color. This light of specific wavelength is reflected back and appears to us as that specific color. But that something, which reflect back this color, is not received in our psyche itself. In the same way, other examples may be given.

But such an approach to prove that *sensed knowledge* exists only in our minds, is basically inductive. In order to arrive at a purely logical conclusion we have to sort out those factors on which all the *sensed knowledge* of the *physical things* depend and then inquire into these factors whether their existence is in our minds or in the world external to our minds. We defined the *physical things* in Section 1.3 on the basis of the perception of time and space. In view of this, it seems appropriate to inquire into the quiddity of space and time themselves as to whether they exist as they appear to us or they are also just appearances in our minds?

As a matter of fact, the results of Einstein's theory of relativity are enough to show that space and time are not

absolute quantities. They may be different for observers at different speeds. But this theory proves the relativity in these quantities for the moving observers only. On the other hand, we have proved in Chapter 3 that there is relativity in these quantities measured by the observers at rest too. Secondly, in Einstein's theory, speed of light is taken as an absolute reality. But from our perspective, the speed of light, like other *quiddities*, is also a relative reality as everybody senses the light only in his own mind. So everybody should have his own measure of it which may or may not be different from that of the others.

Actually, there cannot be any proof that a piece of spatial extension measured by one person is equal to that measured by another person because each person measures it in his own mind. In other words, it cannot be proved how much a certain person senses a certain spatial extension. Such sensation may or may not be different for different people. The only fact we can prove absolutely is the relation between the sizes of different things. So if a distance is 10 feet, the only thing we can say about this distance with certainty is its relation with some other size. For example, we can say that this distance is ten times the distance of one foot. But any observer A cannot know how much distance another observer B observes in his own mind when he sees one foot distance or ten feet distance. The reason is not difficult to understand. Being a continuous quantity, space is indefinitely divisible as has already been explained in Chapter 3. Space does not have any absolute unit the multiple quantity of which can measure different distances in objective terms. The units adopted by different measuring systems are only the man made units and may themselves be sensed differently by different persons.

Same is the case with time. A unit of time, say one hour, sensed by a person may be different from that which is sensed by another person despite the fact that clocks show the same rotation of their needles.

Actually, the relativity and subjectivity of quantities like space and time is difficult to admit due to the double confirmation of more than one senses. If a *quiddity* is sensed

by one sense, its subjectivity is easy to understand. For example, we get the sense of color only through the eyes. Similarly, we get the sense of sounds only through the ears. Same is the case with many other *quiddities* which are uni-sensed. But measure of space is a knowledge which may be sensed separately by two or more independent senses. For example, we see some measure of space through our eyes which is one source of the sensation of the space. But we can also sense this space through the motions of our limbs as we sense the space when we extend our hands or when we travel a space on foot even if our eyes are closed. Thus our eyes and our limbs' muscular sensations, which are independent from each other in their perceptions, give compatible results to us about the extension of space. In this way, the sensation of space becomes multi-sensed.

Sometimes, the direct knowledge of the *quiddity* of a thing is uni-sensed but an effect of that thing on some third thing may make it indirectly multi-sensed. For example, we sense heat directly only through the sense of touch present in our skin. But we can also sense it through the eyes when we see the things like the expanding mercury in a thermometer or red-hot iron or boiling water.

Actually, the *sensed knowledge* is the outcome of the effect of the known thing on the knower because it is the essential requirement of the *sensed knowledge* that the known thing should stimulate the senses of the knower. This requirement shows that the *sensed knowledge* appears in our minds as an effect on us caused by the *real existences* of the sensed objects. Among these existences, some affect only one sense whereas some others affect more than one senses at the same time. On the basis of the two or more than two independent sources, it appears to us in a doubly confirmed manner that the multi-sensed *quiddities* like space exist in the external as they appear to us. But this conclusion is not correct.

Actually, when two or more than two different sensed effects come from one single existence, there is always one single relationship among these different effects. Whenever, the affecting existence produces these different effects on human

psyche, this single relationship come into play producing all such effects on us in a mutually compatible manner. In this way, more than one senses appear to be affected in a coordinated way. For example, we see a certain automobile always burns one liter of gasoline in traveling ten km on a road. In this example, we observe two facts: first is the traveling ten kilometer by the automobile and second is its burning one liter of gasoline. These two facts sensed independently by us by different senses and both these facts happen together in a compatible manner suggesting that whatever happens in the external is exactly what we observe. But this suggestion is not right. Actually, the compatibility between these two facts is the result of the single relationship that exists between the oil consumption of the automobile's engine and its traveling the distance. Due to this relationship, the distance covered by the automobile and its oil consumption always appear to be compatible.

Due to all such relationships, the whole of the physical world appears to us in a well ordered schema. Many of these relationships are discovered by science and are called physical laws. But as far as each single sensation is concerned, it remains relative and subjective when considered in itself. In short, both space and time are just appearances in our minds. This is the reason that whole of the physical world with all its motions and interactions is only a mental state of the knower. But even then, we cannot deny that there must be something in the external which we may call *real existence*. We do not know anything about it except that it exists in the external.

Thus what is objective in the external world is nothing other than the following:

- The *real existences* which are causes of the *sensed knowledge* such as the *real existence* of physical things and the *real existence* of their *attributes* such as space, motions, time etc.;
- The *real existences* (knower) whose senses are affected such as those of human beings in our case;

- The *real existences* of the relationship among the effects of the causes of the *sensed knowledge*.

All these three are the *real existences* which are beyond the grasp of the senses. But as far as the *sensed knowledge* itself is concerned it is only in our minds. Thus space, time, and motion etc. all appear only in our psyches. The stretches of space in all directions, thousands of creatures moving in the depths of oceans, millions of things on the surface of the earth all appear only in our mind. As far as the knowledge of relationship is concerned, their knowledge is an *intellectual knowledge* but we saw that their existence is also proved in the external. From here we can draw the conclusion that some of the *intellectual knowledge* may have its counterpart in the external world too. In this regard, it should also be taken into account that many of the *last differential form*s of the *physical things* are a relational order among their parts as explained in Chapter 2. The physical *attributes* of the *physical things* are also comparative relationships as explained in Chapter 3.

7.5

From the above discussions we can conclude that all the three kinds of knowledge are only in our minds. On the other hand, only the *real existence* of the known, knower and relationships is present in the external. But the following objections may be raised on these conclusions:

7.5.1

The first objection may be raised in this way: why the knowledge of the relationships is considered to have an existence in the external? After all it is also only have a *mental existence*. Hence we can say that since the knowledge of the relationships has also a *mental existence*, it should also be subjective. On what ground, it is considered to have a *real existence* and *sensed knowledge* not? It is no doubt a mental *actuality* but there is something in the external of which it is a representative because the comparative relationship between two quantities turns the quantities into existential units. For example, the fact that A is two times longer than B turns the length of B into a unit. This unit and the unity of the

relationship between A and B are the realities which cannot be subjective only because unity like the conception of existence comes into our minds due to the *real existence* which is an objective reality. Although, we understand unity as well as existence in our minds but we can also understand that their origin i.e. the *real existence* is in the external.

But why the conception of *existence* exist in the minds as well as in the external too whereas those of other things only in the minds? It is because the *real existence* exists by itself whereas the other things exist due to the *real existence*.

Hence, existence exists in itself in the external although its understanding is only in our minds. But nothing exists in the external among the *sensed* and *imagined knowledge* when they are considered in themselves. It is because of the fact that whenever we sense a thing, two kinds of knowledge appear in our minds simultaneously. The first is the knowledge of the sensation and the second is an understanding about its *real existence*. The first one is the *sensed knowledge* whereas the second one is an *intellectual knowledge* as it is totally abstract from the *matter*. Due to the second knowledge, the sensed *quiddities* appear to be present in the external.

Actually, a sensed *quiddity* is an effect of a *real existence* on us. For example, when we see a blue thing in the external, we get the following two effects from this thing:

1. A sense of blue color;
2. An understanding that there is some existence in the external which is the cause of the sense of blue color in our psyche.

The first effect is only in our minds and is thus subjective and only an appearance. On the other hand, the *real existence* mentioned in the second effect is in the external world and is thus an objective reality.

All this may again be explained more clearly with the help of the comparative motions between the Sun and the Earth. We get the following two effects due to these motions:

1. A sense that sun is moving around the Earth;
2. An understanding that there is an existence of a relationship of rotation between the Sun and the Earth.

The first effect may only be an appearance and is only in our minds but the second effect is more realistic and is the basis of our knowledge about the spinning motion of the Earth.

Similarly, when we sense the extension of space, one is the sensation of space and the other is the understanding that there is some existence external to our minds which is the cause of this sensation. Hence, the existence of space is not being denied by the above analysis. Only the external presence of the spatial extension as it appears to us is denied. Such an appearance of the spatial extension is present only in our minds.

7.5.2

At this point the question arises: If the space is just an appearance in our minds, what is the criterion of externality then? In other words, how can we say that the *real existence* of things we see or sense is in the external? Actually, the criteria of externality are unity and existence the concepts of which we draw from the things spatially absent from each other. This criterion is not spatiality as we apparently feel. We feel that whatever is spatially separate from our own bodies is external to us. But spatial separation is only an appearance in our minds and thus cannot be the criterion of externality. A thing is external to another thing if it has a unity and an existence different from the unity and existence of the first thing. Hence, that thing is considered to be external to us which has a unity and existence other than our own unity and existence.

One contradiction also appears to arise on the fact that space and time are only appearances in our minds. If space and time do not exist as they appeared to us, the definition of the

physical things given in Section 1.3 should not be valid. This means that all the conclusions on the basis of that definition should also be invalid. Actually, the concepts of space and time are only in our mind but this does not mean that the information given to us by the space and time regarding the absence of the parts of the *physical things* is also not valid. It is because all sensed appearances including those of space and time give the meaning of existence. Since absence is the opposite of presence or existence, the concept of absence, like the concept of existence, may also validly be made on the basis of sensed appearances. Actually, different parts of space and time are absent from or not present for each other. This result regarding the external world from the appearances is valid and found in the external world. Thus the definition of the *physical things* given in Section 1.3 is a totally valid definition.

7.5.3

One objection may be raised on the subjectivity of the *sensed knowledge*. This objection may be described as follows: If all the *sensed knowledge* is relative and subjective, how two different observers then communicate with each other. We all human beings have similar sensations and thus confirm each other knowledge about our sensations. In other words, human beings have similar *sensed knowledge* and thus name the things accordingly. After this naming they communicate with each other quite effectively. Hence, knowledge of one person is confirmed by the similar knowledge of another person. This again proves that the sensed *quiddities* exist in the external as they appear to us. On the basis of such a commonly participated knowledge, we name different things in our languages and thus communicate with each other. If someone says about a chair that this is a chair, the listener normally understands it and considers it a chair. Hence, different *physical things* should exist in the external exactly as they appear to us.

This objection, actually, proves only that all or most of the human beings are affected by the *real existence* of the *physical things* in similar ways. But similarity of the effect does not prove its reality as such in the external world. It only

proves that the existence affecting more than one person is the same. It may be possible that the *real existence* of a *physical thing* may affect the senses of all the human beings in a fairly similar way just because they all belong to the same *species*.

7.5.4
Here one more kind of objections is usually raised especially through diverting the attention towards the things which are very harmful to human body. If there is nothing like heat in the external, why our skin burns when it gets in touch with fire?. If there is no such thing like the sharpness of the knife, then how it cuts the finger and even blood comes out of it.

The answer to this kind of objections is that the heat as felt by us is negated in the external but the existence of heat is not negated. Similarly, the sharpness of the knife as sensed by us is negated in the external, the existence of the knife having something represented by the sharpness is not negated. Hence, the *real existence* of the fire and the *real existence* of the knife have something in them, which have harmful effects on our *real existence*. These are also the cases of the effect of one existence on the existence of the other. The changes in the *form* of one thing are always possible due to the effects of the existence of the other things. What is stressed here is that the *quiddity* is only appearance whereas the reality is only the *real existence* of the things.

7.5.5
But arriving at such a conclusion raises one big question. Why human beings cannot know the *real existence* of the *physical things* itself? Is there any weakness in the human being?

Actually, the *real existence* of the *physical things,* being attached to *matter*, is very near to nothingness because absence is in the essence of every physical thing. Each part of every *physical thing* is absent from its every other part. Even the whole of the *physical thing* is absent from each of its parts. Moreover, whole of the *physical thing* is continuously changing. At each instant of time it is getting a new *form*.

Even each part of the physical thing is changing continuously. Hence, a physical thing, being subjected to a two-way absence, is a scattered reality which appears to us as dispersed into the space-time continuum. Each part of it necessitates the nothingness of the other part. Each *form* of it at one instant is the extermination of the *form* occurring at the previous instant.

In other words, nothingness of the physical thing is hidden in its existence and its existence is hidden in its nothingness. Thus the physical thing is like the unity of the multiplicity. This is the reason that a physical thing cannot be present in a perfect state and such an imperfect reality cannot be achieved by anybody as such. On the other hand, in the case of knowledge, something appears to be achieved as it is evidently felt. This is the reason that physical thing cannot be known except through a *form* which is totally different from its *real existence* and which is abstract from nothingness of its *matter* up to some extent. It is usually the *sensed knowledge* through which we are able to know the *physical things*. As far as the *real existence* of the *physical thing* itself is concerned it cannot be known as such.

From this we can draw two more conclusions. The first is that the actualities associated with *matter* themselves cannot be known. We know about them only that they exist. These dark actualities may be termed as *material actualities*. Secondly, *sensed knowledge* is also abstract from the factors of nothingness inherent in *matter* up to some extent.

Hence, the fact that it is impossible to know the *real existence* of a *material actuality,* is not due to any weakness of the knower. Rather it is because of the darkness and the factors of absence present in the *matter* of that *material actuality*.

7.6

In short, all the three kinds of knowledge have a *mental existence* which has been abstracted from the factors of absence and nothingness with varying degrees. In the *sensed knowledge*, the process of abstraction from nothingness and *matter* is the most imperfect because all the *attributive meanings* of the *physical things*

are present in this. Due to this imperfection, the factors related to absence such as spatial remoteness, quantitative multiplicity, temporal succession etc. is intense in this kind of knowledge.

On the other hand, the *intellectual knowledge* is totally abstracted from nothingness, *matter* and absence. This knowledge is also beyond the succession of time. The *imagined knowledge* ranks between the other two in the abstraction from nothingness and *matter*. This means that *intellectual knowledge* is the most intense in existence because more intense is the abstraction from nothingness, more intense will be the existence. This means there is an ambiguity of existence in different kinds of knowledge too resulting in an ambiguity in knowledge. Since every kind of knowledge has some kind of existence and every kind of existence is after all some kind of *actuality*, we can say that we encounter the following four worlds of actualities written in an ascending order of increasing existential intensity:

- World of material actualities;
- World of sensed actualities;
- World of imagined actualities;
- World of intellectual actualities.

The fourth world of intellectual actualities is divided into the following further two subcategories because some of the intellectual actualities at the mental level also have something corresponding to them in the external:

- Intellectual actualities at the mental level;
- Intellectual actualities at the external level.

From all this analysis of knowledge, we come to the conclusion that whole of the physical world appears only in the minds of the human beings. What is in the external is only *real existence*. Since every person has his own mind, he has his own world. In other words, whatever is known by a person about this physical world is his own subjective ideas. But despite this subjectivity, we commonly observe that many people agree with each other on a lot of facts. The emergence of languages among the members of a society is also one form of this unconscious agreement on the basis of which those members communicate with each other. This agreement suggests that

there must also be an objective reality in the word external to our minds. This reality in our opinion is the *real existence* of things. In other words, *quiddities* are only in our minds whereas what is present in the external is the *real existence* which we normally cannot know. These *quiddities* are sometimes sensed, sometimes imagined and sometimes found at the intellectual level. In the next chapter, we will examine the relationship of the *real existence* and *quiddities* further.

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Chapter 8

APPEARANCE AND REALITY OF PHYSICAL WORLD

8.1
The analysis and discussion undertaken in the last six chapters concluded that reality of the *physical things* lies in their *real existence* rather than in their *quiddities*. Among these two aspects of the *physical things*, what actually exists in reality is *real existence*. On the other hand, *quiddity* appears only in our minds and has no existence of its own. It exists only through the *real existence*.

We concluded that *real existence* is a reality on the basis of the following:

- *Real existence* is the source of the *last differential form* of the physical things as explained in Chapter 2.

- *Real existence* is the source of *physical attributes* of the physical things as explained in Chapter 3.

- *Real existence* is the source of the *unity* of the physical things as explained in Chapter 4.

- *Real existence* is the source of the *individuality* of the physical things as explained in Chapter 5

- *Real existence* is the source of the *motion* of the physical things thing as shown in Chapter 6

We also concluded that *quiddity* is only an appearance on the basis of the following:

- *Quiddities* are general when considered without any consideration of their existence as shown in Chapter 5.

- *Quiddities* cannot be the subject of the motions of things and serious contradictions arise by considering the *quiddities* as real as shown in Chapter 6.

- *Quiddities* which we know through senses, imagination or intellect only have a mental existence as shown in Chapter 7

8.2

In chapter 5, we explained that *quiddity* is general and is particularized only through the *real existence*. This statement that *quiddity* is particularized through the *real existence* means that *quiddity* does not exist by itself and is thus not present in the world external to our minds as is also proved in the previous chapter. This conclusion is drawn on the basis of the fact that the existence is not included in the meaning of the *quiddity* when we consider the *quiddity* in itself. For example, when we consider only the *quiddity* of a man in itself, it is not necessary that it should have an existence. We can consider the *quiddity* of man in such a manner too that it does not have even a mental existence. Hence we can maintain that the conception of existence is not included in any *quiddity*. If the existence were included in the meaning of *quiddity*, the *quiddity* would not be general because the *real existence* of a particular *physical thing* is an exclusive reality and cannot be general.

Thus *quiddity* is only the appearance of things in our minds. The true reality of a thing is only its *real existence* although we cannot sense this *real existence* because it cannot come into our minds itself. So the things appear to us through their *quiddities* but are present in reality through their *real existences*. In short, the aspect of a thing, which exists in external, is *real existence* and the aspect, which appears to us in our minds, is its *quiddity*. This means what we see in the physical things is not real and what is real in the physical things is unseen.

In other words, we actually live in a world of *real existences* but apparently feel to live in a world of *quiddities*. Hence this entire physical world as we sense it is a set of appearances coming from the *real existence*s of different things. Actually, being general, *quiddity* appears only in our minds. On the other hand, *real existence* is an objective reality in the true sense of the word 'objective' because it is not achieved or known by our minds. These results are similar to what is said about *noumenon* and *phenomenon* among the modern philosophers but the word '*noumenon'* is usually used synonymously with *quiddity* whereas we are giving to the *real existence* a similar sense as understood by the moderns from the word '*noumenon'*. We are using the word *quiddity* in a sense somewhat similar to '*phenomenon*' as understood by modern philosophers.

Here it should also be noted that the *quiddity* may be spatial and temporal but *real existence* is beyond the conceptions of time and space as is proved in the last chapter. This means that *real existence* of the *physical things* belong to a realm which is not physical and even the conception of time and space is formed only in our minds when our senses are stimulated by the *real existence*s of the *physical things*. This conclusion is further substantiated by the fact that time and space do not have any existence of their own as is explained in Chapter 3. They are, rather, generated into our minds when the *last differential form* of a physical thing is produced in our psyche at the stimulation of our senses by the *real existence* of that thing. Thus whole of the physical realm is produced only in our minds whereas the *real existence* belongs to a realm which is not physical.

Here one should not understand that *quiddity* and the *real existence* are two separate aspects of a thing. They are separated into two different aspects only by our minds. Otherwise, they are actually united with each other into one thing. They are only the two aspects of one thing. One aspect i.e. that of *real existence* is actually the thing itself whereas the other aspect i.e. that of *quiddity*, is how the thing appears to us. They are separated into two different aspects only by the analytical faculties of our minds. Otherwise, only one thing exists in reality and that is the *real existence* of the thing itself whereas the *quiddity* is only produced in our minds. But despite all this, it is the *quiddity* of a thing through which we know that thing whereas its *real existence* is not received in our minds as such.

From all this discussion we can conclude that all the physical things which we see and sense around us do not exist in the external exactly in the same way as they appear to us. The colors we see do not exist in the external as we see them. The sounds we hear also do not exist in the external as we hear them. In the same way, the sensations of touch, smell and taste are only appearances in our minds. Only the *real existences* of these things are present in the external world. This would also mean that where we sit, stand or walk is only an illusion. Even our own bodies do not exist in the external exactly as they appear to us.

In short, it is proved that among these two aspects of the *physical things*, *real existence* is the reality whereas *quiddity* is only an appearance.

8.3

We have proved that existence is not necessary for the *quiddity*. From this it may falsely be concluded that *real existence* should be an *attribute* of the *quiddity* because whatever is not necessary for a thing, must not be essential and must thus be attributive to it. But this conclusion is not right because an *attribute*, by its very definition, needs a subject which is not dependent on the *attribute*. On the contrary, nothing can be independent of the *real existence*.

In other words, every *attribute* needs that its subject should already have an existence because the entity, to which something is attributed, must have an existence before the *attribute* is ascribed to it. This means that the *quiddity*, to which existence is going to be attributed, should have already an existence. If some other existence is considered for this *quiddity*, the question about the attributiveness of that second existence will again arise. In such a way, an indefinite continuity of such existences will appear. Such continuity is impossible because thing is a limited reality. In such a case, an indefinite number of things would be admitted to be bounded by two limits i.e. between the *quiddity* and the firstly considered existence. This case is of course impossible because indefinite number of things cannot be bounded by limits. Hence it may be concluded that existence is not an *attribute* of the *quiddity* rather *quiddity* is preceded by *real existence* itself. Actually, derived conception of existence is an *attribute* of the *quiddity* and this conception is present only in our minds. But the *real existence* is a reality external to our

minds and is not an *attribute* of the *quiddity*. Rather, *real existence* exists by itself and it appears to us as *quiddity*.

8.4
But in a temporal perspective, it is the *sensed knowledge* that comes first in our mind and after that we arrive at any *imagined* or *intellectual knowledge* on the basis of this *sensed knowledge*. This means that the *quiddities* understood through *sensed knowledge* should be more primary than the *real existence* which can be known only intellectually. From this it should follow that *quiddities* exists as such and existence is only a hypostatized conception.

It is no doubt that the *sensed knowledge* regarding a thing temporally comes first and then we get *imagined* or *intellectual knowledge* about it. But temporal precedence is totally different from existential precedence. Actually, our minds can evidently understand that the '*real existence*' comes before any *quiddity* of a thing, although, this understanding comes in our minds after getting the *sensed knowledge* of the thing's *quiddity*. The understanding about this existential precedence of *real existence* over *quiddity* is very evident. Whenever we sense a thing, we also get an understanding about its *real existence* in our minds as has already been explained in Section 7.5.2.

Moreover, we also evidently know ourselves as having *real existence* because our own existence is the existence nearest to us. We do not come to know our own existence through any *sensed knowledge*. Hence the understanding about the *real existence* is consciously or unconsciously already present in our minds especially when we got adult and have a mature mind.

Actually, the temporal precedence of the *quiddities* known through the *sensed knowledge* does not mean that they also have the existential precedence. Existentially, it is the *real existence* which comes first and then its effect is felt as *quiddity*. Actually, here too the derived meaning of existence is confused with the *real existence*. It is correct that the derived meaning of existence comes in our minds after the *quiddity*. But existentially, it is the *real existence* which precedes the *quiddity*. We have the intellectual capacity to understand this fact and this understanding also comes in our minds after the *sensed knowledge.*

The confusion between the *real existence* and the derived meaning of existence has actually led many of the modern philosophers to negate the reality of the *real existence*. Most famous among these philosophers are perhaps Emmanuel Kant and Bertrand Russell.

According to Kant, there is nothing like existence in a thing as there is no difference in the meanings imparted by possible hundred dollars and real hundred dollars. Nothing is added in the meanings of the possible hundred dollars when they actually get existence. From here Kant concludes that there cannot be anything like existence in the external[20]. Rather existence is just a hypostatized conception derived from the copula of the sentences.

Actually, what is proved from the above argument is only the fact that the *quiddity* does not have any existence of its own. From this it cannot be concluded that there is no *real existence* in the external. Actually, Kant does not differentiate between *real existence* and the derived meaning of existence. It is the derived meaning of existence whose external presence is negated from his argument. As far as the *real existence* is concerned, the thing actualizes in the external due to this. How can it be negated?

Russell considers existence as second degree predicate as it is not among the first degree object language in his opinion[21]. A man tells about a chair that 'this is a chair' in response to the question "What is this?". Thus 'being' or 'existence' of the chair is a word from the second degree language rather than the first degree object language.

What is proved from this argument is only the fact that *quiddity* comes into our minds first and the existence comes second. There is nothing wrong in this fact. But in the external, the *real existence* comes first and the *quiddity* comes second. In this argument too, the same mistake is being made. The difference between derived conception of existence and the *real existence* is ignored by supposing that existence is wrongly hypostatized by the traditional philosophers. The derived conception of existence is no doubt a second degree predicate and is thus only in our minds. But the *real*

20 Kant,Emmanuel. Critique of Pure Reason. Translated by N.K. Smith, (London: Mac,1929) 368-369

21 Russell, Bertrand. An Inquiry into Meaning and Truth. (London: Allen & Unwin, 1980) 65

existence is an external reality hidden from our senses and appeared to us as *quiddities* which we express through the object language.

The main reason behind the negation of the reality of any *real existence* for a thing by the modern philosophers like Kant and Bertrand Russell is nothing other than that the *real existence* is unseen and cannot be sensed. But to be unseen is not a sufficient ground for negating a reality as is also explained before.

8.5

After establishing that *quiddity* does not exist in the external, it is easy to understand that the effects at the level of *quiddity* are not the effects in reality. Moreover, *quiddity* even cannot be a cause of any effect. Thus real effects and real causes are only at the level of *real existence* and changes in *quiddity* occur only as a necessary outcome of what is present at the level of *real existence*. Or the changes at the level of the *quiddity* may more rightly be called as the outcome of the gradual completion of the *real existence*. This all means that what appears at the level of *quiddity* is only an outcome of what is undergoing at the level of *real existence*. Whatever is affected at the level of *real existence* is reflected at the level of *quiddity*. Otherwise nothing is affected at the level of *quiddity* by itself.

Similarly, *quiddity* itself is also not a cause of anything because when it does not exist in the external how can it be a cause of any thing?. The cause of every effect is always a *real existence*. Does this conclude that the sharpness of the knife is not the cause of cutting the fruit? Such a conclusion appears to be evidently wrong but in actual fact it is right. Actually, there is something in the *real existence* of the knife due to which the existence of the fruit is divided into two *real existence*s. This something is actually the *real existence* of the sharpness. As far as the sharpness itself is concerned, it is, being a *quiddity*, only an appearance in our minds.

Similarly, DNA is not the cause of the growth of living things rather the *real existence* of the DNA is the real cause. Fire is not the cause of the burning of the wood. Rather the *real existence* of the fire causes the burning of the *real existence* of the wood. In other words, the *real existence* of the things is the cause as well effect of any thing happening to them.

Hence all the physical events and all the *physical things* are the outcomes of some *real existences* rather than *quiddities*.

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PART III

GOD, ANGELS AND PHYSICAL WORLD

Chapter 9

DEPENDENCY AND CONTINGENCY OF PHYSICAL WORLD

9.1
In the previous chapter, we learned that for all the meanings achieved from the *physical things* i.e. their *quiddities* and *attributes*, existence is not necessary. It is because all these meanings can be considered without the consideration of their existence. This means that existence of a thing is not included in the essence of its *quiddity*. In other words, existence is not necessary for the *quiddity* of any *physical thing*.

In order to verify this conclusion on the basis of law of non-contradiction, we have to divide all the conceivable meanings including all the meanings present in all the things into the *contradictory categories* based on the concepts of existence and necessity. Since all the *quiddities* are also among the conceivable meanings, they will fall in some of such categories. We know that the *contradictory complement* of existence is nothingness and that of necessity is non-necessity. If we divide all the conceivable meanings into two categories on the basis of whether their existence is necessary or not, there will be two *contradictory categories* regarding all conceivable meanings.

The first category will be of those meanings for which existence is necessary. This category consists of those meanings whose existence is necessary or in other words which necessarily exists. This may be termed as the *necessary existence*. The second are the conceivable

meanings whose existence is not necessary. This category may be divided into two further categories based on necessity or non-necessity of nothingness. The first of them consists of such non-necessarily existing conceivable meanings, which are necessarily nothing. These may be called impossibilities because they are necessarily nothing.

The second of them consist of such non-necessarily existing conceivable meanings for which nothingness is also not necessary. Such a category may be called that of *possibilities* or *contingents* because neither existence nor nothingness is necessary for them. The hierarchical break up of all these categories would be as follows:

1. All Conceivable Meanings
    - 1.1 Meanings for which existence is necessary (*necessary existence*);
    - 1.2 Meanings for which existence is not necessary
        - 1.2.1 Meanings for which existence is not necessary but nothingness is necessary (Impossibility)
        - 1.2.2 Meanings for which existence is not necessary but nothingness is also not necessary (Contingents or Possibilities)

The category of *necessary existence* cannot be divided into the two categories based on necessity or non-necessity of nothingness. It is because non-necessity of nothingness is quite evident for *necessary existence* whereas necessity of nothingness is not possible for *necessary existence* as the *contradictory complement*s cannot be necessitated together in one thing according to the law of non-contradiction. Contrary to this, non-necessity of a meaning and non-necessity of the *contradictory complement* of that meaning, however, may combine together into one thing without violating the law of non-contradiction as is the case with the *contingents* here. The reason is that non-necessity of a meaning for a thing does not contradict with the non-necessity of the *contradictory complement* of that meaning. For example, the non-necessity of blue color for a thing does not contradict with the non-necessity of the non-blue color in it. This only means that neither the blue color is necessary nor non-blue color is necessary for the thing in question. Only the necessity of blue color and the necessity of non-blue color cannot combine

together in a single thing as it will violate the law of non-contradiction.

Hence, all the conceivable meanings may be divided into the following three categories:

1. *Necessary existence*s i.e. which necessarily exist;
2. *Contingents* or *Possibilities*; i.e. for which neither existence is necessary nor nothingness is necessary
3. *Impossibilities*. i.e. which is necessarily nothing

These are shown graphically at Fig. 5. Here it should be noted that these three categories are logically possible for all the conceivable meanings. We do not yet know whether or not any of the things having the meanings of these categories has a *real existence*.

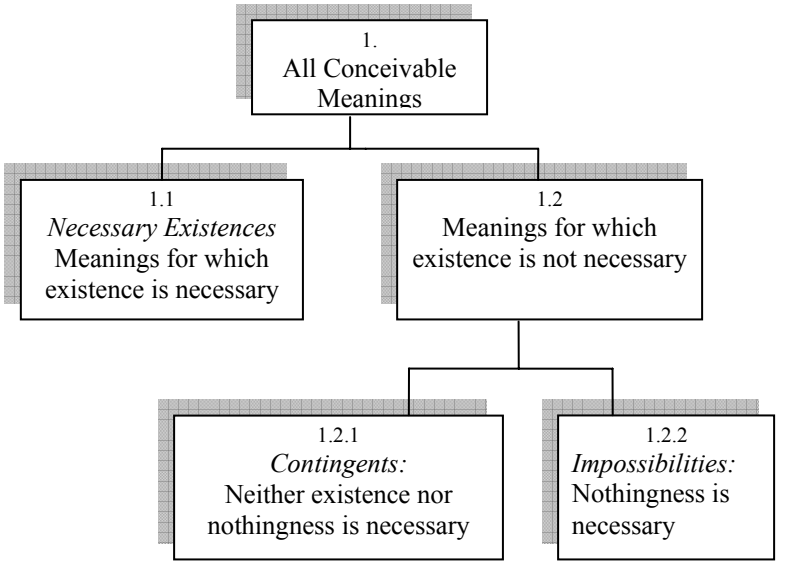

Fig. 5: Different kinds of logically possible conceivable meanings.

9.2

Presently, we are interested to know to which category the *quiddities* of the *physical things* belong. Since these three categories are made on the basis of the *contradictory complement*s, it is clear that they are mutually exclusive and collectively exhaustive. Hence, each physical *quiddity* must belong to only one category among them. Moreover, since these categories are also collectively exhaustive and are made by dividing all the conceivable meanings, no *quiddity* can be outside any of these three categories.

It is evident that the physical *quiddities* cannot be among *impossibilities* because they are after all something because we sense them around us as evidently true facts. Hence they should be either among the *contingents* or among *necessary existences*. First we try to see whether any of the *quiddity* can be among the category of *necessary existence*.

9.2.1

In order to inquire into this issue, it is better to first understand some of the features which are necessarily associated with *necessary existence*, although, we have not yet proved its existence. Notwithstanding the issue that it really exists or not, these essential features anyway emerge from its definition. The first among these features is the non-changeability of *necessary existence*. Since existence is necessary for *necessary existence* it is imperative for it that it must always remain as it is. In other words, it must never change because any change coming into it would mean that its existence was originally contingent with respect to that change rather than necessary.

The second feature emerges from the first one. If *necessary existence* is not changeable, it must be limitless and infinite if it really has an existence because only an infinite and limitless thing can have an existence without any change. Every limited thing may have the *potentiality* to change into a thing or a meaning which is outside its limits. If a thing does not have any *potentiality* of any change, it must have all things and meanings in it in *actuality*.

Actually, *necessary existence* cannot be limited or incomplete with respect to any meaning whatsoever because to be incomplete itself means *necessary existence* does not have something in it. This means that *necessary existence* is dependent on some other existence for the completeness of its existence and thus is no more a complete *necessary existence*. In other words, *necessary existence* should have everything in it in a state of *actuality* and should not be incomplete in any respect. To become complete and perfect in every respect, *necessary existence* should not have any limit in it. In other words, it must be *infinite* in the true sense of the word. Thus by virtue of its very definition, a *necessary existence* is limitless, infinite and completely perfect.

Thirdly, *necessary existence* cannot have any parts in it because if it would have any parts, it would depend on those parts for its existence whereas being *necessary existence* it cannot be dependent on any thing. It is the requirement of the necessity of its existence that it cannot be dependent on any other thing. Having no parts in it, *necessary existence* cannot have any multiplicity. Hence, it must belong to the category of pure unitary things as described in Section 1.3. From here it also follows that whatever would be pure unitary thing, it would be limitless.

After knowing these features, we are now in a better position to see whether the *quiddities* of the *physical things* belong to the category of *necessary existence* or not. We know from Chapter 2 that *quiddity* of a *physical thing* consists of its *form*, *differentia*, *genus* and *species*. All these four meanings are actually limits. This is the reason that every *quiddity* is limited to that particular meanings which it depicts. Even the things which apparently seem indefinite are also limited. For example, the *space-object* seems to extend indefinitely in all directions beyond the galaxies. Notwithstanding the issue that it is indefinite in spatial extension or not, it is after all limited to the *quiddity* of a *space-object*. It cannot be any thing other than *space-object* as far as it is a *space-object*. In other words, every *physical thing* is limited to its own *quiddity* and cannot be the *quiddity* of any other thing.

On the other hand, a *necessary existence* by its very definition is limitless as we explained above. Due to this feature of the *necessary existence*, any thing having *quiddity* including the *physical things* due to being limited to that *quiddity*, can not be a *necessary existence*. From this it also follows that *necessary existence* also cannot have any *quiddity* because *quiddity* is always bounded by some limits whereas *necessary existence*, by its very definition, is limitless.

Even if we consider the *quiddity* after getting existence as a *physical thing*, it remains contingent because every *physical thing*, by its very definition, has multiplicity and thus always consists of some parts. Contrary to this, *necessary existence* cannot have any parts as is explained above. Hence, *physical things* and their *quiddities* cannot be *necessary existence*.

When it is proved that the *physical things* and their *quiddities* can neither be among *impossibilities* nor among *necessary existences*, it is inevitable that they must be from the category of *contingents* because no conceivable can be outside these three mutually exclusive and collectively exhaustive categories.

9.3
This means that for all *physical things* and their *quiddities* neither existence is necessary nor nothingness is necessary. In other words, whenever a *quiddity* gets existence, it gets this from somewhere else rather than from its own self. It is because whatever is necessary and inherent in a thing is always present in its own self. For example, redness is necessary for red color. Thus red color does not get redness from anything other than itself. Watery nature is necessary for water. Thus water does not get watery nature from anything other than itself. But as far as existence is concerned it is not necessary for these contingent *quiddities*. In other words, contingent *quiddities* depend on something other than themselves for getting existence.

This is also true for even the molecules, atoms and sub-atomic particles including the so-called anti-matter particles even if the findings of the modern physics are admitted true. Even the *quiddities* of celestial bodies including stars, planets, black holes and even *space-object* all do not have the existence of their own. Similarly, the *quiddities* of energy waves such as light waves, heat waves and other

electromagnetic waves are also contingents. They all depend on something else for getting their existence.

In short, it is proved that existence is not necessary for any of the *physical things*. This is the reason that all the *physical things* can be destroyed or can at least be imagined to be destroyed. For example, electron, atom, molecule, energy, planets, black hole, stars etc each and every thing can be destroyed or at least can be imagined to be destroyed. If the existence were necessary for the *physical things*, they could never be destroyed because a meaning which is necessary for a thing can never be lost from it, not even in imagination.

At this point one objection may be raised. If the *quiddities* of the *physical things* are contingent because of its being limited, the *real existence* of every *physical thing* should also be contingent as it is also limited though it exists by itself. Moreover, if every *physical thing* is destructible, its *real existence* should also be destructible. This means that the *real existence* of a *physical thing* is also contingent. But contrary to this, it is claimed in Section 2.6 that *real existence* exists by itself. In such a case, what would be the meaning of the contingency of the *real existence* of the *physical things*? Actually, the *real existence* of the *physical things* is contingent because it draws the necessity of its existence from other than itself. It, no doubts, exists due to itself but it depends on some other existence for the necessity of its existence. Hence, the contingency of the *real existence* of the *physical things* means that it depends on something else for the necessity of its existence. This issue will further be clarified in Chapter 12.

9.4

From the above discussion, it is proved that everything having *quiddity* is a contingent. Thus all the parts of the physical world i.e. category no. 1.2.3 of Section 1.3 including the *physical things*, physical events and location points are contingents.

The contingency of the physical world requires that there must be a source of existence for every *physical thing*, and this must also be true for the physical events and the location points. In other words, since every *physical thing*, being *contingent,* has equal relationship with existence and nothingness, there must be something, which prefers existence to nothingness for that *physical thing* when it gets

existence. This need for a source of existence not only arises at the time of getting existence but also continues during the survival of that *physical thing* because at each instant of time during its survival it never ceases to be a contingent. Thus every *physical thing* in the world depends on something other than itself for its existence not only at the time of getting the existence but also continuously during its survival. This dependency may be termed as *existential dependency* and the source of existence of such a contingent may be termed as the *existential cause* as this gives existence to that contingent[22].

But it is also an evidently true fact that every *physical thing* gets existence only at a certain instant of time because time of occurrence is one of the physical *attributes* of the *physical things*. This means that there must be some time when a certain *physical thing* was not in existence and it gets existence only after that time. This necessitates that every *physical thing* gets existence only when certain conditions are fulfilled. Based on this fact, we can categorize all the contingents using division by dichotomy. In other words, one category of contingents is that which depends on some conditions to get existence and the other does not have such dependency as shown below:

1. All Contingents
   1.1 Contingents which needs some conditions to be fulfilled before getting existence. These may be called *conditional contingents*.
   1.2 Contingent which does not need any conditions to be fulfilled for getting existence. These may be called *unconditional contingents*.

According to this categorization, the *physical things* fall into the category of *conditional contingents* as every *physical thing* gets existence after a process of the fulfillment of the conditions. This process of the fulfillment of the conditions takes place in the time prior to the time of occurrence of its getting existence. As more and more conditions are fulfilled, the *quiddity* of the *physical thing* comes closer and closer to the stage of getting existence from its source.

22 This analysis also shows that there is no need to take the Principle of Sufficient Reason as an axiom because this principle can also be based on the Law of Non-contradiction provided we take the concept of necessity and existence as introspected evidently true facts.

This means that *quiddities* of the *physical things* depend on some other kind of factors too which are in addition to their *existential causes*. These other kind of causes may be termed as the *preparatory causes* as they prepare the stage for the *quiddity* of a *physical thing* to get existence. The dependency of the *physical things* on such causes may be called the *preparatory dependency*. The *preparatory causes* consist of all those actions, events and conditions that get the *quiddity* under consideration closer to get existence.

9.5

We can understand and differentiate the concepts of *existential* and *preparatory* dependencies further through some examples. Sometimes some persons are considered as the makers and thus causes of certain things. For example, a sculptor is considered as the creator and thus cause of his sculpture. But in actual fact, he is only the cause of the removal of rock chips from the original rock according to the image of the sculpture he has in his mind. He is not the *existential cause* of the existence of sculpture because he does not give existence to the sculpture. Moreover, sculpture needs the *existential cause* continuously as far as it survives. If the sculptor were the *existential cause* of the sculpture, the sculpture would not survive after his death. Actually, the sculptor is only one of the *preparatory causes* of the sculpture.

Similarly, the builder of a house is also the cause of only bringing the building materials together in a certain shape which is called house. He is not the *existential cause* of the house.

Consider the example of a farmer growing a crop. The actions of the farmer for preparation of the field, throwing of the seeds, watering the field etc. all are among the *preparatory causes* of the crop plants. Moreover, the required weather conditions, sunshine etc. are also among the *preparatory causes*. But none of these causes give existence to the plant when it first time comes out of the seed. These all causes only prepare the stage for the plant to get the existence.

Actually, the quiddity of the plant depends on something else for getting existence. It cannot get existence from itself too because it

does not exist before its own existence. If something is not in existence itself, how can it give existence to itself? Moreover, in this way plant will have superiority over itself because the cause is superior to its effect. Hence, its existential cause must be something else.

Even after getting existence, it still needs the *existential cause* for staying alive because it does not cease to be contingent after getting existence. Existence is still not necessary for it. Thus the *existential cause* has to give existence to the plant continuously during the time of survival of the plant.

Here it should be notified that the bio-chemical processes discovered by modern science to be undergoing inside the seed including the replication of DNA and the resultant changes in its *form* are also among the *preparatory cause*s for the plant. Each *form* adopted by the cells or molecules in the seed due to bio-chemical processes, is in itself a contingent and thus itself needs an *existential cause* for its existence.

The role of DNA in giving the *form* to another DNA molecule is also among the *preparatory causes* because it provides a kind of a mold for the replication of a new DNA molecule but it does not give existence to the new molecule. Moreover, the *form* of the original DNA itself being a contingent *quiddity* needs an *existential cause* for getting existence.

To understand this at the molecular level, take the example of the formation of water. We know that Hydrogen and Oxygen are needed for the formation of water. Hence, oxygen, hydrogen and all the activities to bring these gases in contact with each other are among the *preparatory causes* of the formation of water. But as soon as the two gases make a chemical bond, their own *forms* disappear and the *form* of water appears. Now the question arises about the source of the *real existence* of the water *form*. Who gives the *real existence* to water? We know that water *form* is a contingent *quiddity* which is additional to the existence of its parts as explained in Chapter 2. Being additional to its parts, its *real existence* cannot come from its constituting parts. Its *real existence* also cannot come from its own self as the existence is not necessary for its *quiddity*.

Moreover, this need of a source of the *real existence* arises not only at the time of the formation of water but also persists till the water exists because at each instant of time during its survival, the *quiddity* of water remains contingent i.e. existence as well as nothingness is not necessary for it. Something is continuously needed to keep the water getting existence.

Actually, the *matter* of a thing can never be the source of its *real existence* for that thing because we have learned in chapter 2 that each *differential form* is additional to its *matter*. If *matter* were the source of its *real existence*, all the *forms* potential in that *matter* would get the existence at the same time. But *matter* cannot accept more than one *form* at one time as is also evidently observed. This is because of the factors of nothingness inherent in *matter* as explained in Section 2.5.

In short, the total flow of new *forms* of the seed due to the appearance of new molecules and cells in the seed is also a *preparatory cause* for the plant of the crop. Actually, the flow of all the *form*s before reaching a certain *form* is a *preparatory cause* of that certain *form*. For example, consider the continuous flow of the changing *form*s of the rock when the sculptor is working on it to make the sculpture. At each stroke of his chisel the rock gets a new *form* and as the strokes of his chisel proceed further the final *form* of the sculpture comes closer and closer. Thus there is a continuous flow of different *forms* from the first *form* of the original rock up to the final *form* of the sculpture. Since each following *form* cannot get existence until the preceding *form* gets it, the total flow of preceding *forms* should also be included in the *preparatory causes* of any *form* under consideration. This flow of *forms* cannot be the *existential cause* of the *form* in question because when a certain *form* gets existence, the flow of *forms* previous to it has already extinguished.

To sum up all the abovementioned discussion, we can say that each *differential form* appears in three ways as we learned in chapter 2. Sometimes it appears when another *form* in disintegrated into new *forms*. Sometimes a specific *form* appears after a flow of continuous change of the same thing. Sometimes, two or more *forms* merge together to make a new *form*. In all these three ways of its appearance, the existence of a specific *form* always depends on a continuous flow of *forms* getting existence before it. But this flow of

forms does not give existence to this specific *form* because that flow of *form* is no more in existence at the time when that specific *form* gets existence. If a thing is itself not in existence, how it can give existence to another thing?

From the discussions of the above examples, it may become clear that *preparatory causes* of a certain *quiddity* may be of many different kinds among which we have noticed the following three kinds in the above examples:

1 All the actions of different agents working on the thing under consideration;
2 Supporting conditions;
3 Flow of *form*s before the appearance of *form* under consideration;

But neither of them is the *existential cause* of the *quiddity* under consideration because neither of them gives the *real existence* to it. All of them prepare the required condition for the *quiddity* to get the *real existence* from its source but they themselves are not the source of existence.

This all is also true for the *quiddities* of the physical events and of the location points too because these two categories of things are also contingents like the *physical things* are.

At this stage, one objection may be raised saying that if *quiddity* is not in existence, how it can be considered as the recipient of existence. Actually the recipient of existence before getting existence cannot have existence because if it would have existence, it cannot be a recipient of existence. Any such recipient can be considered without having existence at the mental level. The *quiddity* is called existence recipient on the basis of such a consideration because we can consider *quiddity* without having any existence.

9.7
In short, in deciding about the source of existence of a *physical thing*, we should not confuse the *preparatory causes* with its *existential causes*. Actually, there are the following three differences between *preparatory* and *existential causes/dependencies*:

- *Preparatory causes* exist in the physical world and can be sensed by us whereas the *existential causes* are unseen and cannot be sensed. We understand the requirement of the *existential causes* on logical grounds when we apply the derived meaning of existence to the contingency of the *quiddities*.
- *Existential cause* gives existence to the thing whereas *preparatory cause* only prepares the stage for the thing to get existence.
- *Preparatory dependency* comes to an end when the *contingent* come into being but *existential dependency* does not.

As a matter of fact, there is a continuous flow of *preparatory causes* coming one after the other before a certain *quiddity* gets existence. Since every cause in these flows is an effect of the previous cause, such a flow is actually a chain of cause-effect links. Such a chain of cause effect links is formed for each kind of *preparatory causes*. This means that there are many kinds of preparatory cause-effect chains before a contingent gets existence. This understanding of the *preparatory causes* also accomodates the possibility of the validity of the evolutionary theories in the development of different *form*s on the Earth and on the celestial level. Different vegetative and animal *form*s do emerge in the *matter* as soon as the preparatory conditions are fulfilled in the course of history. This may happen in an evolutionary manner as is the view of the evolutionary theories like that of Darwin (1809-1882). But such theories do not give any answer to our basic question as to who gives existence to a new *form* appearing in the *matter* when it is already proved that this *form* is additional to its *matter*. If the existence of *form* is an additional reality as is explained in Chapter 2, it cannot emerge into *matter* just by chance. The organic *form*s cannot emerge in the inorganic *form*s accidentally. The mutations in the genes cannot occur by chance as the existence of each mutant *differential form* is a reality separate from and additional to the parental genes. We cannot ignore the *existential causes* of the appearance of such a diverse spectrum of *differential forms* on the canvas of *matter* just by saying that this all is happening accidentally or by chance in the vast span of time. Such ignorance may lead us to misleading conclusions.

Actually, modern evolutionists ignore the *existential cause* of a *physical thing* by taking the existence getting process for granted.

They inherently assume that everything gets existence automatically when all of its preparatory conditions are fulfilled. The reason for this ignorance is that *existential causes* are unseen and cannot be sensed whereas the *preparatory causes* exist in the physical world and are sensed by us. This is the basic reason that the minds of the philosophers and scientists go to search for the cause of the world in the past history. Even the scientists of the modern world are making futile efforts to find the cause of the physical world in remote past ignoring the requirement of the *existential causes* at each instant of time. They do not feel any need to draw their attention to such a requirement just because these causes are unseen. But to be unseen and un-sensed should not be a sufficient ground for rejecting a category of causes altogether.

In order to have a more clear understanding about the *existential causes*, we specifically have to inquire into the question as to who gives existence to the *physical things* and to the events of this world. We will do this in the next chapter.

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Chapter 10

CREATION OF PHYSICAL WORLD BY GOD AND ANGELS

10.1
In the preceding chapter, we have proved that the *quiddity* of every *physical thing* needs an *existential cause* for getting existence. This cause gives existence to the *quiddity* when its *preparatory causes* prepare the stage for it to get existence. *Attributes* of the physical things also get their existence from such a cause because *attributes* are also contingents. In this chapter, we will try to inquire into this category of causes as far as we can.

The first feature, which is proved for the *existential cause*, is that it must have a *real existence* because if it does not have a *real existence*, this would mean that it is nothing. But 'nothingness' cannot give existence to any thing. If it does not have any existence of its own, how is it possible that it can give existence to any other thing?

Secondly, the *existential cause* of a contingent must have the existence of that contingent too. In order to understand this, it is better to understand a principle, which may be called the *principle of the requirement of the donor's possession*. According to this principle, if a thing A is a donor of a thing B to another thing C, the thing A must necessarily be in the possession of the thing B at the time of giving it to the thing C. If the thing A would not be in possession of the thing B, it cannot give the thing B to thing C whereas we have supposed that it is the donor of the thing B. In other words, non-possession of the thing B by thing A in case of its being a

donor of thing B would violate the law of non-contradiction. Hence, the *principle of the requirement of the donor's possession* being based on the law of non-contradiction is a valid principle.

According to this principle, to become the existential donor of a contingent, the *existential cause* must also be in the possession of the *real existence* of that contingent. Apart from this it is also a fact that a contingent remains contingent even after getting existence. This fact requires that the *existential cause* gives the existence continuously to the contingent and this would also requires that the *existential cause* remains in the possession of the *real existence* during all the life span of the contingent.

After understanding this principle, we now try to find the characteristics of the *existential cause* of the *physical things*. We know from Chapter 8 that cause and effect occur at the level of *real existence* rather than at the level of *quiddity*. *Quiddity* can neither be a cause nor an effect. Hence, the *existential cause* must be a *real existence* rather than a *quiddity*. But who is this *existential cause*? Can it be any *real existence* from the physical world? Actually it is not possible for the *real existence* of any other *physical thing* to give existence to any other *physical thing* because no *physical thing* can fulfill the requirement of having the *real existence* of any other *physical thing*. This requirement cannot be fulfilled by a *physical thing* because the *real existence* of every *physical thing* is exclusive to that of every other *physical thing*.

Exclusivity of the *physical thing* with respect to other *physical things* is proved from the concept of the *individuality* of the *physical things* as discussed in Chapter 5. Moreover, the exclusivity of the *physical things* is also proved from the fact that every *physical thing* is also a part of the whole universe considered as one thing and since the whole physical universe is also a *physical thing*, its all parts must also be absent from each other as is the requirement of the *physical thing*'s definition presented in Section 1.3. Thus every *physical thing* being the part of the whole universe is absent from every other *physical thing*. Due to this absence and exclusivity no *physical thing* can have the *real existence* of any other *physical thing*. This is the reason that no part of the physical world can be the existence donor of any other *physical thing*.

Apart from the exclusivity of the *physical things* from each other, there is one more reason for the fact that a *physical thing* cannot give existence to any other *physical thing*. We know from Chapters 3, 6 and 7 that *real existence* is a reality which is abstract from spatial extension and temporal succession. Given this, existence giving process cannot be a process involved with spatial extension and temporal succession. This process must be beyond spatial extension and temporal succession and hence cannot be performed by a *physical thing* which is by very definition always involved in spatial extension and temporal succession.

In short, the existence donor must not be a thing from the physical world. In other words, it must be a thing either from the *metaphysical world* or from *pure unitary things* as these are the only two categories identified to be logically possible apart from the physical world as shown in Section 1.3. Even if the existence donor would be from the category of the partially physical and partially metaphysical things, it cannot be from the physical part of any such thing due to the reasons given above.

10.2

Now we have to find out whether the existence donor of the *physical things* is from the *metaphysical world* or from the *pure unitary things*. Since each *physical thing* has a lot of different meanings in it including its *quiddities* and *attributes*, the donor of each *physical thing* would either be one thing providing existences to all the meanings found in that *physical thing* or it would be an aggregate of different donors each for each meaning. In either case, the existence donor of a *physical thing* must have some kind of multiplicity in it. In other words, it must be from the *metaphysical world* rather than from the *pure unitary things* which do not have any multiplicity.

Since every particular meaning or *quiddity* is distinct from any other, we can separately identify the existential donor of every particular *quiddity*. In other words, the existence donor of each *quiddity* should also be distinct from the existence donor of any other *quiddity*. Such a distinction and separation can be noticed at least at the mental level as far as we are considering only the existence donor of a particular *quiddity*. Even if we consider such a distinct and separate existence donor, it can also not be devoid of multiplicity because being the existential cause of a particular quiddity it would be a limited thing

and a limited thing always has multiplicity. Its multiplicity arises from the fact that every limited thing, having limitation in it, always has two aspects in it. One aspect is that by virtue of which that thing is that thing itself. The other aspect is that by virtue of which that thing is not any other thing. The first aspect is affirmative because it affirms the thing by itself. On the other hand, the other aspect is negative because it negates for a thing all things other than that thing.

Nobody can say that both the aspects are same. Actually both aspects are united with each other but are not the same because if both the aspects would be same, the second would be envisaged whenever the first is envisaged. But this is not the case. For example, consider a thing A such that A is not B. If somebody envisages A, he does not envisage 'not B' too. Thus both the aspects are not same. Consequently, we can say that every limited thing has at least two aspects and is thus multiple. Therefore, it only belongs to the *metaphysical world*.

Hence we can conclude that every *existential cause* of every single has some kind of multiplicity and thus belong to the *metaphysical world*. These all existential donors exist in the metaphysical world without being absent from each other because it is in the definition of the metaphysical world that its parts are not absent from each other.

Hence, the *existential causes* of the *physical things* are metaphysical in the sense as defined in Section 1.3. From here the meta*physical things* are proved to be actually having a *real existence*. They may be termed as *intellectual principles*[23]; they are intellectual because belonging to a world without absent parts they are abstract from nothingness inherent in *matter* and they are principles because the *real existences* of the *physical things* originate from them. But whatever they may be called, they actually have a *real existence* in the world external to our minds. In short, a *metaphysical world* other than the physical world is proved to have a *real existence* and this *metaphysical or spiritual world* is giving existence to this physical world continuously.

23 In traditional religious philosophies they are sometimes called 'angels' and sometime 'divine attributes'. Plato's conception of Heavenly Forms is also not very different from them.

10.3

Like the *real existence* of a *physical thing* is represented in our minds by the sensed *quiddity* of that thing, the *existential cause* of that thing is represented in our minds by the intellectual *quiddity* of that thing. As we learned in Chapter 7, the *intellectual knowledge* of the *quiddity* is always abstract from the *physical attributes* of the *physical things* and is thus always general to all the respective sensed *quiddities* which get existence in the physical world. Hence, *quiddity* is one when known intellectually and becomes many when gets existence in the physical world. This *intellectual principle*, whose representation is the intellectual quiddity, gives existence to all its respective sensed *quiddities* in combination with the *intellectual principles* of other *quiddities* and *attributes*.

For instance, the *intellectual principle* of all the circles is a single identifiable being which is represented by the mathematical formula of a circle. This formula is the intellectual *quiddity* of the circle whereas the circular layout is its sensed *quiddity* which may be of different sizes depending on its *attribute* of quantity. The circular layout cannot exist externally until it has some size, location etc. But the *intellectual principle* represented by the formula of the circle does not need such *attributes*. It can exist without them. The existence of the circular layout is a particular limited existence while the existence represented by the formula is general to all circles. Since all the circles are drawn according to this formula, we can say that the *existential cause* of all the circles is actually one single metaphysical being which we identify in our minds up to some extent through the representation of the formula of circle.

This metaphysical being gives existence to every circle whenever the required *preparatory cause*s are fulfilled. At this stage one objection may be raised. This *intellectual principle* like the intellectual *quiddity* is also general because all the circles also share it but how this *intellectual principle*, being general to all the circles, can have a *real existence* in view of the fact that we have refuted the existence of the *quiddities* on the basis of their generality in Chapters 5 and 8?

It is no doubt that the *existential cause* of a thing is also general but its generality is different from the generality of the *quiddities*. Its generality may be termed as *pre-multiplicity generality* whereas the

generality of the *quiddities* may be called the *post-multiplicity generality*[24].

The circular layout has the *post-multiplicity generality* because all circles share it when they come into existence. This generality is a *post-multiplicity generality* because it is proved after many circles get existence. On the other hand, the *existential cause* of all the circles is general to all the circles even before they get existence and hence their generality is called *pre-multiplicity generality*. In other words, to have a circular layout is true for every circle but to be an *existential cause* of the circles is not true for any particular circle despite the fact that every circle gets its existence from it. So the meaning of the generality of the *existential cause* is that it gives or can give existence to more than one *physical thing*. On the other hand, the meaning of the generality of the *quiddity* is that it may be shared by more than one thing. Hence these two generalities are different from each other.

In short, it may be concluded that the *existential causes* of the physical things have their own *real existences* but their existences are metaphysical and can be known vaguely through the respective intellectual *quiddities*. In other words, behind every physical *quiddity*, there is always a metaphysical and *intellectual principle*, which gives existence to this physical *quiddity*. It is the principle and the source of all the relational order in the *quiddity*. Thus the relational order found in the *shape forms* of the solid bodies, in the *non-shape forms* of different substances, in the numerical proportions of the invisible particles, in the biotic order of plants or in the *psyches* of the animals, all is the outcome of their respective *intellectual principles*. These *intellectual principles* in combination with each other give existence to the multiplicity of *forms* creating the diverse world of nature as we learned in Chapter 2 that this world is actually the world of *form*s.

Like the *intellectual principles* of *differential form*s, the *attributes* of a *physical thing* must also be caused by their own respective *intellectual principles* as we learned in chapter 3 that the *attributes* are also the comparative relationships. Like the *intellectual principles* of *differential form*s, the *intellectual principles* of the

24 The difference between pre- and post multiplicity generality is also explained by Mulla Sadra in Asfar.

attributes must also be beyond the physical world on the same grounds. This means that the *intellectual principles* of the *quiddities* and the *intellectual principles* of the *attributes* combine together in different proportions to give existence to a certain individual *physical thing*. The effect of such an aggregate of *intellectual principles* begins to appear at the physical level when the *preparatory cause*s for the existence of a *physical thing* are provided. As soon as this happens, they give existence to that thing.

For example, when the *preparatory cause*s for the existence of a circle are fulfilled, the *intellectual principle* of the circle combined with *intellectual principles* of the *attributes*, give existence to it. In the industrial processes, the machines and laborers act as the *preparatory cause*s for the products whereas these *intellectual principles* give the existence to these products.

Similarly, a man is born when, after the fulfillment of the required *preparatory condition*s, the *intellectual principle* of man combined with *intellectual principles* of appropriate *attributes* gives existence to him. These combinations of principles act and protect him throughout his life. However, their proportions may change with the passage of time as men appears to us as growing and moving from here and there.

10.4
Since the existence donors or the *existential causes* of the physical world belong to a *metaphysical world*, they do not have any parts which are absent from each other as is explained in Section 1.3. In other words, they are independent of time and location as time and space are the outcome of the absence of different parts in the *physical things*. This is the reason that the *existential cause* of a *physical thing* gives existence to it at any location at all the times. Wherever and whenever the preparatory conditions are fulfilled, it gives existence to the thing. This means it exists always and everywhere. Even if the preparatory conditions for the birth of an extinct animal *species* such as dinosaur are fulfilled today, its *existential cause* will give existence to it because being beyond time and location it must be ‘always’ and ‘everywhere’.

Same is the case with the *existential cause*s of all the other *physical things* too. This means that all the *existential cause*s of all the

physical things exist together everywhere and for all the times without being limited to a specific location or time. They all can be present together because belonging to the *metaphysical world* they need not be absent from each other. They all are present everywhere and for all the times but could not be restricted to be only at any specific location or at any specific time because they are beyond time and location.

Similarly, they are also beyond other *attributes* such as that of direction and quantity as we see that a thing gets existence in different sizes and at different locations. Many of the industrial products are made in different sizes and colors. Natural *species* of animals and plants also get existence with a range of quantitative and qualitative *attributes*. Some men are bigger than the other ones. Some roses are smaller than the other ones.

Being beyond the physical world, these *intellectual principles* are totally unseen and un-sensed because our senses, being themselves physical things, can sense only the *physical things.* Actually, our sensed knowledge by its very definition depends on the stimulation of senses and this stimulation occurs in with spatial and temporal attributes. This is the reason that we cannot sense *intellectual principles* of the *metaphysical world*. We can sense only their effects, which are the contingent sensed *quiddities* themselves. But we cannot negate their existences just because we cannot sense them as we believe in many things which we cannot see such as molecules, atoms and sub-atomic particles. We can sense only the effects of these invisible particles. In a somewhat similar way but in a totally different perspective, we can sense the effects of these metaphysical beings too in the *form* of physical *quiddities*. They themselves cannot be sensed because they are beyond the physical world. On the other hand, invisible particles cannot be sensed because they are too small to be sensed.

10.5

After getting scientific knowledge about different processes required for the development of the *forms* of different *physical things*, the modern man began to take the existence giving process for granted. Consequently, he began to ignore the existence of any higher principles acting behind the *physical things*. Scientific developments and discoveries in different fields changed the way of thinking of the

modern man. Under the influence of this paradigm shift, it became difficult for the modern man to understand that the need for an *existential cause* remains intact even if all the *preparatory cause*s are provided. For example, if an organism is manufactured even in a laboratory by providing all the *preparatory causes* for it through artificial ways, the need for an *existential cause* for giving it an existence still persists. Such an organism still needs the action of an *existential cause* not only at the time of its creation but also during its lifespan. The provision of the *preparatory causes* in a laboratory does not answer the question as to who is giving the existence to the organism.

In the same way, even if a human being is produced through a test tube process or through cloning or even if outside the womb of the mother, the need for its *existential cause* can never cease just because he is a contingent and existence is not necessary for him.

Should we conclude from all this description of the *intellectual principles* that the existences of the *physical things* only depend on the action of the *preparatory causes* whereas these *intellectual principles*, like physical laws, give the existences to the things only in a passive way? We will inquire into this question in detail in chapter 14. At this stage we can only say that the *real existence* of the *intellectual principle* of a *physical thing* is more intense than the *real existence* of that *physical thing* itself because being donor of the existence, the principle must have a more intense existence. Actually, the existence donor must have an existence more intense than that of the recipient because if the donor has an existence with intensity less than that of the recipient, it cannot give the existence to the recipient. If the donor has the intensity equal to that of the recipient, it would be the same as recipient. To be distinct from the recipient it must have the intensity different from that of recipient and this difference should be in such a manner that the intensity of donor's existence will be more than that of the recipient.

Such a difference in the degree of intensity is possible in existence as we learned in Chapter 4. The more intensity of existence of the *intellectual principles* requires that their existence is not due to the *physical things*. On the contrary, the *physical things* and all the interactions occurring among them is a necessary outcome of the *intellectual principles*. As far as the physical laws are concerned, it

is no doubt, that we understand them through the *physical things* but these laws are actually also due to these *intellectual principles*. But physical laws exist only in our minds whereas these *intellectual principles* really exist in the world external to our minds as is proved above. The formula of the circle is only in our minds but the *intellectual principle* of the circle exists in the external world. Here we can also understand how some of the intellectual actualities at the mental level also have something corresponding to them in the external as is explained in Chapter 7.

10.6

One more characteristic of the *existential causes* can be noticed at this stage. We know that every *quiddity* gets its existence from its *existential cause*. This means that every *intellectual principle* is after all limited to a specific *quiddity* only. For example, the *intellectual principle* of man should be totally different from the *intellectual principle* of a tree or from the *intellectual principle* of water. In other words, every *intellectual principle* is also a limited existence in a respect and is thus cannot be among the limitless *necessary existences*. In other words, they must also be among the *contingents* because all existing things must be either a *necessary existence* or a contingent. From here it also follows that being a contingent each of these *intellectual principles* further requires an *existential cause* for getting its own existence.

At this stage, the question arises as to whether these *intellectual principles* also depend on some preparatory conditions for getting the existence. Actually, being abstract from time and other physical *attributes*, these existences do not depend on any kind of preparatory conditions. Hence they are among the *unconditional contingents* as categorized in Section 9.4. Actually, the *preparatory dependency* is the requirement of only the *physical things* which exist in *matter* because *matter* can have the potentialities of many things at a time but can have the *actuality* of only one thing at one instant of time. This weakness in *matter* is due to the factor of nothingness or in other words, due to the weak intensity of its existence. *Matter* is actually at the weakest level of existence. Due to the attachment with *matter,* a *physical thing* is always changeable and moving and thus always requires some preparatory conditions to be fulfilled before getting a certain state of existence.

But such is not the case with the *intellectual principles* which being *metaphysical things* does not have any parts absent from each other as the definition of the *metaphysical things* given in Section 1.3 states. Moreover, *intellectual principles*, having more intensity of existence than *physical things*, are abstract from *matter*. These are the reasons that they do not depend on the fulfillment of any preparatory conditions. Due to absence of this dependency, they get the existence from their cause without any delay. Thus they are beyond the constraints of time and are thus eternal. Nothing is in a waiting state in them. Whatever is possible for them is in a state of *actuality* in them. This is the reason that they are also totally immutable. No motion is possible in them because motion is present only in those things which have something in *actuality* and something in *potentiality* as is also mentioned in Section 6.3. Such things are only *physical things*. *Intellectual principles* have everything in them in pure *actuality*. On their own level, there is no *potentiality* in them. Thus motion is neither required nor possible in them.

10.7

In short, *intellectual principles* have only the *existential dependency* and due to this the question arises about the source of their existence. A *physical thing* cannot be the source of the existence of an intellectual being. It is because, in this way the intellectual being would also depend on preparatory conditions because its cause, being a *physical thing*, would depend on some preparatory conditions. Dependence on preparatory conditions means that they are not beyond time whereas we have already proved that they are beyond space and time. In short, the *existential cause* of all the *intellectual principles,* rather of all the metaphysical beings, must be some other intellectual being of a world other than physical.

But that other intellectual being may again be limited to a certain *quiddity* and thus would again turn out to be a contingent requiring an *existential cause* for its existence too. In this way, a cause-effect chain may be envisaged for the *existential cause*s too because each *existential cause* would also need an *existential cause* for itself as far as it is a contingent. But this chain, unlike the chains of preparatory cause-effect links, is not spread in the flow of time because *existential cause* is not needed before the contingent rather it is needed at the same time when the contingent exists. Thus cause in

the preparatory chain temporally precedes the effect whereas the cause in the existential chain precedes the effect only existentially rather than temporally.

In order to differentiate these two chains clearly, it would be better to envisage them as horizontal and vertical chains. Since temporal precedence is only the precedence of the time of occurrence and not an original precedence, the preparatory chain may be considered as a horizontal chain. On the other hand, the *existential cause* has an original and existential priority and precedence over its effect as it gives existence to the effect and its existence is more intense than that of the effect. This is the reason that the chain of *existential cause*s may be envisaged as vertical considering the causes on the higher side of the effects.

10.8
At this stage, a question arises: where a vertical chain for a single thing will go at a single instant of time? There may be many contradictory possibilities in this regard. Firstly, this chain would either branch into two at some point or would continue upward as a single vertical line. In the case of second possibility, the single chain may possibly be turned into a loop ending at the effect itself or it may also be possible that it may continue in the upward direction without forming a loop. In the second case, there are again two further contradictory possibilities. The first is that it will extend indefinitely with indefinite number of cause effect links and the second is that it will end at one certain cause? We will inquire into the validity of all these possibilities in the following sections:

10.8.1
A vertical chain of *existential cause*s is always single for one single effect at a single instant of time and thus cannot have any branch. It is because there can be only one *existential cause* of one effect. There cannot be two or more than two *existential cause*s for one effect because the effect will not require another cause once it comes into existence by the action of one cause. If the effect would be due to the aggregate of two or more beings, this aggregate, considered as one entity, would be the *existential cause* of the effect. If some common feature of two or more beings would be the

cause, that common feature, considered as one entity, would be the *existential cause* of the effect in question. In short it is necessary that one single effect will have one single cause. Consequently, only one single chain of cause-effect links is formed for a single effect at a single instance of time and will not branched into two at any point.

10.8.2
Similarly, this chain of cause effect links cannot *form* a closed loop too. The formation of a closed loop would mean that the continuation of the cause-effect links from the effect to the cause, would end at the ultimate effect itself. In other words, the ultimate cause of an effect would be that effect itself. This would mean that the same thing have a precedence over its own self on the basis of being its own cause. Since a being cannot have precedence over its own self, the formation of such a loop can also not be possible.

10.8.3
Indefinite continuity of such a chain is also not possible. If there would be no end to the continuity of this chain, each part of the chain would have the following two essential characteristics:

1. Every part would be existing;
2. Every part would be an effect of a cause or in other words every part would be contingent.

If parts are contingent, the whole must also be contingent. Thus the whole chain, considered as an aggregate, would be a contingent and thus require a cause. No contingent can be the cause of this aggregate otherwise it would be included in the aggregate itself. Thus such a cause should be a being which is other than the contingent beings. Therefore, such a being cannot be other than a *necessary existence* because all existing things are either *contingent* or *necessary existences* as explained in Section 9.1. This *necessary existence* cannot be the cause of each part of the chain because each part of the chain is an effect of its preceding part and an effect can not have more than one cause as already explained above. Thus the *necessary existence* must be the cause of such a link which is not the effect of any other cause. Therefore, it is necessary to break the continuity of the chain at a certain

point which is the effect of the *necessary existence*. Thus it can be maintained that a chain of indefinite number of effects cannot be possible and it must end at a *necessary existence*.

10.9
Now the question can be raised about the number of the *necessary existence*s. When the vertical chains are being applied to each point of the horizontal chain, a number of vertical chains must exist producing the need of many *necessary existence*s as their ultimate causes. It is true that many vertical chains can be envisaged for the continued changes in this world but it does not mean that each chain is originating from a different *necessary existence*. Actually, *necessary existence*s cannot be more than one because if there were two or more than two *necessary existence*s, some of them would have such differentiating features which are not present in some other *necessary existence*. This would mean that the *necessary existence* devoid of differentiating feature would be incomplete with respect to that feature whereas we have explained in the previous chapter that *necessary existence* is a perfect and infinite being. *Necessary existence* can not be incomplete with respect to any feature whatsoever because to be incomplete means *necessary existence* is dependent on some other being for its completion and thus is no more a *necessary existence*. In short, it can be concluded that *necessary existence* cannot be other than one by its very definition.

The unity of *necessary existence* is also evident from its infinity and limitlessness. As elaborated in Section 9.2.1, *necessary existence* is perfect, infinite and pure unitary thing. Rather, there cannot be any pure unitary thing other than *necessary existence* because whatever would be pure unitary thing, it would always be limitless as explained in Section 9.2.1 and limitless thing cannot be more than one. It cannot be more than one because nothing can be outside its limits. If anything would be outside its limits, it would not be limitless. From here too, it can easily be concluded that *necessary existence* cannot be more than one.

10.10
From all of the above discussion, it can easily be concluded that all the vertical chains emerge from one single being who is *necessary existence* and who is providing existence to the whole of the world at

each instance of time. As far as the horizontal chain of the *preparatory cause*-effect links is concerned, its each point is located at the lowest end of the vertical chain as the *physical things* have the weakest level of existence. In this way, the horizontal chain may be envisaged as making a helix around the *necessary existence* in such a manner that each point at this helix is connected to the central point of *necessary existence* through the chain of *existential cause*-effect links. From here it can also be concluded that *necessary existence* is not merely a logical possibility as we consider it in Section 9.1. Rather it really and actually exists[25]. This being is the ultimate[26] single principle and the first *existential cause* of the rising vertical chains of *intellectual principles* creating the physical world. In this way, this being is the sole creator of not only all the *intellectual principles* but also whole of the physical world.

At this stage an objection may be raised that God, being one and single, should give existence to only one thing. Given this fact, how He can give existence to such a multiplicity of things which are spread around us? Actually, the multiplicity of effects increases gradually starting from the *first effect* to the world of the multiple *physical things*. It is no doubt that the *first effect* caused by *necessary existence* must be one and single. But being a contingent the *first effect* also has the duality of having existence and having some kind of limitation as limitation is the essential requirement of every contingent. This duality of the *first effect* is its multiplicity which increases in the lower levels of existence till the maximum multiplicity of the physical world.

From here it is again proved that there are many layers of metaphysical beings in the metaphysical world with varying degrees of multiplicity starting from the least multiplicity of the first effect to the multiplicity of the intellectual principles who give existence to the world of multiple *physical things*. Actually, multiplicity increases with the decrease in the intensity of existence. On the other hand, it

25 The ontological, cosmological and physico-theological proofs of God's existence have been discussed by different philosophers in different ways since ancient times. The proof of God's existence given in this chapter is a blend of these proofs ultimately based on evident truths and concepts.

26 The word 'ultimate' is used here under the perspective that existence is the ultimate conception of human understanding. Even if we envisage a thing or a concept in which the principle of necessary existence is assumed to reside, there would be no name for that according to our perspective. In some books of metaphysics, the word 'Non-Being' is used for such a thing or concept which is, of course, not nothingness. At the level of this thing or concept, human understanding collapses according to our perspective. The use of the word 'ultimate' at this point may, thus, not be correct if this perspective of ours is not correct.

decreases with increase in the intensity of existence on the rising vertical chain of existential cause-effect links and ultimately vanishes away at the pure unitary *necessary existence*. This issue will further be explained in Sections 13.7 and 13.8.

What is stressed at this stage is the fact that this single being of *necessary existence* does not need an *existential cause* because He necessarily exists. His Existence is necessary for Him and according to the *principle of essentiality* there is no need for a cause for a meaning, which is necessary for a being. *Necessary existence* is that for whom existence is necessary. Thus there is no need of a cause for His existence. He is Himself the cause of His own existence.

The conception of this being as elaborated here and also in Section 9.2.1 is fairly similar to the most of the conceptions of God found in the esoteric circles of the traditional philosophies and religions[27]. In this perspective this being may also be called God. But whatever it may be called, this being is the one who is creating this world.

Despite similarity of this conception of God with other conceptions, there are many points of differences too. Among such differences, the most important one is related to the continuity of the creation process. According to the conception presented above, the process of the creation of this physical world is not undertaken only at some primordial point of time like billions of years ago as is commonly understood. Rather this process is a continuous process occurring in the present time too because everything in the world is contingent and continuously requires an *existential cause* for its survival. Thus God is creating this world continuously at each instant of time. He has been doing this continuously since the time immemorial. This conception of *continuous creation* is presently not very commonly understood along with the conception of God.

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27 The word 'most' in this sentence is used on the basis of the conceptions of God in the esoteric circles of Hindu, Islamic and Christian religious philosophies as well as in Greek, Chinese and Shinto philosophies. But in all these ideologies too the conception of God is, of course, have a wide variety of shades even within one single ideology.

Chapter 11

ACTIONS OF GOD AND ANGELS IN PHYSICAL WORLD

11.1

We learned in the last chapter that *preparatory causes* are also required before a *physical thing* gets existence in addition to the requirement of the *existential cause*. We also learned that whenever the *preparatory cause*s and conditions are fulfilled, the thing in question gets existence from its *existential cause*. In such a situation, it appears to us that the main importance in making a thing lies in fulfilling the preparatory conditions. Industries are also established in order to fulfill the required *preparatory condition*s for the massive production of their products. The farmer's efforts to grow a crop are also among the *preparatory cause*s for the existence of the crop. The role of parents in giving birth to a child is also among the *preparatory cause*s of child's existence. A lot of instances may be quoted in this regard. Such an important role of the *preparatory causes* in getting existence for a *physical thing* requires that we should also try to find out the ultimate cause behind the *preparatory causes*.

Since *preparatory causes* flow in the time, motion is the basic feature of the *preparatory cause*s. This motion may be that of the activities of different agents working to make a certain thing or the motions of *form*s before the appearance of the *form* under consideration or this may be among the motions involved in the fulfillment of the required conditions. This fact requires that we

make an inquiry into the cause of the motions in the *physical things* in order to find out the ultimate cause acting behind all the *preparatory causes*. In order to undertake such an inquiry, we first try to see what factors are generally considered as the ultimate causes of the motions.

11.1.1
The modern science tells us that force and energy are the ultimate cause of the motions of the *physical things*. For example, when a force is applied to a *physical thing*, it begins to move in its location. The motions in the sizes of a thing are also the result of force coming out of some kind of energy. Similarly, the changes in the *differential form* of a thing are also due to the application of some kind of force or energy as we see that the energy and force play an important role in the growth of plants and animals. The motion in the direction, which is known as the angular motion, is also due to the application of force. Hence, the application of force appears to be involved in all the four kinds of motions. In the above perspective, the force causing the motion or the thing exerting the force is usually considered as the cause of the motion or the mover of that moving thing.

11.1.2
But there are many other motions in which the force is not generally considered as the ultimate cause. For instance, the spatial and angular motions in a frictionless framework, such as in upper space, once generated by a force continue for ever without the need of a further force. Many of the motions of the celestial bodies are of this kind. If force is the cause of the motion, the question arises as to why a *physical thing* continues to move after the application of force is stopped. For example, if we throw a thing in the space, it will continue to move for ever provided it is not stopped, although, there is no more application of force on it.

Modern science tells us that the thing moves due to inertia. This means that in such kind of motion, the inertia of the *physical thing* is considered as the ultimate cause of the motion.

11.1.3
The ultimate cause of many of the other motions is described as the thing itself or the nature of the moving thing. The motions of many of the sub-atomic particles and motion of ideas in our psyche may be included in this category. Even the ultimate causes of many kinds of the motions within the bodies of the plants and animals are not clearly known, though, they are also affected by forces acting within the bodies. The disintegration of the radioactive materials, proton decay and the bio-chemical processes in the living organisms also come under this category. Nature of the moving thing itself is usually considered as the cause of such motions.

11.1.4
Sometimes, a thing appears to be moved by another thing but without the application of any such thing which is called 'force'. For example, many of the *physical things* appear to cause a change in the psyche of human beings by stimulating their senses in some manner. The thing affecting the change may be termed as the mover in such kind of motions because the change occurs apparently due to them. Hence all the three kinds of knowledge and any other change in mental state are apparently caused by something or some event in the external world. Reflexive actions of our bodies may also be enumerated in this category.

11.1.5
Many of the motions of our limbs and other body parts are ultimately caused by our free will as we know very evidently that a normal person can move his limbs in different directions on his own will. Through his different body organs, a man can also move other physical bodies too. It is no doubt that there may be a role of the electro-chemical energy present in human muscles in such motions. But the sequence of all these motions is ultimately initiated by the will of the person. To understand this issue more clearly we can consider the example of a bicycle driven by a man. The motion of the wheels may be termed as the cause of the motion of bicycle. The motion of chain may be considered as the cause of the motion of the wheels. The motion of the pedals may be considered as the cause of the motion of the chain. The

motion of the feet of the man may be considered as the cause of the motion of the pedals. The man's will and intention ultimately appears to be the cause of the motion of his feet. When he intends, he applies the force on the pedals through his feet. If he intends to increase the speed, he applies more force. If he intends to slow down, he reduces the force. Thus his free will appears to be the ultimate cause of the bicycle's motion.

It is introspectively evident that a normal man has a free will in applying the force in the physical environment around him. On the one hand, there is flexibility in his limbs and other body parts to apply forces of different magnitudes and in different directions. On the other hand, there is a potentiality in different physical things to move in different directions according to the application of force. Due to these factors, a man applies force of different magnitudes and in different directions on his will to move different things in different directions in order to fulfill his different desires during his life.

Human free will may also be considered to be the cause of some of the imaginative and intellectual knowledge as human being can bring different ideas in his mind on his will. These all facts are very evidently known.

11.2

In short, different kinds of causes are identified for different kinds of motions. But can these inductively identified causes be realistically considered as the real movers? For the correct answer of this question, we have to investigate who must be the mover on the basis of the definition of motion given in Chapter 6.

According to its definition, motion is the actualization of the states of meaning which are potential in a thing. In other words, every moving thing moves for the actualization of a meaning which is previously potential in it. Moreover, we also know from Chapter 6 that the motion is one unit of existence which completes gradually.

According to the *principle of the requirement of the donor's possession*, the cause of the motion or mover of the thing must be a

being which is in possession of all the states of meanings through which the moving thing passes during its motion because if the mover does not have the whole unit of motion's existence, how can it give it to another thing. This means that to become the *mover* of a moving thing, the mover should have all the meanings which are going to be actualized in the moving thing throughout its motion.

For instance, consider a thing which exists at point A but it has the *potentiality* of moving to another point B. According to the definition of the mover given above, the mover of this thing must have the *actuality* of being at point B as well as at all those points which lies between A and B.

After defining the mover, we can now verify whether the movers considered commonly by modern science and identified in Section 11.1 fulfill the requirements of this definition.

11.3
Force and inertia cannot fulfill these requirements because such meanings are only the *attributes* of a *physical thing*. Being *attributes* of a *physical thing*, how can they have the different states of some other attributive or *essential meanings* of the moving *physical thing*?

The nature of a *physical thing* is also nothing other than its *quiddity* which is known only at the mental level and do not exist as such in the external real world. Being only a mental meaning, it can also not fulfill the requirements of a mover and thus cannot be the cause of the motion.

Free will is a mental faculty present in human beings. Such a faculty is among the meanings of their *last differential form*. Being a particular meaning it does not fulfill the requirements of mover mentioned above as it cannot possess all the states of meanings of motion of a thing.

The thing applying the force on the moving thing can also not fulfill the required conditions of the mover. Actually, no *physical thing* can do so because no *physical thing* can have all the states of meanings through which the moving thing passes at the same time. This means that the mover must be from a world other than the physical world.

We can understand this issue more clearly by considering an example from the real life. Consider a moving train which is dragged by its engine. What is the mover of the train in this case? An ordinary scientist would answer that engine is moving the train and energy supplied to the engine is moving the engine. But here a question arises. Does the engine have the *actuality* of all the points of location, which the train gets during the motion? If we concentrate on this issue we can easily work out that the answer to this question is in negative as explained below.

Consider a point Y at which the engine arrives during this motion. When the engine is at point Y, the train is at another point say X which is, of course, behind the point Y if the engine is installed ahead of train. At this point, the train has the *potentiality* of getting at point Y. But at the very moment when the train gets the point Y in *actuality*, the engine must have moved ahead to another point Z and thus would not have the *actuality* of the point Y at that time when the train gets it. In the same way, during whole of the motion, whenever the train gets the *actuality* of a location, the engine has lost *actuality* of that location at that time. Thus the engine cannot be the mover of the train according to the *principle of the requirement of the donor's possession*. If the engine does not have the *actuality* of a meaning itself, how can it give the *actuality* of this meaning to another thing?

On the same ground, the energy supplied to the engine can also not be the mover of the engine or train. Actually, no other *physical thing* can be the mover of any other *physical thing* even if it applies the force on that thing just because no other *physical thing* can have all the meanings through which the moving thing passes. It is because a *physical thing* at a certain instant of time is limited to have its own attributes and thus cannot have the attributes of other things. Same is the case with the *trans-substantial motion* as well as with the motions in the *attributes* of quantity and direction. The mover of a *physical thing* having *angular motion*, for instance, should also have the meanings of all the directions through which that thing passes.

The moving thing itself can also not be the mover because only the *potentiality* of the meanings of motion is present in that thing before the start of the motion. Such meanings are not present in the thing in *actuality* before the motion. If they were present in the moving thing

in *actuality*, there would not be any motion because if a meaning is already present in a thing how it can move towards it.

For example, whenever a thing is at point A, the feature of being at point B is in a state of *potentiality* in that thing. Since to be at point B is not in a state of *actuality* in that thing, it cannot give this location to itself i.e. it cannot move itself from A to B. Actually a thing cannot have something in *actuality* as well as have its *potentiality*.

In short, the mover of a moving thing can neither be any force nor inertia nor any other essential meaning of a *physical thing*. It can also not be the thing itself nor be any other *physical thing*. Actually, no *physical thing* or any of its attributive or essential meaning can be the mover of any motion in the physical world. This means that the mover must be from the world other than the physical world.

11.4

In chapter 6 we learned that the motion is actually the gradual completion of the *real existence* of the moving thing. In other words, motion is due to the gradually completing states of existence. This means that the mover of a thing must be a thing which is the cause of these gradually completing states of existence. In other words, mover of a thing must be its *existential cause* or its *intellectual principle*, which gives existence to that thing as discussed in the last chapter.

It is the physical thing's *intellectual principle* which not only has the *actuality* of the existence of that thing appearing as at rest but also has the actualities of all kinds of gradually completing states of existence due to which that thing appears to us as moving. *Intellectual principle* of a *physical thing* have the actuality of all possible kinds of gradual states of existence due to which a *physical thing* may move in any direction and with any intensity of speed. As proved in Section 10.6 nothing is in waiting state in the *intellectual principles*. They are always present and everywhere. Due to their omnipresence, neither a start nor an end is proved for a moving *physical thing* as explained in Section 6.7.1. When a *physical thing* appears to start a motion, it does not have a start because the state of motion of the meanings is already in existence in its *intellectual principle*. In other words, the *physical thing* is already moving before the start of its apparent motion. It only appears to move to our senses

when its preparatory conditions are fulfilled. Similarly, its motion does not have any end because its motion only appears to be stopped whereas the state of motion still persists in its *intellectual principle*.

Having all the states of motions, the *intellectual principle* gives the moving thing that state of motion, whose preparatory conditions are fulfilled by the force being applied to the moving thing. This is the reason that the *intellectual principle* always moves the thing with the speed and direction corresponding to the force being applied.

Thus the role of force is actually to prepare the stage of getting the gradual state of existence for the moving thing. In this way, the application of force or the thing applying the force is only a *preparatory cause* of the motion. But it is not the mover of the moving thing. A resistive force also acts in the same way to stop a moving thing and is thus only a *preparatory cause* of stopping or decelerating the moving thing. Force is actually that agency which is the *preparatory cause* for a change in the state of existence of a thing.

The thing applying the force such as the engine is also the *preparatory cause* of the motion of the train. When the engine exerts a force on the train, one of the gradual states of existence is manifested at the physical level from the different gradually completing states of existence found actualized in the *intellectual principle* of the train. As soon as the force is exerted by the engine, the *intellectual principle* of the train begins to give the train that state of existence which is corresponding to the intensity of force. As a result, the train appears to move with a certain intensity of speed.

Similarly, when a person throws a ball in the air, he is only the *preparatory cause* of the motion of the ball. The motion of the hand of the thrower of the ball fulfills the preparatory conditions for the *intellectual principle* of the ball to give a gradually completing state of existence to the ball changing the existence of the ball from the state of rest to the state of graduation. Since the state of existence is changed, the ball continues to be moved by its *intellectual principle* even after being released by the thrower as its state of existence is now converted into a gradual state with respect to the *attribute* of location. The modern science express this situation by saying that the thrower applies a force to the ball and gives it some energy due to

which the ball continue to move even after its release from his hands. But in *actuality*, an unseen metaphysical mover moves the ball and this metaphysical mover is nothing other than the ball's own *intellectual principle*. This mover moves the ball when it is in the moving hand of the thrower as well as after its departure from his hand.

Free will of a person is also only a *preparatory cause* of a motion. The real mover is the *intellectual principle* of the moving thing in such cases too. For example, when a man walks or moves his hands, he does this on his own will but the real mover in this case too is his *intellectual principle*.

In short, everything is moved by its own *intellectual principle* and the action of the factors like forces and free will is only to fulfill the preparatory conditions for a certain state of existence. Such factors only prepare the conditions for the manifestation of a certain state of existence at the physical level. The *intellectual principle*, which has the *actuality* of all the gradual and stationery states of existence of a thing, actually moves the thing according to that certain state for which the preparatory conditions are fulfilled.

The motion in our mental state in getting knowledge etc. is also caused by our *intellectual principles* rather than by any external thing or event which are only a *preparatory cause*. As far as the *sensed knowledge* is concerned, the corresponding change in psyche is apparently caused by the stimulation of the senses. But the real cause of this change must also be our own *intellectual principle* rather than the stimulation of the senses or the *physical thing* stimulating the senses. The stimulation or the *physical thing* stimulating the senses are actually, only the *preparatory cause*s of this change because the *real existence* of the sensed *physical thing* does not have the sensed percept to give it to the psyche. The psyche is changed to this percept by its own *intellectual principle* who is in possession of all such percepts.

Similarly, when we get an imagined or *intellectual knowledge*, our *intellectual principle* causes a change in our psyche such that our psyche becomes the imagined thing or intellectual idea. But in such a case, an external thing is not always acting as a *preparatory cause* like in case of *sensed knowledge*. It is introspectively evident that in

getting *imagined* or *intellectual knowledge* sometimes our own free will acts as the *preparatory cause* and sometimes the suggestions of other people, or another external thing is the *preparatory cause*.

Hence, sensed, imagined and *intellectual knowledge* and any other mental state including sleep are caused by our *intellectual principle* only. The appearance of different mental ideas, whose apparent *preparatory cause* is not clearly known, may also be included in this list. The role of human free will in this regard also acts as only a *preparatory cause*. The reason of all this is the same principle which is known as the *principle of the requirement of donor's possession*. Since our *intellectual principle* is the only being which has the possession of all these different mental states and mental occurrences, it is the only being causing this change. All other factors are mere *preparatory cause*s.

From all this discussion, it follows that the *preparatory causes* only fulfills the conditions for the appearance of a certain state of existence of the moving thing. But this does not mean that *intellectual principles* are also changing with the moving thing. Actually, no change is created at the level of *intellectual principles* as they have the *actuality* of all the states integrated in it. Whatever is potential or possible at the level of *quiddity* is already in the state of *actuality* in them. Thus the change appears to us only at the level of *quiddity* at a time when a certain *preparatory cause* fulfills the conditions for a particular determination of a certain state of existence manifesting that particular determination in front of us. In short, there is actually no change at the level of the totality of existence; it is only at the level of *quiddity*.

Now question arises as to what is the source of the factors like force, inertia, free will and nature of things?

11.5

The modern science tells us that the capacity of a thing to apply force, which is called energy, is a converted form of another kind of energy. For example, the energy from the fuel is the chemical energy present in the hydro-carbon molecules. This chemical energy is the result of the converted form of the solar energy which in turn is due to the fusion process going on the Sun. Modern science also tells us that the ultimate source of all kinds of energies is the four basic

forces. These forces are termed by modern scientists as the gravitational force, electro-magnetic force, weak nuclear force and strong nuclear force. Another latest scientific theory combines the electro-magnetic force and weak force under the name electroweak force and thus enumerates three basic forces instead of four. All these three or four forces are present at the level of the atomic and sub-atomic particles according to modern physics. Electro-magnetic force is the force found between electron and proton. Gravitational force is also found among the atomic particles. Strong nuclear force is the force which binds the protons together in the nucleus despite the repulsive force among them.

According to modern science, all the other forces are the outcome of these four or three forces. But from our standpoint this view is not correct. Being a quantity, force is actually an *attribute* of the *physical things*. This is the reason that every force has, like the physical *attribute* of quantity, an existence separate from the existence of its parts as is proved in Chapter 3. Hence a force of 1000 units is not constituted by thousand small forces of one unit each. Rather it has only the *potentiality* of having one thousand pieces of one unit each. Whenever, two or more than two forces are joined together, they themselves extinguished and a third force of the magnitude of the sum of those two get existence. The validity of such conclusions has already been explained in Chapter 3. Hence each bigger force exists on its own and its source is the *form* of the whole thing exerting the force rather than the smaller parts of the thing or those of the force. Since the source of the *form* of every *physical thing* is its *real existence* and that of the *real existence* is its *intellectual principle*, the ultimate source of the force must also be the *intellectual principle*.

Actually, *matter* of a thing cannot be the source of energy or force in that thing. It is always some *form*. For example, the source of chemical energy present in a fuel is the *form* of hydro-carbon molecules rather than hydrogen and carbon atoms.

Even the source of the four basic forces is also the *form* of the particle having the force rather than its *matter*. For example, the source of positive and negative electric charge is the *form* of protons and electrons respectively. Similarly, the source of the strong nuclear

force which binds the protons in the nucleus is also the *form* of the nucleus or that of the atom rather than the protons or neutrons. Exactly in the same manner, the source of the gravitational force between two bodies is also the *form*s of those bodies rather than their *matter*.

In short, the ultimate source of force in any *physical thing* is its *intellectual principle* because the source of all *form*s is also the *intellectual principles*.

11.6
As far as the free will of a human being is concerned, its source is also his *intellectual principle*. Being part of the *last differential form* of man, his free will emerges from his *real existence*. Since everything's *real existence* emerges from its *intellectual principle*, the source of the free will in man must also be his *intellectual principle*.

11.7
The nature of a thing or its inertia is also either among the *last differential form* of the thing or its *attributes*. We know from Chapters 2 and 3 that all these meanings emerge from the thing's *real existence* and thus ultimately emerge from its *intellectual principle*. In short, all these factors which are usually considered as the movers of things also emerge from the *intellectual principles* of the higher *metaphysical world*.

11.8
But we have concluded in the last chapter that the ultimate source of existence for the *intellectual principles* is the *necessary existence*. This means that the source of each and everything is nothing other than *necessary existence*. This is the being who is the first mover of all motions in the physical world. Not only every thing gets existence from this being but also each and every event preparing the stage of getting this existence also gets existence from Him. Each and every thing and each and every event in this world are the effect of the higher[28] intellectual world and ultimately the effect of the *necessary existence*. No motion, no event, no activity and nothing can get

28 Here the word 'higher' is used with reference to the vertical chain envisaged for the existential cause-effect links mentioned in Section 10.7 because the cause has more intensity of existence than the effect.

existence without His Will and Knowledge. These conclusions also show that God did not create this *physical world* only in remote past like billions of years ago and since then, the world is operating on its own. Rather God is creating it continuously at each instant of time both in past and present. If this world continues to exist in the future, this will also be only due to His *continuous creation*.

From the conclusions of this and the last chapters, we understand existence at three broad levels. The first level is the level of pure *necessary existence* who is the sole ultimate mover and sole ultimate *existential cause* of all the things in the world. The second level is that of the applicable existence of the metaphysical *intellectual principles* and the third is the level of limited existences of the *physical things* which emerges from the second level of existence. The first two levels of existence are completely immutable because all the possibilities of existences are in a state of *actuality* in them. All the changes appearing to human minds are due to the graduation at the third level of existence. At this point, three comparative relationships among the existences with respect to their state of changeability may also be identified.

The first kind of comparative relationship is between immutability of *necessary existence* and immutability of *intellectual principles*. This kind of relationship may be called *Eternity*. Since both sides of this relationship are immutable, it is a perfect simultaneity.

The second kind of relationship is between immutability of *intellectual principles* and the mutability of the physical world. This kind of relationship may be termed as *Perpetuity* as its one side is immutable and the other one is mutable. The third kind of relationship, which is known as *Time*, is among the mutability of the *physical things* themselves. Both sides of this relationship are moving and create the sense of time in our minds due to the mutual difference in the intensity of their motions as has already been explained in Chapter 3.

At this stage, some contradictions arise which are as follows:

1. If *intellectual principles* and *necessary existence* have existence more intense than the *physical things*, why human beings normally cannot see or know them.

2. In Section 9.2.1 it is stated that the *necessary existence* being perfect include everything and nothing can be outside it. If it is true, how metaphysical and physical worlds can be admitted to have existence separate from *necessary existence*.
3. From the above discussion of the *intellectual principles*, it appears that they are nothing other than what the scientists called as the set of physical laws according to which different things come into existence and behave with each other. In this perspective, they as well as God appear to be passive and theoretical entities. Is it correct?
4. If everything is moved by *intellectual principles*, how do they remain immutable? In the same lines, question also arises about *necessary existence* that how it is the first mover of all the motions of the world despite being immutable.

We will inquire into the answers of these questions in the next four chapters.

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Chapter 12

KNOWLEDGE AND METAPHYSICAL WORLDS

12.1
From the discussions of the last two chapters, it may easily be concluded that God and the *intellectual principles,* while giving existence to this physical world, are just in front of us. Moreover, we also learned that God and the *intellectual principles* have existence more intense than that of the *physical things*. At this point an objection arises. If God and the *intellectual principles* have more perfect and intense existence than the *physical things* and if they are also right in front of us, why we are normally unable to know them as we know the *physical things?* We can have the knowledge about them that they exist but we cannot know these beings themselves. Do we have some inability? Or are these beings, through some means, hidden from us? If such is the case, there must be some reasons for that. What may be these reasons? To answer these questions, we have to investigate further into the reality of the 'knowledge', 'knower' and 'known' especially with reference to God and *intellectual principles*.

12.2
In other words, we have to investigate what 'knowledge' really is, what type of the knowledge is the knowledge of these beings and what types of the knowledge we normally have in our daily lives? Secondly, we should also investigate what 'knower' really is? What kind of the 'knower' one should become in order to be the knower of these beings and what kind of the 'knower' we normally are in our

daily lives? Thirdly, we should also investigate what 'known' really is? What kind of the 'known' are these beings? and what kinds of the 'known' we normally encounter in our daily lives?

In short, we should know more about 'knowledge', 'knower' and 'known'. What kinds of these three do we normally encounter? And what kinds of these should be in case of the *intellectual principles* and God.

12.3

In chapter 7 we learned that it is necessary for the knowledge to be abstract from nothingness inherent in *matter*. But we did not discuss what are exactly 'knower' and 'known'?

We can start our investigation about knower and known through a very simple example of the *sensed knowledge*. Consider a tree which is in front of a man in such a manner that only the tree is present in his field of vision and he do not have any idea in his mind except the image of tree. In this case, the sensed percept of the tree is the knowledge but who is 'knower' and 'known'. An ordinary answer may be that the man is the knower. But if it is asked what part of man is exactly the knower? The answer will be that the psyche of man is the knower. But what is psyche at this time. Since we assumed that man does not have any other idea or any other percept apart from the percept of the tree, the psyche of the man is nothing other than the knowledge of tree itself. In other words, there is no difference between knowledge and knower in this example.

And who is 'known' in this case? An ordinary answer would be that the tree is 'known'. But we know that the tree itself or its *real existence* does not come into the psyche of the man. We know from Chapter 7 that the *real existence* of *physical things* cannot be known because their each part is absent from any other part. Hence, it is only the percept of the tree which is actually 'known' in the above example. In other words, there is no difference between knowledge and known in this example as there is also no difference between knowledge and knower. Consequently, knowledge, knower and known are the same in this example.

This example shows that the separation of the knower from the knowledge is due to the fact that knower has some other parts which do not participate in the knowing process. Otherwise knower and knowledge is the same thing. Similarly, the separation of the known from the knowledge is also due to the fact that the thing stimulating our sense organs is considered to be the 'known'. Otherwise, the known and knowledge is also the same thing.

This conclusion of the unity of knowledge, knower and known is also true for all kinds of knowledge no matter what is the content of the knowledge or percept because its validity does not depend on the content of the knowledge or percept. So change of content cannot invalidate this conclusion. Independent of any particular percept or knowledge, whatever is known is actually the knowledge itself and knower is also nothing other than the knowledge itself and what is known. Hence, there is a unity in knower, knowledge and known in all cases.

This is also true even when we see or sense many things at a time or we have many mental ideas. In such a case, the aggregate of the percepts of different things or aggregate of the ideas is the knowledge, the knower as well as the known. When we sense as well as get some *imagined* or *intellectual knowledge*, the aggregate of all these percepts and ideas is the knowledge, knower and known.

The unity of knower, known and knowledge may better be understood when we focus our attention on the knowledge of our own self. When a man knows himself, he himself is the known, knowledge as well as the knower. It is because if these three were different things, this would mean that he is three different existences at the same time. This would also mean that he has three different actualities of his own self at the same time and this is not possible because his own unity would be shattered in such a case.

In short, knowledge, knower and known are one and the same thing. The difference among them is only that of the perspective. Thus it is wrong that the knowledge comes into our psyche or mind and mind is somewhat like its container. It only appears like this because we know the thing and we know ourselves too. Actually, the knowledge of things changes from one thing to another whereas knowledge of the self remains constant and eternal. Moreover, a knower as a man

also has body parts which are other than his psyche. We consider him collectively as the knower and thus consider him distinct from knowledge. But as far as his knowing psyche is concerned, there is no difference between knowledge and knower.

12.4
Like in the case of *sensed knowledge*, the knowledge, knower and known is same also in the case of *imagined* and *intellectual knowledge*. In all kinds of human knowledge, it is the human psyche which is knowledge, knower and known. Actually, these different kinds of knowledge are different states of human psyche. When a change occurs in the knowledge, a corresponding change occurs in the human psyche.

Even the dream and sleep is also different states of human psyche. Dream state is a kind of the state of *imagined knowledge*. But pure sleep is such a state in which nothing is known but it is after all a state of psyche. This is the reason that we do not sense anything during pure sleep. For instance, we cannot hear the sounds and feel the smells when we are sleeping. It may be possible that our sleep may be disturbed due to a sound and we begin to hear the sound at that time. But as far as we are sleeping, we cannot hear any sound although our ears are stimulated at that time and are not closed like our eyes. Even we can feel the light passing through the eyelids of our closed eyes during our waking state but does not feel so when we are sleeping in light. Similarly, other senses such as those of smell, taste and touch are not working during sleep even if these senses are stimulated like in a waking state. The reason is not difficult to understand. Since our psyche is in the sleep state, it cannot change into the state of the *sensed knowledge*.

Hence, it can be concluded that human psyche changes from one state to another when it knows one thing after the other. Similarly it also changes different states when it passes from no knowledge of sleep state to *sensed knowledge*, from *sensed knowledge* to *imagined knowledge* and from imagined to *intellectual knowledge*. In other words, sleep, *sensed knowledge*, *imagined knowledge* and *intellectual knowledge* are only different states of the human psyche.

12.5
Since we know from Chapter 7 that knowledge is an existence abstract from nothingness inherent in *matter* and knower is also the knowledge, the main difference in these different mental states is in the degree of abstraction from nothingness inherent in *matter*. In the pure sleep state, the effect of nothingness inherent in *matter* is most intense and abstraction from it is the least. This is the reason that it is the state of no knowledge. On the other hand, the *intellectual knowledge* is more abstracted kind of knowledge than *imagined* and *sensed knowledge* as explained in Chapter 7.

12.6
It is also an evident fact that our knowledge level or state of our psyche changes from one state to other. Whenever our knowledge changes, a corresponding change actually occurs in our psyche. We learned in Section 11.4 that the actual cause of human psyche is man's *intellectual principle*. This means that all kinds of knowledge including *sensed*, *imagined* and *intellectual knowledge* are caused by man's *intellectual principle*. All physical factors in this regard are mere *preparatory cause*s. On the same principles, the change of human psyche to the sleeping state is also caused by the human *intellectual principle* and the biological requirements of sleep are only the *preparatory cause*s.

12.7
It is also a common experience that the *intellectual knowledge* is difficult to get as compared to the *sensed* and *imagined knowledge*. Whatever we get in this regard is usually obscure and imperfect. The reason is not difficult to understand. Actually, the human psyche stays in one state at one time. When it is in the state of sleep, it is not possible to get *sensed knowledge*. When it is in the state of getting *sensed knowledge*, it cannot get the state of *imagined knowledge*. This is also true in the reverse directions as we also commonly experience that when we go deeply into imagination, we sometimes cannot listen and sometimes even cannot see the things. We usually term such an experience as absent-mindedness. But in actuality, this is not absent-mindedness as the mind is never absent. Only our psyche is in some other state.

But it is possible that we get an obscure knowledge of one kind while we were in the state of another kind as we know evidently. For

example, when we are looking at a thing, we can also imagine another thing. But in such a case, one kind of knowledge is always obscure. If we concentrate on the imagined thing, the seen thing will become obscure. If we focus on the seen thing, the imagined thing becomes obscure. We can experience this very evidently. In the same way, when we are in a state of getting *imagined knowledge*, we can get some understanding of *intellectual knowledge* in an obscure way only but we cannot get the *intellectual knowledge* with concentration while in getting *imagined knowledge*. In short, one state of the human psyche is an obstacle in getting into the other state. The sleep is an obstacle in the way of *sensed knowledge*. *Sensed knowledge* is an obstacle in the way of *imagined knowledge* and *imagined knowledge* for *intellectual knowledge*.

One state is an obstacle in the way of other state just because the different mental states are different in their abstraction from nothingness inherent in *matter*. In the dreamless deep sleep, the mental state is not abstract from nothingness at all. The sensed mental occurrence is the least abstract from nothingness whereas the intellectual mental occurrences are the most abstracted among them. Imagined mental occurrences are between these two in this respect. Since at any one instant of time, human psyche can be only at a certain level of abstraction from nothingness inherent in *matter*, it can have only one state of psyche at a certain instant of time.

From all this analysis, we can conclude that every kind of world be it the world of sensed actualities or the world of imagined actualities or any other world, is a level of knowledge[29]. To be the knower of any one world, one has to be the member of that world having that level of abstraction from nothingness which is characteristic of that world just because knowledge, knower and known are one and the same thing.

12.8

After learning about the knower, knowledge and known in this physical world, we now come to learn about these three in case of *necessary existence* and *intellectual principles*. We know from Chapter 10 that *intellectual principles* being the existence donor of

29 In Arabic language, the word 'ilm' means 'knowledge' and the word 'aalam' means 'world'. Both these Arabic words emerge from the same root.

the physical world have more intensity of existence than the physical world. Moreover, there are different layers of intellectual principles within the metaphysical world having varying degrees of existential intensity. Each higher layer is the existence donor of the lower one till *necessary existence* who is the existence donor of all lower worlds and who is at the maximum level of existential intensity. In other words, abstraction from nothingness inherent in *matter* at the level of *necessary existence* is at the maximum[30] and at the level of intellectual principles, it is much more than that of physical things.

In order to become the knower of these *intellectual principles*, one should have that higher level of abstraction which is characteristic of these *intellectual principles* because their knowledge is a knowledge highly abstracted from nothingness inherent in *matter*. Rather, one has to become the member of the metaphysical world in order to know them because knower, known and knowledge is one and the same thing.

The higher the existential intensity of an *intellectual principle* would be, the higher level of abstraction from nothingness would be required for knowing it. Since, these metaphysical beings do not have any physical parts, the difference among knower, knowledge and known totally vanish at this level.

Moving further in this direction, *necessary existence* or God being the existence donor of the *intellectual principles* must have an existence with the highest level of abstraction from nothingness inherent in *matter*. Hence, his knowledge and knower must also be at the highest level of abstraction which is compatible with his abstraction. In other words, one has to become God in order to know God.

12.9

Thus to know God and *intellectual principles*, one has to get that high level of abstraction from nothingness inherent in *matter* which is characteristic of these beings. Contrary to this requirement, human psyche being immersed in *matter* normally remains most of the time in the state of sensed and imagined mental occurrences and is thus

30 It was also proved in Section 9.2.1 that necessary existence does not have any multiplicity and is a pure unitary thing. This further elaborates how necessary existence is nothing other than pure knowledge

unable to know God and *intellectual principles*. In other words, sensed and imagined mental occurrences act as a kind of curtain between human being and these higher beings. This is the main reason why we cannot normally know these beings despite the fact that they are right in front of us.

Actually human psyche remains in the state of sensed and imagined mental occurrences because it has a certain limited existence which is abstract from nothingness inherent in *matter* only up to a certain degree. Since knower, knowledge and known are the same thing, a person can know only those things which are abstract from nothingness inherent in *matter* to the degree to which his own psyche is abstracted. Since God and *intellectual principles* are totally abstract from nothingness inherent in *matter*, they cannot normally be known by human psyche which is at a very low level of such abstraction. This human inability may be termed as *vertical inability* of human knowledge because his existence is normally at a lower level of abstraction from nothingness than is required to know the existentially higher metaphysical beings.

12.10
But why is human psyche at such a low level of abstraction from nothingness inherent in *matter*? The reason is not difficult to understand. Being associated with the senses of the physical body, human psyche remains most of the time in *sensed knowledge* which is the least abstract from nothingness inherent in *matter*. But why it is so? Human psyche normally remains involved with *sensed knowledge* because human being exists with such a limitation. But what is the source of this limitation in the human being? Who is responsible for this?

Is it *necessary existence* who gives existence to everything? The answer is in negative. It cannot be *necessary existence* because *necessary existence* is Infinite and thus can not have any sort of imperfection and is thus can not be the source of any imperfection or limitation. Then nothingness or the human being himself may be such source. Since nothingness is nothing, it cannot be the source of limitation in the human being. Hence, human being himself is the source of his limitations. Actually, every contingent receives existence from its *intellectual principle* according to its limitation. The more limited a contingent is, less intensity of existence, it would

have. The source of its limitation is thus the essence of the contingent itself. God or *intellectual principles* from where all contingents are getting existence are not the source of such limitations. They give the existence to a thing to the full extent of its limited capacity. If something does not have the capacity of getting more than it can get, the giver cannot be held responsible for this limitation.

Now one may ask that contingent does not exist before getting existence, then how a non-existing thing may be held responsible for its limitation. Actually, at the level of essence, contingent *quiddity* is neither existing nor non-existing because at this level, *quiddity* is considered without any regard to its existence. This is the reason that *law of excluded middle* does not apply in this case.

But why a contingent is contingent? In other words, what is the cause of the contingency in the contingents? As far as the contingency is concerned, it is also an *attribute* of the *quiddities* which is proved for it at the level of essence. This is the reason that there is no need of a cause of contingency for contingents because the contingency is an essential aspect of the contingent and essential aspects do not need any cause or source according to the *principle of essentiality*. Contingency comes only from the essence of the contingent and not from anything other than that.

In short, the ultimate reason of our vertical inability is our own limitations arising out of our own contingency. There is no invisibility on the part of God and *intellectual principles*. Neither He is hidden nor is He responsible for our inability to know him. We are unable to know him or He is unseen to us only due to our own weaknesses and limitations.

Human beings could know the true reality of God and *intellectual principles* only through an intellectual process of getting more and more abstraction from nothingness inherent in *matter*. Is human being able to do this? The answer of this question requires a separate study which should be focused on the reality of human being. Such a study is out of the scope of this book as this is restricted only to the study of the reality of things in general.

12.11

From all the discussions undertaken in this chapter, it follows that God and *intellectual principles* exist as extremely intense forms[31] of knowledge. Moreover, it also follows that each world actually consists of those co-existing things which are at a certain level of abstraction from nothingness. But at this stage, one big objection arises. In Section 9.2.1 it is stated that the *necessary existence* being perfect include everything and nothing can be outside it. If it is true, how metaphysical and physical worlds can be admitted to have existence separate from *necessary existence*. We will inquire into this contradiction in the next chapter.

Apart from this contradiction, one more conclusion may be drawn from what we learned in this chapter. We have learned that each world is actually a level of knowledge and it is known by only that knower whose level of abstraction from *matter* is equal to that world's level of abstraction. Moreover, among the three levels of *sensed*, *imagined* and *intellectual knowledge*, one level of human knowledge is an obstruction or a curtain in the way of another level. From these two facts, it may be concluded that God being at the highest level of abstraction from *matter* would not be aware of the lower worlds. In the next chapter, we will also inquire into the validity of this possible conclusion.

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31 The use of the word 'form' for God is actually not correct because God, being Infinite, cannot have any form.

Chapter 13

UNITY AND TRANSCENDENCE OF DIVINE PRINCIPLE

13.1
The objection raised in the end of the previous chapter asks the question: how are the existences of the physical contingents and their *intellectual principles* separate and exclusive from that of the pure unitary *necessary existence* outside of which nothing can exist? Actually, *necessary existence* cannot be imperfect in any respect whatsoever because if it were incomplete or imperfect in some respect, it would be depended on some other thing for its completion and this dependence means that it is not a necessarily existing being. In other words, by its very definition, *necessary existence* requires that nothing should be outside him. On the other hand, we know from Section 1.3 that the *metaphysical world* and the physical world are outside the category of *pure unitary things*. In Section 9.1 too, the *physical things* and even their *intellectual principles,* being contingents, belong to a category which is a *contradictory complement* of *necessary existence*. Hence they must be outside *necessary existence*. But how can these things be outside *necessary existence* outside of which there cannot be anything? We can inquire into this contradiction by focusing our attention onto the existence giving process because this process is the one which establishes the relations among the physical contingents, their *intellectual principles* and the *necessary existence*.

13.2
By focusing on the existence giving process, we can conclude that whenever an existence donor gives existence to a thing, he does not give the existence by departing it from his own self. Actually, the existence giving process is not like we give the things to each other

in the physical world. For example, when a donor gives a thing to someone else in the physical world, the thing is departed from the donor. But the process of existence giving is totally different. When a thing gives existence to any other thing and continues to give it to that recipient, the existence is not transferred from the donor to the recipient. If it were so, the donor would lose this existence after giving it to the recipient. In other words, the donor would not be able to give existence to the recipient any more. But we know that the recipient needs existence continuously during its lifespan as it never ceases to be a contingent. It needs the necessity of existence from its source continuously during its lifespan. This means that the recipient gets the existence from the donor in such a manner that both of them keep the existence. In other words, the recipient receives the existence by sharing it with the donor although it may have the existence with far less intensity than the donor has. In this way, the existence of the recipient remains integrated into the existence of the donor rather than departed from it.

Hence when an *intellectual principle* gives existence to a physical contingent, this existence is not departed from it. Rather it gives the existence in such a manner that the existence of the physical contingent remains integrated in it. Similarly, the existence of the *intellectual principles* remains integrated into their own *intellectual principles* which in their own turn are further integrated into their own principle. This series of integration within every higher level of principles continues up to the ultimate principle of the *necessary existence* in whom all the *intellectual principles* and even whole of the physical world is integrated.

In other words, everything is integrated into the existence of the *necessary existence* and nothing is outside Him or separate from Him. The *physical things* appear to be separate to us because we consider the *quiddities* of things as real. But in *actuality* the quiddites are only appearances in our minds. As far as the pure existence is concerned, the existences of the *physical things* are integrated into the existence of their principles and those of their principles into their own principle. This would mean that the existence of the *physical things* and the existences of the *intellectual principles* only appear to be separate from God. But in *actuality* their existences are integrated into Him in such a manner that nothing lies outside Him.

13.3
But this should not mean that the existences of contingents are integrated into Him as His parts because the whole depends on the parts whereas *necessary existence* cannot be dependent on any other thing by its very definition. The parts make the whole. But *necessary existence* being the existence giver of all the contingents is not made by the contingents. Hence, any such pantheistic view is totally wrong that this whole of the physical world is actually the God and every physical thing is its part. Such pantheism is not correct. Being without any part, God does not have any multiplicity. He is pure unity as He is also pure existence.

The issue of parts and whole arises in our minds again because of our understanding about the physical *quiddities* that they are real. We see different parts of a thing existing in themselves and combine together to make the whole having a spatial extension. Analogically, we consider God's existence too as constituted by the existences of the physical things. Such a consideration is wrong because the spatial extension itself is only an appearance in our minds. If we consider only the existence of a physical thing without any consideration of its *quiddity* and keeps in mind the existential cause-effect relationship, we would come to the conclusion that the existence of a physical thing is actually a less intense version of the more intense existence of its intellectual principle rather than its part.

13.4
Actually, a donor cannot give to a recipient a thing different from the thing which is in its possession. In other words, the thing a recipient receives from a donor is exactly the same thing, which is in possession of the donor. This may be possible that the donor gives the thing in fewer amounts or with less intensity to the recipient. But it cannot be possible that the donor gives a thing, which is different from the thing, which is in his possession as it would be against the *principle of the requirement of donor's possession*. This is exactly the case with the existence giving process. The existence of the effect is the same existence, which the cause has, though it has intensity less than that of the cause. In other words, the existence of the physical contingents is not different from the existence of the *intellectual principles* and that of the *intellectual principles* is not different from that of necessary *existence*. They all are same in

reality. They differ only in the intensity. In other words, there is an *ambiguity in existence*[32].

Since *necessary existence* is the first cause of everything, it has the most intense existence. On the other hand, the existences of the *intellectual principles* and contingents are integrated into Him, though their existences have less intensity because of being at lower state of existence. The intensity of their existences depends on their own capacity to accommodate the intensity of existence and since this capacity is limited, their existences are also limited. But the reality of existence is same in all. The reason is that the ultimate source of all the existences is the same single being.

But here the same objection arises on the basis of which we proved the existence of *forms* in Chapter 2 where we raised the question: how can different things emerge from the same *matter*? Now a similar question arises: how can different things emerge from the same existence? Actually, these two questions are not the same because *matter* is only the other name of *potentiality* which requires an actualizing factor for the actualization of a *form*. On the other hand, the existence is the other name of *actuality* itself. It is the actual aspect of existence due to which a *physical thing*, being a combination of potentiality and actuality, exists.

13.5

Despite existence is same in all the things, we also evidently know that one physical thing is totally different from another and there is after all a difference between existence donor and existence recipient or between cause and effect. Keeping in view these two kinds of differences, we can easily notice that there are two kinds of ambiguities in existence. One is the vertical[33] ambiguity and the other is the horizontal ambiguity in existence. Vertical ambiguity is due to the difference of existential intensity found in the rising vertical chain of cause-effect links. On the other hand, horizontal ambiguity is due to the differences of existential intensity found among the co-existing members of a world such as the physical world. Vertical ambiguity is due to the higher degree of existential

32 This concept of ambiguity in existence is one of the basic features of Mulla Sadra's ontology explained in his work Asfar-e-Arbaa.

33 Here verticality is ascribed on the basis of more intensity of existence.

intensity of the cause than that of the effect. This difference of existential intensity is ultimately the result of the mixture of nothingness with the existence. Necessary existence of God, being the first cause of everything, is pure existence without any spec of nothingness. All the lower levels of existence emerge from it with the mixture of nothingness. More a level is remote from the pure existence of God, more will be nothingness in it.

Actually, all contingents, being limited things, have two aspects as is also mentioned in Section 10.2. One aspect among these two is that by virtue of which the limited thing is that thing itself. The other aspect is that by virtue of which that thing is not any other thing. The first aspect is affirmative because it affirms the thing by itself. On the other hand, the other aspect is limiting and negative because it negates for a thing all things other than that thing. Nobody can say that both the aspects are same. Actually both aspects are united with each other but are not the same because if both the aspects would be same, the second would be envisaged whenever the first is envisaged. But this is not the case. For example, consider a thing A such that A is not B. If somebody envisages A, he does not envisage 'not B' too. Thus both the aspects are not same. Such a duality may be called the *existence-limitation duality*. It is characteristic of the existences of all the contingents because all the contingents are limited things.

The first aspect, which may be termed as the *existential aspect*, is the common aspect of having some state of existence. Through this very aspect, the contingents are linked to the perfect existence of *necessary existence*. The second is the differentiating aspect of not having other states of existences. In other words, the second aspect, which may be termed as *limitation aspect*, is that of being on a certain state of deficiencies. While the first aspect is that of existence and originates from *necessary existence*, the second aspect is that of nothingness and originates from the contingent itself. While the first aspect is that of presence, the other one is that of absence. In the vertical chain of cause-effect links, each effect gets existence from its cause with less intensity according to its limitations until the physical things get the existence with the least intensity of existence.

On the other hand, the *horizontal ambiguity in existence* among the physical things or among the things of the same world, is due to the differences in their limitations. Actually, different contingents are

imperfect in different ways according to the differences in their limitations and capacity to receive existence. Due to the different ways of their imperfections and limitations, they appear different to us in their *quiddities* as we see that water is different from say elephant, an elephant is different from a tree and a tree is different from a star etc. etc.

Hence, the differences in the *quiddities* of the contingents also originate on the basis of their limitations, which are present in those contingents due to their own selves. Thus an elephant is different from water because it has the existence of many meanings and properties which water does not have. Similarly, water has the existence of many properties or meanings which elephant does not have. In the same way, each and every thing has many properties which other things do not have and do not have many other properties which other things have. On the basis of these different states of deficiencies, the existences of different things differ in intensity and because of this the *quiddities* of things appear different from each other. In this way, horizontal ambiguity in existence appears to us as differences of *quiddities*.

13.6
Given the fact that the reality of existence is same in all things, it is easy to understand that the multiplicity present in this physical world is the multiplicity of only the *quiddities* which appear to spread all around us. Being only appearances, *quiddities* are only in our minds. Hence, only objective reality is that of existence which is same in every thing. Even the existence of the *space-object* is also the same as that of any other thing. The multiplicity at the level of existence is only due to the difference in intensity and this multiplicity is integrated into and transcended by the unity of God in such a manner that the multiplicity arising among the lower intensities of the existences of the contingents does not affect the unity of the pure existence of God.

The reason of unaffectedness on His unity is that the existence of each contingent is integrated in the *necessary existence* of God in such a manner that it is itself related to His existence. Actually, the things, whose existences are integrated in the other things, may be divided into two *contradictory categories*. One category consists of the things which can be imagined to be separate from their subject

although in actuality they are not separate from it. The other is of the things, which cannot even be imagined separately from their subject. The existences of *form*s and *attributes*, whose existences are for their subjects, are the examples of the first category. They can be imagined separate from their subject because their relation with the subject is outside the *quiddity* of the subject.

Other category, in this regard, is of those things whose existence is purely relational, and thus cannot be imagined separately. The existences of the contingents are among this category when only their existences are considered in relation to the *necessary existence* of God. They cannot be imagined separately from *necessary existence* or God because their relation with Him is not outside Him or his *quiddity*. Actually, being necessarily existing being and having no limitation, He does not have any *quiddity*. Thus the existence of a contingent cannot be analyzed in such a manner that one is its existence and the other is its relation with *necessary existence*. Rather its existence is itself related to God and no other external relation is required in this regard. In other words, contingent and *necessary existence* are not the two different existences. Their difference is only in intensity.

Actually, such a purely relational integration is present among all existential causes and effects. This means that the existences of all the individuals of a *species* are integrated into the existence of its *intellectual principle*. For example, the existences of all the human beings are integrated in man's *intellectual principle* that is providing life to all the human beings and is the cause of all the motions occurring to them and occurring within their bodies. Similarly, all the chemicals, minerals, biotic and animal *form*s are integrated into their own respective *intellectual principles* and all the *intellectual principles* are integrated into their own *intellectual principles* and they into their own reducing the multiplicity at each rising level of existence. This series of different levels of *intellectual principles* ultimately end at one single Divine Principle which necessarily exists and which may be termed as God. God, being a single principle of the highest order, alone encompasses and transcends everything without being subject to any multiplicity.

The way the multiplicity of the contingent's existences is integrated into the Unity of *necessary existence* is difficult to explain because

we cannot explain it through examples. It is because nothing can be similar to Him as nothing can be outside Him. Whatever exists comes into the region of existence and is thus integrated in Him. So no example can be set to explain this issue. Only a very imperfect example may be the man and his ideas. Man is the cause of his ideas. His existence and the existence of his ideas differ only in intensity. But both of them are same in existence. The existence of his ideas cannot be imagined or considered without his existence. Even both the considerations of him and his ideas are actually the same. But no wrong conclusion should be drawn from the imperfection present in this analogy as the ideas of man flowing in time may be a source of multiplicity in him. In actual fact, *necessary existence* is beyond time and does not have any kind of multiplicity.

13.7

At this point, somebody may say that the quddities are after all the result of the limited existences and since there are many *physical things*, there must also be many limited existences. If these limited existences exist as being integrated in their respective *intellectual principles* and those principles into the Divine Principle, there must be a multiplicity in God due to all these existences of lower intensities because they are after all present in God.

Such an objection is not correct. Actually, every *existential cause* or principle has only the possibilities of the contingent effects within itself. Whatever is possible regarding that contingent is present within that principle. No further multiplicity is even added to the principle due to the presence of such possibilities because at the level of the principle those possibilities are mere possibilities. In this manner, a principle is actually a unifying agent with respect to the multiplicity of the possibilities within it like the intellectual concept of the formula of circle integrates all the possible circles within it. No circle comes into existence until the formula or the relationship is not applied. Similarly, a computer software integrates within it all its possible applications without being subject to any multiplicity of applications until and unless they are not applied.

In a similar way with some reservations[34], divine principle integrates all the possible worlds within itself without being subject to any multiplicity. A world comes into existence only for a knower who comes into existence having abstraction from nothingness inherent in matter equal to the level of abstraction of that world[35]. We evidently know that at least the possibility of a knower termed as 'human being' exists as we know our own existence evidently. This is the reason that the world equal to our level of abstraction appear to us to get existence and this world is known as the physical world which we know through the mental actualities of sensed knowledge and also through some of the mental actualities of imagined and intellectual knowledge. The preparatory conditions for these actualities are provided by the principles of the *world of material actualities* which are ultimately integrated into and transcended by divine principle.

This means that the limited existences at lower levels of reality appear to get existence only when some knower gets existence at that level otherwise they do not exist at all at a higher level[36]. They exist only in the *form* of the Principle of principles of principles of principles ….of their principles. Since the first Principle of everything is God, only God exists. All other worlds and things exist subject to the condition that some knower at their level of abstraction exists and knows them. However, the existence of the knower other than God is also a mere possibility. This is the reason that the physical world and different layers of the *metaphysical world* along with their knowing existences are present in the Divine Principle only as mere possibilities. All worlds appear to come into existence only for the knowers who exist at their levels of abstraction. This is the reason that the exclusivity and multiplicity present in them is only an appearance for the knower existing at their level of abstraction. Hence, only God exists in actuality. All the multiplicity and exclusivity of the lower worlds is the result of the lower

34 Reservations to this analogy are due to the fact that no analogy regarding God can be perfect as there is nothing outside Him. So nothing can be similar to Him. Whatever the analogy will be made to explain anything about Him will be imperfect in some respect or the other.

35 The requirement of the equality of abstraction from nothingness inherent in matter for the knowing process is explained in Chapter 12.

36 This is in confirmation with the existential priority of beings having consciousness propagated by the followers of modern existentialism such as Heidegger (1889-1976) and Sartre (1905-1980)

abstraction level of a knower himself who knows the world around him from within[37] God.

13.8
Hence the categories made in Section 1.3 are exclusive only on the basis of the concept of multiplicity or on the basis of the absence or non-absence of the parts. They are not exclusive on the basis of existence. Existentially, the physical world is integrated into its *intellectual principles* and the *metaphysical world* of *intellectual principles* is integrated into the category of pure unitary things which has only a single member termed as God.

Similarly, the categories made in Section 9.1 are exclusive only on the basis of necessity and contingency of existence. Existentially, all the categories are integrated into the category of *necessary existence*. Hence, exclusivity among the existences is understood only at the level lower than that of *necessary existence* and this understanding of the exclusivity is the result of mutual differences of intensities and imperfections of all the existences of a certain level. Even the vertical exclusivity among different levels of existences is also due to such differences.

Since we are normally at lower levels of existence, we know the multiplicity of contingents belonging to that level on which we exist. This knowledge appears to us as *quiddities*. This means that only that level of multiplicity appears to us that corresponds to our own level of existence. All other levels of existence along with their levels of multiplicity remain hidden from us. But all the other levels of existences never cease to be present in front of us.

This is the reason that when a physical contingent is in front of us, we only see its *quiddity* but in actuality the whole of the reality is in front of us. For example, when we see a tree, we see its trunk, its branches and its leaves. But if we ignore its *quiddity* and consider only its *real existence*, not only its limited existence and the total reality of its *intellectual principle* is in front of us but also the whole boundless reality of *necessary existence* is in front of us. This is exactly the meaning of the saying that God is hidden in everything.

37 The word ‘within’ is used here in an existential and ontological sense rather than in a spatial sense.

In short, nothing exists here except the timeless space less presence of God. This is the case when we see the reality from the above considering *necessary existence* at the top. On the other hand, if we look at the reality at the lowest level, a multiple world of the *quiddities* of a lot of *physical things* is in front of us. Each of these things, including human beings themselves, consists of a series of states of existence emanating from the *necessary existence* of God. This emanation is a necessary result of the fact that whatever is possible gets existence from perfect existence of God. Since God is completely perfect, He gives existence to each of those things whose existence is possible. Its reverse is also true because of his perfection. So He also takes away the existence from each of those things for whom existence is no more possible. But all this giving and taking away of existence takes place in a lower world because all these possible existences do not exist as such at the highest level of *necessary existence* and thus do not disturb His unity. They are determinable only at their own respective lower levels when a knower gets existence at that level.

13.9
Having learned how the lower worlds are integrated into their principle and how all is integrated into *necessary existence*, we are now in a position to understand the invalidity of the conclusion drawn in the end of the previous chapter where we concluded that *necessary existence* being at the highest level of abstraction from *matter* would not be aware of the lower worlds like one level of human knowledge is an obstruction or a curtain in the way of another level. This conclusion is not valid due to the fact that the three levels of human knowledge are not the cause of each other despite being different in abstraction from nothingness inherent in *matter*.

On the other hand, in the vertical series of different worlds as described above, every higher world is a cause and principle of the lower one in such a manner that God, being the first cause, is on the top and world of *material actualities*, being the last effect, is at the lowest level. In this vertical series, world of *material actualities* is a dark world unknowable due to its nearness to nothingness inherent in *matter*. But all upper worlds are the causes and principles of each other and thus each level know its effect very well such that *necessary existence* knows all the worlds very clearly.

From here we can also conclude that all the three levels of human knowledge mentioned in Chapter 7 are outside of this vertical series of worlds if the principle of human being is considered to be outside this series. All the meanings inherent in these three worlds are imparted to the human being by his *intellectual principle* because of which Necessary existence also knows everything about these three worlds too as He is the cause and principle of the man's *intellectual principle* too. In this way, *necessary existence* knows even whatever we sense, whatever we imagine and whatever we intellect. In this perspective all the contingent quiddities are also in the knowledge of *necessary existence* but as having existence only in the human minds. He is omniscient in the true sense of the word.

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Chapter 14

SOVEREIGNTY AND GOODNESS OF DIVINE WILL

14.1
The conclusions, which we draw in the previous chapters, may also suggest to some people that the *necessary existence* and its boundless reality is a kind of passive physical law according to which the *physical things* are getting existence as soon as their preparatory conditions are fulfilled. Apart from this it also appears to follow from all the discussions undertaken in Chapter 6 and 11 regarding one unit of cosmic motion that everything in this world is pre-determined. In this chapter we will inquire into the validity of these apparent conclusions. Both of these apparent conclusions draw our attention to the question: Is the *necessary existence* just a passive physical law for this physical world or an active conscious affecting agent with a free will or sovereignty?

In other words, we have to find out whether the *necessary existence* of God has the *attributes* of free will, a consciousness and knowledge or not. We learned in Chapter 12 that God and *intellectual principles*, being highly abstract from nothingness inherent in *matter*, are themselves intense *forms* of knowledge. In other words, their existence itself is actually in the *form* of knowledge. Hence we cannot have a doubt in their having knowledge. Rather their knowledge is far more intense than our normal knowledge as it is at the highest level of abstraction from nothingness inherent in *matter*.

14.2
As far as the issue of free will or sovereignty of God and that of *intellectual principles* is concerned, it may be analyzed from different perspective. In this regard, different questions may be asked from different perspectives. For instance: Do God and *intellectual*

principles give existence to a *physical thing* with a free will? Is it possible that He will not give existence to a *physical thing* even if the required preparatory conditions are fulfilled? Can God give existence to a *physical thing* without the fulfillment of the required preparatory conditions? Many of the other related questions may also be raised in this regard. Before inquiring into these questions and their answers, we have to see what we exactly mean by sovereignty and subjugation.

Sovereignty and subjugation are the states of a thing with respect to do or not to do an act. We can analyze different states of a thing with regard to do or not to do an act by applying the division by dichotomy. There may be the following two contradictory states of a thing with respect to do an act.

i. The thing has the ability to do that act;
ii. The thing has no ability to do the act;

Similarly, there may be the following two *contradictory categories* of the states of a thing to avoid doing an act.

i. The thing has the ability to avoid doing that act;
ii. The thing has no ability to avoid doing that act.

Among these four categories, a thing is said to be sovereign in the following two categories:

a. The thing has the ability to do that act;
b. The thing has the ability to avoid doing that act;

These two states may exist in a thing with respect to the same act because the act for which a thing has the ability to do, may also have the ability not to do. Thus these two categories may be expressed as one in the following way:

- The thing has the ability to do or not to do an act;

On the other hand, the thing is subjugated in the rest of the two categories of states as rewritten below:

- The thing has no ability to do the act i.e. unable to do that act;

- The thing has no ability to avoid doing that act i.e. forced to do that act.

Unlike in the case of sovereignty, these two categories cannot be for the same act because there is no case for a thing to avoid doing an act to do which it is unable.

Thus there are three kinds of states of a thing to do an act:

a. The thing would be free to do or not to do an act;
b. The thing would be forced or subjugated to do an act;
c. The thing would be unable to do an act.

The first state is the case of a free will or sovereignty and the last two are those of subjugation. On the basis of the above analysis, we can identify the basic conditions of subjugation and sovereignty.

A thing, subjugated to do an act or unable to do an act, is subjugated either due to the effect of an outside agent or due to some inability within that thing. For example, an employee is forced to do something on the orders of his employer. This is an example of a limitation from outside. Such limitation is possible only for a thing which is limited. For God who is without limits and is Infinite, such limitation is not possible as there is nothing outside Him.

Subjugation as a result of inability to do some act arises due to lack of some ability in that thing. Many examples about a lot of things may be given in this regard. Such inability is also a kind of limitation and thus cannot be attributed to Infinite God.

Hence, it can be maintained that in both kinds of subjugations, the basic reason of subjugation is some kind of limitation. Actually, the word ‘subjugation’ is itself another name for limitation. In other words, limitation is the basic condition of subjugation and it is the representation of nothingness as it negates something for something.

On the other hand, it is an introspected *evidently true fact* for us that in order to be sovereign, a thing should fulfill the following three conditions:

i. It should have a mental existence of two or more than two optional acts from which it has to choose one.
ii. It should have a mental capacity to choose an option.
iii. It should have an ability to act on the chosen option.

The third condition is already in the definition of the sovereignty. The first two conditions require that in order to have sovereignty or a free will, a thing must have something like a mind or psyche in it i.e. something whose existence is abstract from nothingness inherent in *matter*. In other words, knowledge is a condition of free will because knowledge is the existence abstract from nothingness inherent in *matter*. Hence we can maintain that limitation is the condition of subjugation and knowledge or abstraction from nothingness inherent in *matter* is the condition of sovereignty.

We know through sensed *evidently true facts* that pure *physical things* having no knowledge are totally subjugated because they come under the effect of outside agents and also lack the powers to do an act. Even the scientific instruments, machines or robots which take action on the fulfillment of certain conditions, are actually subjugated to a well defined physical law or a pre-written computer program. They cannot take any action on their own will.

Only the things having knowledge can have free will. The reason is simple as explained above. Subjugation is actually the characteristic of *physical things* having absence of all of their parts whereas free will is the characteristic of knowledge of a higher order.

After learning about the sovereignty and subjugation and their basic conditions, we can now come to the questions regarding the sovereignty of God and *intellectual principles*.

14.2.1
Some of such questions may be put like this: Does God and *intellectual principles* give existence to a *physical thing* with a free will? In other words, is God free to give existence to the events of this physical world or He is forced to do this?

As far as the issue of the sovereignty of God for acting in the physical world is concerned, the condition of subjugation

does not apply to him because he is infinite and limitless. Since nothing can be outside Him, He cannot be subject to any outside effect. Similarly, being completely perfect He is also not deficient of anything. Thus having no limitation, He cannot be subjugated in any way. Since subjugation is the *contradictory complement* of sovereignty, He proves to be sovereign. Moreover, having unlimited knowledge he fulfills the conditions for having unlimited sovereignty. *Intellectual principles* being in the *form* of knowledge also have sovereignty and would be subjugated to the extent of limitations they have. Thus God, being completely abstract from the absence and being pure knowledge, has unlimited sovereignty over all worlds including this *physical world*.

14.2.2
At this stage one more question arises: Is it possible that God will not give existence to a *physical thing* even if the required preparatory conditions are fulfilled? For example, if hydrogen and oxygen gases are mixed in the conditions, which are required for the formation of water, may it be possible that water will not get existence if God wills? Our experience tells us that in most of the cases, the thing gets existence whenever the required preparatory conditions are fulfilled. Due to this high level of probability, we get the impression that there is no hidden will working behind the day to day events happening according to discovered scientific laws. This is the reason that the science claims that the water will most probably get existence in the above case whenever the preparatory conditions are fulfilled.

But happening of an event according to a scientific law and the formation of water in the above case is not in any way a ground for the divine subjugation. Rather it is the very ground of the fulfillment of the divine will because the water gets existence from God's created *intellectual principle* of water. Thus the events getting existence according to physical laws proves the Divine will rather than His subjugation.

Actually, the main mistake here lies in our understanding that God is limited within time. Under the influence of this

understanding, we unconsciously assume that the divine will acts instantaneously like human free will. But such is not the case. His free will or sovereignty acts in the physical world in a perpetual manner rather than in an instantaneous manner. Actually, He and his *intellectual principles* have an eternal relationship whereas the relationship between His *intellectual principles* and the *physical things* are perpetual as explained in Section 11.8. Thus He has same relationship with both past and future.

Staying aloof from time, He has already created the *intellectual principle* of water with His free will. This is the reason that whenever the physical water gets existence from its *intellectual principle* on the fulfillment of the required preparatory conditions, the divine will is fulfilled. Divine will is not restricted to that very instant when Hydrogen and Oxygen are brought together and hence such a question cannot be asked about him. Of course, human free will is restricted to such instants and this is the reason that we ask such questions regarding divine will too.

Hence, all the events in the world get existence according to His will. So whatever happens is a reflection of His will. Even if some miraculous event happens, there must be an *intellectual principle* for it already in existence eternally beyond time. Without *intellectual principle* no event can take place at the level of time. All this can be expressed by saying that all the physical laws are actually the Will of God. Thus the miraculous events are not the only proof of the imposition of the Divine Will. Even the ordinary events are also happening according to His Will. A miraculous event, if anyone really happens, is termed as miraculous because of our ignorance of the *intellectual principle* or the law acting behind it.

14.2.3

The same question as above may be asked in another way too: Can God give existence to a *physical thing* without the fulfillment of the required preparatory conditions? The answer to this question lies in the fact that the *preparatory dependency* of the *physical things* is due to their own

weakness of existence. Hence if a *physical thing* cannot get existence without the fulfillment of the required preparatory conditions, it is due to its own incapacity rather than due to any incapacity or subjugation on the part of God. It may be possible that God is able to give existence to a *physical thing* miraculously without the fulfillment of its commonly known preparatory condition. If such is the case with something, there must be an *intellectual principle* for such an occurrence too as explained above. Even in such a case too, there must be some flow of events before such occurrence because the time, as understood by us, is the basic condition of the *physical things*.

14.2.4
If each and every event occurs according to His Will, human beings should be considered to be subjugated because whatever they would do, that will be pre-defined according to God's will. In other words, man's all actions appear to be pre-determined. Such conclusion also arises from the results of chapter 6 where we have proved that the total life span of a thing encompassing all its motions is one unit of existence. This should also be true for a man as man is also a thing. This should mean that whatever the actions a man takes in his life are pre-determined. Even his thinking and ideas are pre-determined as nothing is outside the realm of *necessary existence*. These conclusions suggest that man does not have any free will and is totally subjugated.

Contrary to this conclusion, it is evidently known through our general observations and experiences that man has a free will up to some extent and is subjugated up to some extent. Through his free will he can normally exert force by moving his body limbs in different directions according to his will. Through this force he can fulfill the preparatory conditions for the existence of different events in the physical world which has a multiplicity of potentialities within itself due to nothingness inherent in matter as is also explained in Section 2.3.1 By applying force, man is normally able to actualize an event among the set of potentially possible events. In this way, he strives to make different efforts to improve his conditions in life etc.

Apart from exerting force in the physical world, he also normally has the ability to imagine many different things according to his will as is introspectively evident. Hence, he is normally free to exert force in the physical world as well as to imagine different ideas in his mind.

As far as his subjugation is concerned, it is also quite evident that he is not free to do a lot of actions. The areas of actions which he cannot take, is even wider than what he can do. For example, he cannot reach at the moon by just making a high jump. He cannot put his uncovered hand in the fire etc. etc. All these observations show that the human beings are subjugated as well as free i.e. he is subjugated up to some extent and free up to some extent. In other words, he is a *partially sovereign being*.

What is the truth in this case then? Is man partially free and partially subjugated or totally subjugated? Or how his free will is compatible with God's free will?

In order to get answers to these questions, first we will learn about different kinds of events based on their necessity of occurrence. If we categorize all events happening to a man at a single instant of time in parallel to the categorization performed in Section 9.1, we can say that at each instant of time three kinds of events may possibly be conceived for a man. The first is necessary events, the second is contingent or possible events and the third is the impossible events[38]. Since these three categories are mutually exclusive and encompass all the conceivable events, no event outside these categories can even be conceived to occur to a man. With the passage of time, the limits of these three categories of events may change as one impossible event at one instant may become possible or necessary at another and vice versa. But no event can be outside the limits of these three categories. The *intellectual principles* of both the possible and necessary

38 Here it should be noticed that necessary events are necessitated only at a certain instant of time before which they are of course contingent.

events exist eternally with respect to God and perpetually with respect to the *physical things*. As soon as the preparatory conditions are fulfilled for these events, they begin to appear at the level of time. A man is said to be sovereign or having a free will when he can imagine two or more than two options regarding the happening of some events and he exercises his free will by fulfilling the preparatory conditions for one of such imagined options.

But the very definitions of the necessity and impossibility force us to conclude that man is subjugated with respect to impossible and necessary events. Impossible events cannot happen to him and he cannot avoid the occurrence of necessary events. Human beings normally have very limited knowledge regarding what events are possible and which ones are necessary or impossible. This is the reason that sometimes he may uselessly strive for an impossible event mistakenly considering it a possible event. But every conceivable event falls within these three categories and a man can have the free will only for the possible events.

After learning about different kinds of events, we are now in a better position to answer our questions. Since the divine will has given existence to the *intellectual principles* of all the possible events already in an eternal manner, the exercise of the human free will for the possible events does not violate the divine free will. Whatever the event is selected by a man among the possible options, its *intellectual principle* is already actualized by God. A man cannot select an event whose *intellectual principle* is not in *actuality* at the level of eternity. In this way, we can say that man exercises his free will within a set of pre-determined options without violating the divine free will which actually pre-determined all these options.

Moreover, human free will is exercised for the motion of the *physical things* whereas the divine free will is exercised in giving existence to the *physical things* whose motions are created within their own existences.

Hence it may be maintained that every human being at each instant of his life has a free will to select among a set of certain possibilities which may be indefinite in number. The *intellectual principles* of all these possibilities are actualized at the level of eternity according to the divine will. Among these possibilities, an event, which a man selects and for which he fulfills the respective preparatory conditions, is actualized by its respective *intellectual principle*. At each instant of his life, the set of possibilities available for the human free will changes according to the conditions to which that human being is subjected at that time.

When a man selects a possibility for him among this set of possibilities by exercising his free will, he actually defines a certain fate for him without changing the divine will as the total set of possibilities remain actualized in the same immutable way at the divine level. God has already pre-determined all the possibilities and the possible fates of selecting each possibility in an eternal manner. In this way, a man cannot do anything outside his will. He exercises his free will to select a possibility only among the given set of possibilities.

One more objection may be put like this: When a man selects an option among a set of options, this selection itself must be the selection of God because nothing is outside him. In this way, man must be subjugated to the divine selection and consequently only a single line of physical possibilities is envisaged. Such a conclusion is not correct because if it would be correct, this would mean that God would be imperfect with respect to unselected possibilities. But it has been proved that being necessary existence God must be a perfect being integrating and encompassing all possibilities of existence within it as explained in Sections 13.7 and 13.8.

Actually human sovereignty or free will is the result of the principle of free will bestowed upon him by God through man's own *intellectual principle* as is explained in Section 11.6.

14.2.5

The problem of free will may be put in another way too. Does God know at a certain instant of time what a man will select from the given set of possibilities at a future instant of time? If He does not, He proved to be not an all-knower and thus not omniscient. If He does, man does not have a free will.

The reason of this contradiction is again the same human tendency to limit God at a certain instant of time. Actually, God and His *intellectual principles* exist beyond time. He and his knowledge are at the level of eternity and perpetuity, which is beyond the temporal succession. It is wrong to consider Him to be present at a certain instant of time and absent from another in the future. Since He does not have any motion like *physical things* have, He does not flow with time as the *physical things* do. Being beyond time, He has same relationships with both past and future. Thus staying aloof from time, He knows all the possibilities which a man may select in a perpetual manner no matter how indefinite they may be in number. Likewise, He also knows what will be the outcome and fate of selecting each possibility. His will is perpetual rather than instantaneous like the human will. So whatever a man selects among these possibilities is according to His Will. A man cannot select an option which is not present in a state of *actuality* at the level of *intellectual principles* or in other words which is not in the Knowledge of God. In short nothing can happen against the will of God or outside the realm of His Knowledge. Since He knows the principles of all the possibilities available for human actions, the indefinite number of these possibilities does not cause any inherent impossibility.

Hence, to ask that does God know at a certain instant of time what a man will select from a given set of options? is to limit God at that instant of time and is thus not a valid question. Whatever fate a man selects for himself, makes no difference for God. He knows all the possible fates of all the selections of every human being in an eternal manner because He is the ultimate principle of everything.

From all this discussion and analysis, it may now be concluded that God and *intellectual principles* are sovereign, conscious, knowledgeable and alive beings. *Matter* and the *physical things* are on the other hand passive, unknowledgeable and subjugated things. Man having both the aspects of *matter* and *psyche*, is sovereign, conscious, knowledgeable up to some extent and subjugated and ignorant up to some extent. All his sovereignty and knowledge is due to his metaphysical psyche and all his subjugations and ignorance is due to his physical body. Since metaphysical psyche is more in existential intensity and physical body is less, man's sovereignty is due to his *existential aspect* and his subjugation is due to his *limitation aspect*.

14.3
Looking the reality in this way, the problem of theodicy arises in addition to other problems. If God is the existential cause of each and every event, the evil in this world should also be due to Him. In other words, God is proved to be the source of all evil as well as good events. In order to find out whether this objection is valid we have to first clearly understand what we really mean by evil and goodness.

It is introspectively evident that the issue of goodness and evil is tied up with the issue of liking and disliking whether this liking and disliking is long term or short term. Goodness for a thing is that which that thing likes. Similarly, the evil for a thing is that which that thing dislikes. Sometimes, a thing which is disliked in the short term results in a long term goodness and sometimes its reverse is true. Since liking is not the contradictory complement of disliking, there may be a third possibility too which is neither liked nor disliked. This third neutral possibility for a thing is that which is neither good nor evil for that thing.

Moreover, goodness and evil appear to occur sometimes only in our minds and sometimes in the world external to our minds. In short, there may be two possible perspectives for analyzing the issue of goodness and evil.

> 14.3.1
> In the perspective of the possibility of goodness and evil in the world external to our minds, it may be concluded that the issue of goodness and evil, being the issue of liking and

disliking, is only related to the quiddity of things. As far as *real existence* of things is concerned, it cannot be other than goodness. In order to understand this issue more clearly we will consider the example of a sick man, the germ causing his disease and the antibiotic medicine curing the disease. Antibiotic medicine is good for the man as it cures his disease by killing the germs. But the same antibiotic is evil from the perspective of the germs.

Here it should be noted that the germ is evil for man not in the capacity of an existent. Rather it is an evil for man in the capacity of a threat to his existence. Similarly, the antibiotic is evil for the germ not in the capacity of being existent. Antibiotic is evil for the germ in its capacity of a threat to its existence. From here we can understand that a thing cannot be an evil for another thing in the capacity of being existent.

Keeping in view the definition of goodness and evil, the same fact can be presented in another way too. Actually, what man dislikes is not the existence of the germ. He actually dislikes the disease or he actually scares of death. Disease is actually the weakening of his existence. Similarly, death is actually the privation of his body's existence. Thus what a man dislikes is actually the weakening and privation of his existence. Similarly, antibiotic is considered good for man because it protects his existence and it is considered evil for the germ because it weakens or damages the existence of the germ.

Thus it can be maintained that real goodness is actually the existential perfections or the existence itself. Evil come from the quiddities of things which do not exist when considered in themselves.

On the other hand, existence for a thing is the most primary goodness. This is the reason that everything tries to protect its existence as far as it has capacity to do so. Thus existence of a thing is pure goodness for that thing when that existence is considered in itself. It is considered evil for some other thing only when its quiddity is evil for that other thing.

Thus we can draw the following three conclusions from the above discussion.

The first conclusion is that existence considered as existence is never an evil for others when we consider it without any regard to its quiddity. Only the quiddity of things may be evil for another thing. The second conclusion is that existence for a thing and its perfection is goodness for that thing. The third conclusion is that the weakening of existence of a thing and its privation is an evil for that thing.

As far as the quiddities are concerned they may be good, evil or neither good nor evil. Here the objection arises as to what is the source of evil in the quiddities of things. The source of this evil is the limitations of the thing considered as evil or it may be the limitation of the thing for which that thing is evil. The source of limitations as we proved in Section 12.10 is the weakness and lack of the intensity of existence. This lack is due to the contingency of things and contingency comes only from the essence of the contingent and not from anything other than that. Thus existence giver or existence itself cannot be the source of the limitations of the physical contingents.

In short, goodness for a thing is all that which protects and intensifies its existence. Evil for a thing is all that which damages or weakens its existence. Any other existence, considered in itself, is neither good nor evil for a thing. The goodness or evil for a thing is the intensification and limitation of its own existence respectively. Since *necessary existence* is the source of existence for all the things, He is pure goodness. On the other hand, nothingness, being the source of all limitations, is also the source of all evil although it is illusory to consider it as source as it is after all nothing. It is better to say that contingency of different things are the source of all evils because it is the source of all limitations in a contingent as explained earlier.

After it has been clear that existence considered in itself can never be an evil, it is easy to understand that whenever God gives existence to a thing which happens to be an evil for another, it is only because its *intellectual principle* is already

in actuality. Whenever the preparatory conditions for such a thing are fulfilled, its *intellectual principle* which is created by God not as an evil, gives existence to it without any regard to the fact that the quiddity of the existence recipient may happen to be an evil for another thing. In other words, He does not create any quiddity no matter it is good or evil for another thing. He only gives existence to the things and this existence is goodness for that recipient and, being an existence, is also not an evil for any other thing. In short, being the existence giver of all the things, God is pure goodness.

14.3.2

The second perspective of looking at the issue of goodness and evil relates to the mental occurrences in beings which have such a capacity. Whether the existence of a thing is evil or not, there are after all many situations when such a being, like human being, suffers negativity. There are a lot of people in this world who suffer pain, sadness, gloominess, worries, frustrations etc. These feelings are after all negative feelings. We have learned in Chapter 11 that all mental occurrences are also caused by man's intellectual principle and ultimately by God. This means that all these sufferings and negativity should also be from God.

If we look at the issue of evil in this perspective too, the main source of evil cannot be proved to be God. Actually, the source of all evils in the form of human sufferings is always the disliking as is evident from the definition of the evil. Disliking is actually a kind of subjugation or arises due to subjugation because the thing or person subject to a disliked thing or disliked situation is unable to avoid it. This inability of avoiding the disliking is actually subjugation as is the definition of subjugation given in Section 14.2 shows. For instance, if a person dislikes diseases, he actually cannot avoid the evil associated with it. This inability is actually his subjugation. We learned in the previous section, that subjugation in a thing is due to its limitations. Thus disliking for a thing is also due to his limitation. Actually, a thing becomes disliking for a being when that becomes subjugation. On the other hand, likings or pleasures are not the result of

subjugation. Rather, a person moves or wants to move toward them by using his free will.

In short, we can maintain that the negative feelings like all other things are, no doubt, caused and created by the spiritual world of intellectual principles and ultimately by God. But these creations and their intellectual principles are also among the possibilities like all other possible feelings and things. These possibilities happen to be evil for a knowing being such as man because of his own limitations. In other words, God never makes a thing as evil. Rather it becomes evil for a person or another thing because of the limitations of that person.

In short, whether we analyze the issue of evil and goodness from the perspective of their occurrence in the world external to our minds or from the perspective of their occurrence within our minds, the source of evil proves to be the *limitation aspect* of the physical things. On the other hand, pure existence is always good.

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Chapter 15

DIVINE IMMUTABILITY AND END OF PHYSICAL WORLD

15.1
The conclusion that *necessary existence*, being perfectly immutable, is the source of all the motions of all the *physical things* also raises the problem of how an immutable entity can also act as a mover. In other words, the question arises as to how the changes in the physical world are caused by the *intellectual principles* and *necessary existence* who are perfectly immutable. For instance, when a *differential form* A changes to another *differential form* B or a thing moves from a location A to location B, a corresponding change must also be present in the cause of these changes.

Putting the same question in another way, one may ask how the discursiveness or changeability of the physical world is connected to the immutable God. This question arises because the continuous renewal and mutability is always caused by a thing, which is itself renewed continuously and is mutable.

15.1.1.
In order to give answer to this objection, one should understand that the continuous renewal and mutability for the mover of a continuously moving thing is required only if the change in a thing is caused by something outside that thing. In case of a thing in which the change is essential, there is no need of a mutable cause because essential aspects do not require a cause according to the *principle of essentiality*. In other words, all the possible motions of a *physical thing* are created along with the creation of that thing at the intellectual level.

We can understand this issue further by taking into account that a motion in a thing exists in one unit as we proved in chapter 6. Thus a thing along with its motion is caused by its *intellectual principle* as one effect rather than each instant of its occurrence is caused by its *intellectual principle* one after the other. In other words, the *form*s in a moving thing are not caused by its *intellectual principle* or by *necessary existence* instant by instant rather whole of the flow of *form*s is created as one unit because we have proved in Chapter 6 that instants in such a flow do not exist in *actuality*. Rather they exist only in a potential state. The existence of instants is only at the mental level when we consider them. Thus the concept of instant-by-instant creation is only in our minds. Otherwise the whole of the motion is created as one unit, which is manifested in our minds as instant by instant because of our own limitations.

Actually, our limitations restrict our capability of realizing the total reality and force us to realize the physical world only for an instant. Being associated with *matter*, we know the world mostly through *sensed knowledge* which is always restricted to an instant because it is dependent on the stimulation of the sense organs by its very definition and the sense organs, being a *physical thing,* are getting existence gradually. In short, when a physical thing is created, all of its possible motions are also present in its principle.

15.1.2
At this point, confusion again arises about the start of a thing i.e. how it first time comes into existence. This starting event of getting existence should also require a change in the cause of this event. In other words, the changeability would again appear to be proved in the *metaphysical world*. The answer to this confusion lies in the fact that there is no definite starting instant for any *physical thing* as is proved in Section 6.7.1. In other words, all the moving *physical things* are connected to each other in one cosmic motion of the total universe as explained in Section 6.8.

15.1.3

Hence, we can say that the total cosmic motion is caused as one unit by *necessary existence* or its own *intellectual principle*. At this point, somebody may object that the start of this cosmic motion necessitates a corresponding change in *necessary existence*. The answer to this objection lies in the fact that there is no beginning and no end of this cosmic motion too because we as human beings can know the totality of this motion only in our imagination by comparing this motion with our own trans-substantial motion which is the cause of the limitless *primary time* in our minds. The totality of this *primary time* is limitless because, being only in our imagination, it cannot have any beginning or end.

Actually, it is in the essence of time that its each instant is preceded and followed by some instant. Having such an essence, it is impossible for time to have a beginning and end especially when it is considered in imagination. If we suppose privation of time before it, this privation would be before this time in another time. Thus we would need another time for the privation of the firstly considered time before it. Similarly, privation of time cannot be present after the end of this time otherwise the need of another time would arise in which that nothingness would occur. In this way, an indefinite continuity of such needs would arise and this is impossible.

In short, whole of the cosmic motion considered in this way is within the flow of our primary time which has neither any beginning nor any end. But this all is due to one Divine Act as there cannot be any multiplicity in God.

At this point, one may again put another objection in the following way. If there is continuity on both sides of time, how can it be considered as an outcome of one Divine Act. We know that the time is a kind of entity which exists in series. If such an entity is indefinitely continuous and is also the result of a unity, it cannot be present except in a cyclic way because the unity of only a cyclic series can complete itself without stopping its indefinite continuation. From this we can conclude that our primary time as well as the cosmic

motion exists in cycles[39]. After the completion of one cycle the next cycle begins. So there is a continuity of cycles on both the directions of past and future. But each cycle is the effect of the same Divine Act.

Keeping in view all these considerations, it can be maintained that the mutability of the physical world does not affect the immutability of *necessary existence* because the whole of the physical universe along with the succession of all of its events which we call time, is due to one Divine Act. This Divine Act, which is the *existential cause* and principle of the total cosmic motion with all its possible manifestations, may be considered as pre-determined with respect to our understanding about time.

As soon as the end of a time cycle reaches, the next cycle starts as a necessary outcome of the same Divine Act, the necessary outcome of which the previous cycle was. At this, one would say that each cycle should be exactly identical as each one of them is the necessary outcome of the same Divine Act. This would amount to say that each one of us would be born again in the same manner. All the events of our lives would be repeated again. But this is not true because whole of the physical world including our lives are only the outward manifestation of the present time cycle and outward manifestations of the two time cycles would not be same, though, their ultimate principle would be the same.

Actually, it is impossible that a contingent thing gets existence again after losing it because the word 'after' means that the thing will get existence with different temporal conditions. This means that the thing getting the existence again having different temporal conditions cannot be the same thing that was originally envisaged no matter how similar they both may be. A similar world may emerge again from the same ultimate principle. At least, it is logically possible. But it will again not be the same because temporal conditions would at least change.

39 According to Hindu philosophy too, there are cycles in time called Manvantra.

Since the *real existence* of the total cosmos completes gradually including the gradual completion of the *real existence* of our own material actualities, the difference between any two manifestations of the total reality is the outcome of the inter-relationship of these two gradual completions. On the one hand, there is a gradual completion of the physical cosmos and on the other hand, there is a gradual completion of our own existence resulting in a change in the limitation of our knowing capacities. Since the gradual flows of both of these completions may contain exclusive options the selection of which depends on the will of *partially sovereign beings* like human beings, the *quiddities* withdrawn from the different opted paths of these two completions may be different from each other. In this way, one cycle may appear to its knower to be different from the other one. But this difference always remains within the limits of the options given to each such partially sovereign being at the material level at each instant of time.

15.1.4
But does the change caused by the exercise of human free will create a change in the total reality? The answer to this question is in negative because the jurisdiction of all possible options is already pre-determined in the principle of the free will. All the options and their outcomes are already created along with the principle of a being having a free will. So whatever option a human being selects, it already exists at the level of his *intellectual principle*. So total boundless reality of *necessary existence* remains the same and is not required to be changed at the exercise of human free will within its jurisdiction. So if the manifestation of a temporal cycle is historically found to be different from that of another one due to the exercise of free wills of some partially sovereign beings, this should not be taken to mean that change occurs at the total Boundless reality of God. He remains the same without any spec of a motion.

To understand this further, consider two possible manifestations A and B of a time cycle. If A is manifested in one cycle, the whole boundless reality of *necessary existence* appears to human beings of that cycle through A. If B is

manifested in the next cycle, again the same whole boundless reality appears to human beings of that cycle through B. Thus *necessary existence* does not change on how it is manifested in a cycle. In other words, the way the whole reality manifests does not change this whole reality in any way just because whatever is manifested among a set of possibilities is already in the state of *actuality* in the whole reality. This means passing of time from one cycle to another continuously in an indefinite way is possible in *necessary existence*. There is nothing wrong in it because indefinite number of possibilities is possible in an Infinite boundless reality.

Therefore, every one of us finds himself in some tiny part of some cycle but we can imagine indefinite number of such cycles before and after our own cycle. Nothing is wrong in this conclusion because time itself is just a mental determination. A human being, being situated in some tiny part of a cycle[40], has only a very limited perspective of the total reality around him. This limited understanding is actually his physical world. In other words, man is subject to a horizontal inability too in addition to the vertical inability which is regarding his inability to know about the higher beings such as God and the *intellectual principles* discussed in Chapter 12. Due to horizontal inability, man is unable to sense even a small proportion of the total physical cosmos.

Actually at a certain instant of time, we sense only those *quiddities* which are within the range of the limitations of our own senses at that instant. All the aspects of the total Infinite Reality outside these ranges remain hidden from us. Moreover, our *sensed knowledge* persists only for an instant because it depends on the stimulation of senses by its very definition and senses being a *physical thing* are dispersed in the extension of time as is the requirement of the definition of the *physical things*. Staying in one cycle, we can only imagine the continuity of the other time cycles before and

40 To know the length of the time cycle is out of the scope of this book. But it may be maintained that it must be extremely large as compared to the average length of our normal physical lives because in whole of our historical knowledge of the past cosmos, we do not notice any cyclic return of similar events except of only very limited and secondary nature such as pertaining to cyclic seasonal variations, cyclic motion of planets etc..

after us but cannot normally sense them due to our own limitations. But for God, all past and future exist in a single simultaneity in the form of one single principle.

To us, past appears to be a single line of possibility whereas future appears to be a set of multiple lines of possibilities among which one line is expected to be selected according to the will of the partially sovereign beings. But in reality, past also consists of a set of multiple lines of possibilities. It appears to be a single line of possibilities due to our own limitations because it has become history for us. Hence, total reality of all possibilities is always in front of us. But due to attachment to senses we normally know only a limited view of reality through senses and only for a single instant of time.

In other words, we can sense only some aspects of the total reality only for one instant whereas the reality in the past and future remains hidden from us. Thus past is annihilated only for us whereas future is not yet appeared only to us. But for God both past and future is present in a state of simultaneity. The case is that only our *sensed knowledge* is limited for an instant. This limitation to an instant does not mean that the reality hidden in the past and future no more exists. It does not exist only for us while it is always in the state of *actuality* at the level of perpetuity and eternity in the form of the possibilities of the principle of principles.

Even during whole of our physical lives, we can sense only a very tiny part of the whole temporal cycle and this all is due to our own limitations. Due to the horizontal and vertical inabilities man is able to sense only a very limited view of the whole eternal boundless reality of God. Due to this limited view, the things appear to him as limited moving things in his mind, though, only the timeless space less presence of immutable God is in the reality external to his mind. This limited view is due to his own weakness and due to his own lower level of existence because man himself is only a possibility with respect to the divine principle.

15.1.5

The indefiniteness of the cycles also generates an objection as it proves that the *physical things* must also be indefinite in number. The existence of indefinite number of things is logically impossible. But nothing is wrong in such a conclusion because whole of the physical world appears to come into existence only when a knower gets existence. In reality, only the possibilities of the *physical things* are present in the ultimate Divine principle and indefinite number of possibilities are possible in an Infinite Boundless Actuality. At a single instant of time, man can view only a very limited portion of the whole physical cosmos rather than the whole indefinite number of *physical things*. In other words, the *physical things* viewed by him are always limited and definite. The indefinite extension of the *physical things* in past and future is only in his imagination and this is logically possible because he can imagine a limitless physical cosmos through a *mental existence* under the title of 'indefinite extension of cosmos' for instance.

This indefiniteness is not only along the flow of time but also present spatially at each instant of time as it appears that there is no limit to the images coming from the sky. This is the reason that physical cosmos around us does not appear to have any boundaries. But the limits up to where we can see with a naked eye or with the aid of a telescope are actually the limits of our sensed physical world. Since only the known *physical things* appear to get the existence, the sensed *physical things* are always definite in number no matter how far a man can see them[41]. The things beyond his visual limits are mere possibilities actualized only in the form of one single divine principle. The things within his visual limits including his own existence are also mere possibilities with respect to God. The world of physical things sensed by him merely appears to get existence only in his mind. Hence indefinite extension of space, like the indefinite succession of time, is only in our imagination while space and time sensed

41 Similarly, counted numbers are always definite, though, we can imagine indefinite numbers in our minds as explained in Section 7.4.1.

by us also have only a mental existence. In reality, only the necessary existence of God is in the external.

15.1.6
The above mentioned concept of indefinite succession of our primary time in both the direction of past and future encompasses the total cosmic motion of the whole physical cosmos which is renewed afresh in each time cycle. This indicates that there may be a point in time which may be considered as the beginning of the physical cosmos and its motion because the total cosmic motion is envisaged to be encompassed by the cyclic succession of our primary time. Since before the beginning of a certain cycle, one can also imagine the previous cycle, the beginning instant is also the ending instant of the previous cycle.

This instant needs further investigation as this is a special instant touching both consecutive cycles. Since whole of the time cycle of the whole of physical cosmos is just a single possibility, this instant is the point of origin of this possibility and this is also the last instant of the previous possibility of the same principle. The two consecutive time cycles, before and after this instant, may be different manifestations of this same principle.

This instant is, thus, a dividing instant between two cycles without breaking the continuity of the flow of time. This instant is called first instant and last instant only with respect to the cycle under consideration. Otherwise, it is one instant only dividing the two consecutive cycles. On one side of this instant is the preceding cycle and on the other side is the following cycle.

Since the possibility of the physical world starts from and ends at this instant, this instant must be outside the definition of the physical world terminating the spatial extension. If it would not be admitted to be beyond the physical world and admitted to be within the physical world, the question would arise as to which cycle it would belong. It also cannot be a common point of both the cycles because in this way it would be in both cycles. No instant can be in both the cycles which

are complete in themselves. Hence, this instant must belong to a world other than the *physical world*[42]. Such a world cannot be other than the world of God and angels as is evident from the exclusive categories made in Section 1.3. Hence, we can conclude that the time in each cycle emerges from the angels and ultimately from God not only vertically at each of its instant but also horizontally in its backward succession. It also diminishes into the angels and ultimately into God at the end of its forward succession.

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42 The modern particle physics' concept of the Singularity at Big Bang from when the physical cosmos is considered to be started, is also not very different from the concept of this instant because the Singularity envisaged by modern science does not have any parts, neither spatial nor temporal. Being so, this concept of Singularity is not different from that of this instant from where the physical world emerges and into which it diminishes in the horizontal succession of time.

CONCLUSION

After undertaking all the research and analysis in the previous chapters, we are now in a position to formulize a worldview by summarizing all the conclusions drawn in different chapters of this book.

These conclusions have shown that the reality may possibly be expressed and understood in the following three layers:

1. Pure unity of *necessary existence*;
2. Metaphysical world of *intellectual principles*;
3. World of *material actualities*;

These layers of reality are written in the descending order of existential intensity. *Necessary existence* or God being at the highest level of existential intensity is on the top whereas the world of *material actualities* is on the lowest level Below the world of *material actualities* is the abyss of nothingness which is actually nothing other than a mental concept. The *world of material actualities*, which is just above nothingness is also a very weak level of existence and is thus an unknowable dark world because of being very near to nothingness. The world between God and that of *material actualities* is the metaphysical world which may possibly consist of many layers of different spiritual worlds with varying degrees of existential intensity in such a manner that each higher layer is the principle of the lower one.

This hierarchy of reality and existence appear to us because of the fact that each lower level of reality is merely a possibility of the higher one with the exception that *necessary existence* necessarily

exists on its own instead of being a possibility. The multiplicity of the possibilities increases in different layers of the metaphysical world with remoteness from *necessary existence* which is the ultimate principle of all worlds. The multiplicity of the possibility as well as weakness of existence further increases in case of the *world of material actualities* which cannot be the principle of anything because of being subject to a two way absence of parts. Due to this two-way absence, the possibility of existence becomes so weak at this level, that this world or any member of this world not only cannot know any thing but is also unknowable except that it exists.

Among the *material actualities*, there are, however, some actualities which are also associated with metaphysical elements having different degrees of knowing capacity. Human body is among such *material actualities* and has probably the strongest knowing capacity among such things on the Earth as knowing capacity or knowledge itself is also an existence with varying degrees of intensities. Since man's knowing capacity i.e. his psyche is attached with a material body, his knowledge has a lot of horizontal and vertical inabilities. However, he normally has the following three kinds of knowledge which are different worlds on their own levels:

1. *World of sensed actualities*:
2. *World of imagined actualities*:
3. *World of intellectual actualities*:

The world of sensed actualities is the world of sensed percepts coming into the minds of human beings from the real existences of the *material actualities* after a process of abstraction. This is actually the sensed physical world which appears to most of us to be present in actuality. But in reality, the world of *material actualities* with its two-way absence of parts exists. One kind of absence of parts in the *material actualities* appears to us as the spatial extension of the physical things and the other kind of absence of parts appears to us as temporal succession associated with the physical world. In this way, through the sensed physical world we are able to know the dark world of material actualities after a process of abstraction.

World of imagined actualities includes the reflection of the sensed actualities in a more abstracted form whereas the world of

intellectual actualities is the locus of physical laws and relationships and is the reflection of the metaphysical *intellectual principles*.

Through these three kinds of knowledge man is normally able to know the reality at his own level. But due to the horizontal and vertical inabilities of his knowledge, he normally has an extremely limited view of the total reality and this limited view is actually his physical world which consists of *mental existences* of sensed actualities and some of imagined and intellectual actualities.

Since the *world of material actualities* and metaphysical world of *intellectual principles* are only the possibilities with respect to the ultimate reality of God, man is actually looking at God whenever he looks at the physical world. All the percepts sensed by him are actually his own determinations arising out of his own limitations to which he is subject. Since his location and time of occurrence is also among his conditions and limitations, his view of the physical world changes with the change of these conditions but the whole boundless reality of immutable Divine Principle remain always and everywhere the same.

Other knowers of the world of *material actualities* such as animals may have their own view of their physical worlds depending on their own limitations. But the basic principle is the same i.e. every knower knows the reality according to his own determinations arising out of his own limitations. What is in the external is nothing other than timeless space less presence of God. The world of *material actualities* is only a possibility in the metaphysical world of *intellectual principles* which is again only a possibility in the first principle of *necessary existence*. The possibility of the world of *material actualities* is the possibility of the lowest order in terms of existential intensity arising out of the potentialities of *prime matter* because of the actions of *intellectual principles*.

Hence the world of *material actualities* and physical world may be viewed as a shadow of the higher principles onto the plane of *prime matter*. All the motions and conflicts arising into this shadow are due to this world's own limitations but existentially caused by the immutable *intellectual principles* of higher existential intensity. In other words, this lower *world of material actualities* is just a

necessary outcome of the higher worlds and thus does not have its own objective within itself.

Actually, a higher world never creates a lower world for some purpose or intention. Rather the lower world may be the necessary outcome of the higher principle in which its possibility resides. This is the reason that whole of the cosmos is created as a necessary outcome of its principle which in turn is a necessary outcome of its own principle till this series ends at God who is the first principle of all principles.

From here the answer may be given to those people who ask: why God created this world? Such people think that God has some desire or need to create this world. What may be that desire or need or purpose? People ask such questions because they themselves make things or take different actions keeping in mind some purposes or for the fulfillment of some needs or desires. But to ask such questions regarding God is totally wrong because God being a perfect and infinite existence does not have any need or deficiency. In this perspective, there is no purpose or desire in God's mind for creating this world which is coming into existence as a necessary outcome of the existence of metaphysical worlds and ultimately of God just because there is a possibility of each lower world in its principle. Due to such a possibility, world of *material actualities* gets its existence from God's existence as a result of His Attribute of Creation. He has this attribute because being a perfect existence, his existence giving attribute is his essential requirement. He cannot prevent himself from this creation because he cannot prevent himself to be perfect and infinite.

It is the essential requirement of his perfection that God gives existence to whatever has the capacity to get it. Other than this reason, there is no such reason for the creation of the world that he has some need or some desire to create it. Moreover, God already have all what the world has. So for what He will create it? Whole of the world from the start of a cycle to its end is existentially already present in him as a principle in a state of simultaneity.

But, of course, from a lower level perspective of the physical things themselves, they all at each instant of time have a goal towards which they are moving. From this instantaneous perspective,

everything does have a purpose. We know from the concept of *trans-substantial motion* that every *physical thing* is moving to complete its existence. This means that completion or perfection of existence is the goal of every physical thing's motion. Hence, the purpose of every physical thing is to get perfection of existence because every limited thing has the *potentiality* for some higher level of perfection and all physical things are limited by their very definition.

Like all other things of the world of *material actualities*, human being is also a possibility among all the possibilities of this world and arises out of the potentialities of *prime matter* due to the actions of his *intellectual principle*. All his actions and motions are also due to the actions of respective *intellectual principles*. But this does not mean that all of his life is pre-determined and subjugated to one single pre-defined path. Having a metaphysical psyche, he has some capacity to act in this physical world like other *intellectual principles* of the metaphysical world. This limited capacity is actually his limited free will and operates within a jurisdiction defined by Divine Will. This jurisdiction may change at each instant of time according to Divine Will.

Some people ask the question: Why the world is as it is and not otherwise? This question is also superfluous. This physical world, whatever it is, consists of those things which have the possibility of getting existence from God. The possibilities of all possible *forms* are present in the Divine Will in the form of one Divine Principle which does not flow at the level of time. Rather it is eternally determined in the form of one Divine Act which is creating this physical world according to Will of God. So whatever the *form* the physical world takes, it is always according to the immutable Divine Will.

The different phrases like Divine Will, Divine Principle and Divine Act are also coined to understand the ultimate reality in different perspectives. They all are different aspects of one and the same reality and thus should not be taken as bringing any kind of multiplicity in the pure unity of God.

We can easily notice that the worldview presented in this book has a full-fledged idea of God and many other traditional concepts. In this perspective, this worldview, which may rightly be called an

ontological worldview, is more coincident with those thoughts which are termed as '*traditional thoughts'* in the Introduction of this book because the idea of God is the main point of cleavage between the *traditional* and *modern thoughts*. Hence, from our standpoint, *traditional thoughts* are apparently more correct and more complete in their worldview than the modern ones. But such a claim may be made with certainty only after a careful, comprehensive and detailed study of the traditional concepts and ideologies.

Despite this coincidence with the *traditional thoughts*, the *ontological worldview* concluded in this book is not in conflict with any of the modern thoughts too. It not only endorses the whole of the modern scientific worldview after indicating its shortcomings but also clarifies the standpoint of the traditional religions especially that of their esoteric sections. The worldview presented in this book, does not repudiate modern evolutionary theories, molecular and atomic theories or any of the modern philosophical theories except by indicating some shortcomings in them.

Actually, there should never be any conflict between any two kinds of knowledge if truth is one and consistent. The conflict only arises in the lack of knowledge. A person having conflict with other over an opinion either lacks some aspects of the knowledge which the other one has or the other one lacks some aspect of the knowledge which he has? If such deficiencies are correctly identified, there must not be any conflict between any two opinions. Similarly, there can never be a contradiction between any two schools of thought if their limitations and perspectives are understood correctly.

Hence the differences between traditional and modern thoughts regarding reality of things or between science and religion basically emerge from lack of knowledge or from lack of correctly understanding each other's point of view. Modern ideas are already available to us more completely with more understandability due to the better printing and other communication facilities which are invented and developed in recent centuries. *Traditional thoughts*, on the other hand, are mostly written and developed in an era when physical aids for the preparation and preservation of written texts are very scarce. Whatever was available was difficult to manage and maintain. As a result less people could have the opportunity to write their ideas. Moreover, most of the texts, which got the chance of

being written, were either lost or damaged. In short, only a very scarce written material of traditional thoughts is now available down to us. Whatever is transferred verbally from generation to generation down to our times is prone to deviations and degenerations because of the limitations and weaknesses of the transferring people.

This is the reason that there is a dire need to try to understand and study the scarcely available texts of *traditional thoughts* in more detail and with more flexibility of understandability in order to correctly understand the perspective in which they have been written and developed centuries ago by our ancient ancestors. Moreover, traditional heritage in the *form* of folklores, crafts and arts such as architecture, sculpture and paintings available to us are also required to be studied with the same zest and zeal if humanity is really serious in finding out the ultimate truth about this world and life.

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Glossary of Important Terms

The following terms used in the book should be understood only in the sense of the following given definitions or as explained in the book:

Actuality: The meanings which are really present in a thing.

Additional Actualizing Factor: A meaning or a set of meanings which are required to be added onto the matter of a thing to actualize that thing.

Ambiguity: The presence of different intensities of a meaning.

Animal Form: The form of a physical thing having sensed knowledge.

Attributes or *Attributive Meanings:* Meanings associated with a thing or a concept but are not required to consider that thing or that concept

Body: Spatial part of a thing in the world of material actualities.

Conditional Contingent: Contingents which needs some conditions to be fulfilled before getting existence.

Contingent or *Possibility:* A conceivable meaning or thing for which neither existence nor nothingness is necessary.

Contradictory Category: one of the categories which are made from a group of things through *division by dichotomy*.

Contradictory Complement: A meaning which contradicts another meaning is the contradictory complement of that another meaning.

Cosmic Motion: The total motion of the whole of the physical world.

Differentia: The meanings which actualize a sub-group of things from the meanings of a more general group of things.

Division by Dichotomy: The process of dividing a group of thing into two groups based on two meanings which are *contradictory complement* of each other.

Essence or *Essential Meanings:* Meanings required to consider a thing or a concept.

Eternity: The immutable relationship between immutability of *necessary existence* and immutability of *intellectual principles*.

Evident Truths: Facts, arguments and concepts whose truthfulness and understanding is self-evident and which do not need any proof or definition for their truthfulness or understanding because of their self evidence.

Existential Aspect: The aspect of a contingent due to which its existence is affirmed for that contingent.

Existential Cause or *Intellectual Principle*: A thing's that cause which gives existence to that thing.

Free Will or Sovereignty: The attribute of a thing due to which it is free to do or not to do an act

Form: The meanings which actualize a certain thing from the potentialities of its *matter*.

Generality: The meanings which can be shared by others.

Genus: The meanings associated with a general group of things having the potentialities of some sub-groups.

Horizontal Ambiguity in Existence: The differences among the intensities of existences of things of any one world.

Horizontal Inability of Human Knowledge: The inability of the human beings to know about whole of the physical world in its total temporal and spatial span.

Identity: The meanings through which a thing is recognized to be that thing.

Imagined Actualities: Actualities formed by imagined knowledge.

Imagined Knowledge: The human knowledge which is neither abstract from the *physical attributes* nor require the stimulation of the senses of the knower.

Impossibilities: The conceivable meanings for which nothingness is necessary.

Individuality: That aspect of a thing due to which that thing cannot be any other thing, even not in imagination of any person.

Infinite: The aspect of necessary existence depicting that it is limitless in all respects.

Intellectual Actualities: Actualities formed by intellectual knowledge.

Intellectual Knowledge: The knowledge which is abstract from all the *physical attributes*

Intellectual Principle or *Existential Cause*: A thing's that cause which gives existence to that thing.

Introspection: Contemplation on one's own self.

Last Differential Form: The aggregate of the last *form* and last *differentia* of a thing through which that thing is actualized and recognized.

Limitation Aspect: The aspect of a contingent due to which existences of other things are negated for that contingent.

Material Actualities: Meanings which are actualized in matter and which cannot themselves be known by human beings.

Matter: The parts of a physical thing which bear the potentialities of some other things.

Mental Existence: That type of real existence which is other than the body part of a partially physical and partially metaphysical thing.

Metaphysical Things: Things which have multiplicity and whose no part is absent from any of its other parts.

Motion: Actualization of different potential states of a meaning in a thing in a continuous series.

Mover: Being who actualizes potential states of a meaning in the moving thing in a continuous series.

Necessary Existence: The existence which necessarily exists.

Partially Sovereign Being: Beings which have a limited free will.

Perpetuity: The relationship between immutability of *intellectual principles* and mutability of *physical things*.

Physical Attributes: The *attributes* which are required for the existence or for maintaining the existence of the *physical things*

Physical Events: Things whose all the parts, in addition to being absent from each other, also co-exist with each other.

Physical Things: Things whose one part is absent from other parts and whose some of the parts co-exist while some others do not co-exist.

Possibility or *Contingent*: A conceivable meaning or thing for which neither existence nor nothingness is necessary.

Potentialities: Possibilities of differential forms inherent in a *physical thing*.

Preparatory Cause: The causes which prepare the stage for a thing to get existence.

Preparatory Dependency: The dependency of the conditional contingents on certain conditions required to be fulfilled before getting existence.

Primary Time: Time introspectively felt by a human being due to his or her own trans-substantial motion.

Prime Matter: All potentialities of physical things considered without any *form*

Principle of Essentiality: The *essential meanings* of a thing do not need a cause for its association with that thing because they are the thing itself.

Psyche or *Soul:* Partially physical and partially metaphysical thing's that part which has some parts absent from other but do not have any co-existing parts absent from each other.

Pure Unitary Thing: Thing which do not have any multiplicity.

Quiddity: The *essential meanings* of an existing thing. In case of *physical things*, it consists of the meanings of *Form*, *Differentia*, *Genus* and *Species*.

Sensed Actualities: Actualities formed by sensed knowledge.

Sensed Knowledge: The human knowledge which is not abstract from the *physical attributes* and also requires the stimulation of physical senses.

Space-object: A physical thing which bears no essential meaning except absence of its parts. In other words, pure vacuum, when considered as a physical thing, may be called Space-object.

Subjugation: A thing is subject to subjugation when it is forced to do an act or is unable to do an act.

Time: The comparative relationship among different sates of motions and rest of *physical things*.

Time of Occurrence: The instant of time at which something occurs.

Trans-substantial Motion: Motion of a physical thing itself.

Unconditional contingents: Contingent which does not need any conditions to be fulfilled for getting existence.

Vegetative Form: The form characterized by replication of some or all parts of a physical body.

Vertical Ambiguity in Existence: The differences among the intensities of existences of things of such different worlds which are existential causes of each other..

Vertical Inability of Human Knowledge: The inability of the human beings to directly know the higher beings in the existential hierarchy.

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