MYSTICISM, SCIENCE AND THE UNDERSTANDING OF RELIGIOUS DOCTRINES

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DECLARATION

This Thesis is my original work and has not been presented for a degree in any other university.

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This thesis has been submitted for examination with my approval as University Supervisor.

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Date: 7/11/2001

DEDICATION

This work is dedicated to my parents for their encouragement and support - material and moral. It is also dedicated to Jacinta Waringa, to my brothers, John, Philip, and Mbugua, and to my sister Njeri. Thank you all for everything.

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ABSTRACT

It is recognised that religion plays an important role in individual and societal life. On the one hand, the advent of science and rationalism heralded a sustained critique on the basis on which religious beliefs are ordinarily held. On the other, and as a means of countering this, attempts were made to seek a dialogue between religion and science. This was done in the hope that it would give credence and objectivity to religious doctrines. However, whilst religion and science can be related to one another as complementary, though different forms of human discourse, any close and direct association between them is misplaced and undesirable.

Consequently, religion, as far as it is valid, ought to be able to provide its own reasons in support of this. However, in academic and intellectual circles, focus has been on the traditional conceptions of religion, mostly faith, whilst ignoring its mystical dimensions. Consequently, this work has focused on mysticism, as an alternative conception to religion as faith. It has been argued that mysticism offers convincing logical, methodological, and experiential evidence to support its claims, particularly those that pertain to the ultimate reality or God. The inference from mystical experience to such a being rests on reasonable criteria, contrary to what has been argued about the usefulness of such experiences.

The study notes that religious doctrines should not be exempt from validating criteria lest their adoption be reduced to mere sentimentalism. Science has a role to play in this respect, but it should not illicitly be used as the criteria by which religion is to be validated. Philosophy and rationalism also have a unique role to play in this. Any

genuine assertion, religious or otherwise, ought to be consistent with reason. Both science and philosophy should act as checks and balances, as complementaries not the bases upon which religious claims are to be solely grounded.

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CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND INFORMATION

Religion, in whatever form, has been taught and practised since the dawn of civilisation; it has guided and shaped the human way of thinking and of life (culture). In most traditional societies, no sphere was untouched by religion. Mbiti (1969, 3) argues that the African people did not know how to exist without religion. This assertion can be generalised to cover most traditional societies the world over. However, the predominance of religion was to be questioned and supplanted.

One such critique was the primitive-mind tradition prevalent in 18th century Europe and championed by scholars such as David Hume, Emile Durkheim, F. Hegel, James Frazier, Herbert Spencer, Levy-Bruhl, and Auguste Comte. This tradition attributes religion to primitive thinking and declares its inevitable decline and doom in a scientific world (Starke *et al,* 1996, 435). Auguste Comte's law of the three stages is typical of the argument. He argues that human beings, or societies, develop in three stages. The first, the *theological* or *fictitious*, is characterised by the supposition that phenomena is produced by the immediate action of supernatural being(s); the *metaphysical* or *abstract* which conceives of abstract forces inherent in all beings and capable of producing all phenomena, and finally, the *positive* or *scientific*, where reasoning and observation combined (empiricism) are the means of knowledge (Comte 1853, 134). The contention

here is that the religious kind of thinking and interpreting the world, apart from being incompatible with the scientific, is a relic of the past, with no role to play whatsoever in a modern, scientific world.

If true, Comte's thesis would entail, *inter alia*, (i) a decline in religion as fruits of scientific progress spread and grow; (ii) lower levels of religious belief and practice among people with higher levels of education; (iii) especially low levels among those actually engaged in scientific activities; and (iv) within the academic community, lower levels within the "hard" (physical) sciences than within the "soft" (social) sciences and humanities.

However, the reality is otherwise. Assuming that we are in the scientific age, the table below which gives in percentages religious levels pertaining to category (iv) above, clearly reflects this. This category is least likely to be religious, granted the primitive-mind tradition in general and Comte's thesis in particular.

FIELD	IS RELIGIOUS (%)	ATTENDS REGULARLY (%)	OPPOSES RELIGION (%)
MATHS/STATISTICS	60	47	11
PHYSICAL SCIENCE	55	43	11
LIFE SCIENCES	55	42	11
SOCIAL SCIENCES	45	31	13
ECONOMICS	50	38	10
POLITICAL SCIENCE	51	32	10
SOCIOLOGY	49	38	12
PSYCHOLOGY	33	20	21
ANTHROPOLOGY	29	15	19

Source: Starke *et al*, 1996[1].

[1] Columns two and three are not mutually exclusive. Column three is a subset or elaboration of column two. Though the percentages do not tally to 100%, it is clear that those who are religious are in the majority in most instances.

As is clear from the table above, religion has not declined nor faded out even amongst those educated in the sciences, contrary to Comte's predictions. We also observe that Comte's categories seem to be mutually exclusive, which need not be the case; religious thinking can exist side by side with scientific thinking or the metaphysical. Additionally, Comte's model is based on European experiences and, even if true, the same cannot be seen to be true for non-European experiences, say, the African or the Oriental. It is imperative to note that the primitive-mind thesis contrasts religion directly with science; it assumes that religion is doctrinal (is concerned with explaining the world), and concludes that the methods and findings of science are better, if not the only possible way of rationalising the observable world.

However, illustrative as the table above might be, it does not inform us whether or not religion is a mistaken belief or hypothesis. At best, it informs us that even people trained in the sciences can be religious. Hence, though the primitive-mind thesis collapses, this does not kill the complementary view of religion as irrational choice maintained by scholars such as Sigmund Freud, Kinsley Davies, F. C Wallace, amongst others (Starke *et al*, ibid., 433). The typical argument here is that one is rationally more justified in disbelieving religion, than in believing it, the reasons for this assertion being varied. Nonetheless, the reasons can significantly be attributed to the spread and growth of scientific thinking. As Byers (1996, 8) has argued, having developed apart and sometimes in conscious opposition to one another for the past three hundred and fifty years or so, religion and science have had the legacy of mutual hostility, and seem unable to relate to each other.

The primitive-mind thesis and religion as irrational choice positions seek to primarily demonstrate the supremacy of science over other modes of knowledge and imply exclusivity between them. Nevertheless, this not withstanding, as well as the perceived mutual "hostility" between religion and science, the question can be asked: can and should the two relate to each other? There are those who maintain that religion and science can and should somehow accommodate each other, that the two need not be seen as mutually exclusive, that each has something it can learn from, offer the other, and so on. However, there is intense controversy, even amongst the advocates of a relationship, surrounding the exact nature of such a relationship as we illustrate below.

Paton (1958, 103), arguing for the relationship, maintains that the discrepancy between religion and science is caused by the intellectual elements within religion. Each religion offers doctrines of man, history, the universe, and of God which, however, enter into competition with rival doctrines, especially the scientific. Nevertheless, he contends that one doctrine may be true from one point of view, and another doctrine claim the same from another point of view; but ultimately there can be only one truth or one comprehensive system of truths, in which divergent points of view are reconciled. He consequently envisions a reconciliation between religion and science (ibid., 104).

Paton seeks a comprehensive system of truths, encompassing all of human knowledge, with religion and science as component parts of it. Incidentally, such reconciliation is a possibility, not yet a reality. However, he does not state how that reconciliation is to be effected nor does he mention any anticipated outcome. Paton also states that some doctrines, say, those of religion may be true from one point of view whilst another set of

doctrines, say the scientific, may be true from another point of view. This does leave open the possibility of incommensurability, that is, the impossibility of being compared, as they may relate to exclusive levels of reality. It is possible that each may use concepts and principles that cannot be translated to their equivalents in the other system. The point here is that Paton does not show how the two can be compared, even though they may share doctrines on similar matters, and thus fails to concretise their relationship as he likely wished to do.

In 1988 Pope, John Paul II, issued a statement aimed at creating harmony between religion and science. He said, "It is crucial that this common search based on critical openness and interchange should not only continue but also grow and deepen in its quality and scope. For the impact [science and religion have] and will continue to have, on the course of civilisation and on the world itself, cannot be overestimated, and there is so much each can offer the other." (Byres, op cit., 9). This view, though similar to Paton's, is not as broad. It perceives of common ground between religion and science but stops short of "marrying" the two, or taking it that the two are a subset of a larger domain of knowledge. Whereas it is admitted that a relation may exist between the two, what form it should take or how precisely the two can relate is not made clear. Is it at the doctrinal level, or the moral level? What is the anticipated outcome, a religious principle, or a scientific one? What deficiencies does the one have that the other can remedy?

Albert Einstein similarly believed that science and religion are mutually reinforcing. He asserted that, "Science without religion is lame, religion without science is blind."

(Slack 1997, 58). His view, like the Pope's, is bi-directional, that is, religion can influence science just as science can influence religion. At the very least, it implies a common ground between religion and science. Nonetheless, it does share in the deficiencies of the above views.

In contrast with the above views which do not seem to give predominance of one view over the other(s), John Polkinghorne (1989, 4), however, contends that those who seek to attain the deepest understanding of the world will have to reckon with the possibility that it will be found in theism. He is implying that it is only within the framework of religion that a comprehensive view of the universe may be obtained. Polkinghorne's view is uni-directional since theism is the broad framework upon which science - and almost everything else - is to be rightly grasped. It should however be noted that Polkinghorne is wrongly attributing to theism (religion) the role of philosophy, which alone is equipped to attaining a comprehensive view of the diverse realms of knowledge. It is also questionable whether theism has the requisite resources (methods and techniques) to rightly appraise disciplines such as science.

However, contrary, to Polkinghorne's view, Paul Davies (1990, 8) argues that it is science that will ultimately provide answers to questions raised by religion. His argument proceeds in a direction opposite to Polkinghorne's, that is, religion and the questions it raises are best understood within the framework of science. His suggestion is that science can render understandable and explicable, in the best possible manner, the concepts of religion such as creation and miracles. Though less mild than Polkinghorne's version in that he restricts himself only to religion and science, not to

the entire realm of knowledge, Davies is perhaps giving science more to bite than it can chew. Paul Davies' view is similar in some respects to Comte's: principally, they both claim the superiority of science over religion. Though it can be admitted that there are concepts in religion that are amenable to scientific treatment, such as cosmogonies and miracles, it is doubtful whether such coverage is universal (applies to all of religion) as Davies implies. This is because religion has dimensions other than the doctrinal (such as moral) and even where doctrinal, there are spiritual doctrines as well as non-spiritual ones.

However, others scholars like Carl Sagan, dismiss all the above positions by denying any relationship between religion and science. Sagan argues that since the birth of the universe, for instance, could be explained by the laws of physics alone, there was nothing for a creator to do. God is dismissed as an unnecessary hypothesis (Sharon and Westley 1998, 46). In other words, science and religion are viewed as mutually exclusive systems of thought. There is nothing that either can offer or say about the other. This is a more radical version of Paul Davies' argument; it seeks to eliminate rather than accommodate religion scientifically. It is not dissimilar to the primitive mind thesis already mentioned.

1.1 STATEMENT OF THE RESEARCH PROBLEM

Divergent as the above opinions are, they all seem to predicate religion to faith. Religion is taken to be a system based on beliefs rather than on experience or any other mode of knowing. Religion's way of *knowing* therefore becomes revelational rather than empirical, emotional rather than rational. As Arthur J. D'Adamo has rightly observed,

religion's way of knowing follows the revealed word (scripture) without question or criticism, whilst on the other hand, science recognises no final authorities nor accepts anything without inquiry or criticism (1997, 22)[2]. How then, if at all, can the two relate?

Additionally, any view that envisages any relationship between religion and science implicitly assumes that at least one has some deficiency that the other can remedy, a gap that the other can fill or at least be enriched by a dialogue between them. Science, with its methodology of controlled observation, experimentation, confirmation, corroboration and so on, is seen as likely to infuse a sense of objectivity into religion (seen mostly as faith and therefore inherently subjective). However, as William Austin has aptly pointed out, it would be easier for theology to draw from science than for science to draw from theology (1976, 1). This is because science, unlike theology, is a self-contained discipline with a sharply delimited scope and purpose. As such, a theologian wishing to consult scientific results would find a more or less agreed upon body of data to consult. Nevertheless, a scientist wishing to take account of theology would immediately be faced with the question of which theology: Catholic, Buddhist, or what? Additionally, it is not clear what science may stand to gain by associating with religion except, perhaps, from instilling a sense of morality on scientists, a feat which can equally be accomplished by any ethical non-religious system. There is also the additional question of whether religion, perceived as faith, is the best alternative in comparing or harmonising the two. Do other elements in religion exist suitable to this end? Furthermore, it can also be asked whether science, as it tacitly assumed, is the best way or only way of

[2] This is an on-line version of the book. Page numbers refer to the SWB-97 version of it and may not match the text version.

rationalising the world to the exclusion of everything else since in seeking to reconcile religion with science, there is the usual presumption that science is superior to religion. Above all, it is also worth asking whether religion can offer its own proof of validity without relying on science.

1.2 OPERATIONAL DEFINITIONS

Hick, quoting the **Concise Oxford Dictionary**, defines religion as the "...human recognition of a superhuman controlling power and especially of a personal God or gods entitled to obedience and worship." (1990, 2). Religion can thus be seen as the recognition and acceptance of a super being or power as well as the underlying justifications for its existence, narrations and explanations of it attributes, powers and actions, relationship to man and the world and procedures for appeasing or communicating with this being. We have limited our use of the term "religion" (also referred to in this work as "conventional religion") to those forms and manifestations or religious beliefs most commonly practised by religious people which are also the modes most commonly discussed by commentators and scholars in matters religious. This is to distinguish it from that form of religion referred herein as mysticism.

The **IEP**[3] defines mysticism as, "Belief in direct apprehension of divine or eternal reality by means of spiritual contemplation distinct from more ordinary avenues of human knowledge." John Smith views it as a form of immediate experience that is present in every religious form to a greater or lesser degree (1965, 104). Mysticism is thus seen as the attempt to "perceive" and to understand religious or spiritual *reality*.

This is its chief distinguishing characteristic from conventional religion.

We have used the term science to broadly refer to the natural sciences - physics, chemistry, and biology, as well as the social sciences. It can briefly be defined as the systematic ordering of facts on nature and its processes, by means of methods and techniques designed to eliminate bias or subjectivity, aimed at explanation, prediction and control of nature, amongst other uses.

1.3 RESEARCH OBJECTIVES

The research objectives of this work are:

1. To critically assess the suitability of religion conceived as faith in discoursing on religion.
2. To identify and assess if and whether religion can relate to science.
3. To identify and assess if and whether mysticism can provide independent criteria to justify religion.

1.4 JUSTIFICATION AND SIGNIFICANCE

A significant amount of literature on the philosophy of religion tends to be highly abstract. This is not surprising though, given the abstract nature of philosophy itself. However, rationalisation, *per se*, has the limitation that the only truths it can demonstrate are analytical and tautological. Logic alone cannot demonstrate any matters of fact and experience, which have to be known through experience. This does, in part, justify our preference for mysticism. This is a departure from the traditional discussions

[3] Internet encyclopaedia of philosophy.

on religion and its justification or refutation by the use of reason alone. It is perhaps due to the difficulty above -- as religion can equally be *vindicated* or *vilified* solely by reason that science has been employed by proponents on both sides of the divide to argue their cases. It is crucial to examine if such use of science in the justification of religion is in the first instance justifiable or even desirable and in the second whether decisive (that is does it accomplish what it sets out to do).

Additionally, as Phillips (1976, 9) aptly observes:

> ...changes outside philosophy constantly throw up new philosophical problems, or place old problems in a new context such that the way to tackle them is difficult to discover. .... One does not philosophize in a vacuum. One philosophizes at a certain time and place when some interests and concerns in the culture at large are more dominant than others. Yet, despite this fact, the deepest philosophic reflections about these interests and concerns always lead us back to the central questions of philosophy."

Hick echoes the same concern when he observes that much of the problems of philosophy are of such broad relevance to human concerns, and so complex in their ramifications, that they are in one form or another, perennially present (op cit., viii). He further argues that though they may yield in part to philosophical inquiry, they may need to be rethought by each age considering its broader scientific knowledge and deepened ethical and religious experience. Thus, whereas philosophic discussions on religion are as old as philosophy itself, changing times and circumstances require their re-examination in the light of such changes. There currently has been a change in focus, with increased attention being given to non-traditional conceptions of religion such as mysticism.

We also note, partly as a consequence of the preceding point, that there lacks a unified, coherent and philosophical view on mysticism and its various components. Much of the available literature on religion has tended to focus mainly on the element of faith or belief and not mysticism. Where mysticism has been dealt with, such works have tended not to be strictly philosophical, or not exhaustive. This research consequently seeks to fill this gap as well as serve as a scholarly contribution to philosophy of religion.

1.5 LITERATURE REVIEW

1.5.1 ON THE NATURE RELIGION

According to Mac Gregor (1960, 1), religion is a commitment to a kind or quality of life that purports to recognise a source beyond itself - usually but not necessarily called God - and that issues in recognisable fruits of human conduct, such as law and morality; culture, such as art and poetry; and thought, for instance, philosophy. This definition recognises the multiple influences of religion on man's life and ascribes a supernatural source to it. It employs the term broadly to encompass any religious belief system be it Buddhist, Christian, Hindu or Islamic, implicitly assuming that there is more in common amongst the various religious systems than there are differences. This definition however is more applicable to traditional societies, where religion played a pivotal role in man's life. In a modern society, the sources of morality, culture, and thought system are in most cases secular. Mac Gregor's definition is more concerned with the outcome or manifestations of religion rather than with its contents and their nature.

Commenting on the nature of religious beliefs, John Wilson observes that religious

statements make no assertions at all. One of their major shortcomings is that they are not falsifiable, that is, there is no way they could be proved wrong. He likens them to assertions such as "...there is a little person flying in the room," with the qualification that "the little person cannot be seen, heard, or touched." Without the qualification, the statement is verifiable, (and in principle capable of being falsified) but unverifiable with qualification, for there is no way to prove that the little man is there. Wilson argues that a person asserting this wants to state what they are feeling, believes to be the case, or they are delusional. Thus, religion is not intended to give information or state facts, but is, "...a rather special way of advocating a moral code or a way of life." (1972, 18).

Braithwaite shares a similar opinion. In his non-cognitive theory of religion, he argues that, "...a religious assertion,... is the assertion of an intention to carry out a certain behavior policy, subsumed under a sufficiently general principle to be a moral one, together with the implicit or explicit statement, but not the assertion, of certain stories." (Hick, op. cit., 94). The stories that Braithwaite refers to are those to be found in religious scriptures such as creation stories. It is not necessary, he argues, that the stories be true or be believed to be true. The stories serve as a psychological motivation to act in a manner that is contrary to human natural instincts. However, as Hick rightly points out, Braithwaite considers religious assertions to function in a manner that is radically different from the way most religious people have considered them - the stories asserted in religious statements are generally believed to be true, to be matters of fact, contrary to Braithwaite's assertion. Similarly, as Seth Shostak rightly observes, "...both [religion and science] offer ways of interpreting the universe, and both provide theories of how the cosmos got to its present state." (1998, 31). As already noted, religion has moral as

well as doctrinal aspects. Wilson and Braithwaite fail to sufficiently take the latter into their accounts of religion. Additionally, there are aspects of religious doctrines that can be falsified (Mazur, 1996, 21) contrary to Wilson's assertions. For instance, the biblical reckoning of the age of the earth is approximately six thousand years, whereas the scientific account gives an age of about 4.5 billion years. Though it is the contention of some that such accounts are not literal, it is the case that they are interpreted literally by the majority of believers as already noted.

In criticising the ethical account of religious statements as an asserter's intention to act in a certain way, Hick (op cit.) argues that the assertion "Lying is wrong," for instance, would, given this interpretation, be equivalent to, "I intend never to lie." Thus, the assertion "Lying is wrong but I intend to lie" translates to "I intend never to lie but I intend to lie," which is a manifest contradiction. What this means is that it is logically impossible to intend to act unethically. However, people do intend to act wrongly contrary to the consequences of the ethical interpretation of religious beliefs.

1.5.1.1 ON THE ORIGINS OF RELIGION

Views on the origins of religious beliefs are varied. Two positions are eminent. They are that religion is of human origin on one hand and, on the other, that it is of non-human or divine origin.

According to Bertrand Russell, religion is based on or derived primarily from fear - the terror of the unknown, the mysterious, fear of defeat and death - and partly to feel comforted in times of trouble. He argues that:

> Science can help us get over this craven fear in which mankind has lived for so many generations. Science can teach us to no longer look around for imaginary supports, no longer to invent allies in the sky, but rather to look to our own efforts here below to make this world a fit place to live in, instead of the sort of place that the church in all these centuries have made it (1967, 26).

Russell's view is that, given the origin of religious sentiments in man's fear of the unknown, science can help him out by aiding in the understanding of the universe and the processes of nature. He ignores the fact that the search for ultimate meaning cannot be fulfilled by science alone. Though it is the case that it cannot be achieved by the kind of religion he alludes to, it is nonetheless the case that any ultimate meaning to man's life ought not leave out an account of religion.

Sigmund Freud expresses an opinion similar to Russell's. He argues that religious beliefs are not a precipitate of experience or the results of thinking. Rather, they are illusions, fulfilments of the oldest, strongest, and most urgent wishes of humanity. The secret of their strength lies in the strength of those wishes. Freud thought that people who hold religious beliefs have an unconscious need for a father image to provide them with security and comfort.

By illusion, Freud does not mean an error, nor is an illusion necessarily an error. One characteristic of illusions is that they are developed from human wishes such as Columbus' "belief" that he had discovered a new sea-route to the Indies. Freud argues that illusions are close to psychiatric delusions but that unlike them, illusions need not be in contradiction with reality (Deutsch 1997, 423). What Freud is asserting is that though untrue, illusions need not be logically impossible.

Deutsch, however, observes that Freud commits the genetic fallacy, that is, the fallacy that one can measure the truth and value of various ideas by tracing them to their seemingly psychological origins (ibid., 422). Additionally, Kallenberger argues that one who is "delusional" can be said to be so only in reference to one who is "normal." How then, he asks, does Freud term the religious as delusional and not the non-religious? The non-believer, he argues, could equally be a prey to delusions (1972, 21). Cupid expresses a similar opinion when he asserts that "... the trust we place in science and technology in modern culture is illusory, being nothing but a projection of infantile belief in the omnipotence of wishes." (1976, 103). Cupid seems to be turning Freud's argument against him with the aim of showing that his (Freud's) account need not be limited to religion only. Delusions, he contends, can also cover other areas of human endeavours, including the scientific.

It should be clear from the foregoing that religion is here being considered as faith and is therefore fantastical (Freud), mistaken and based on fear (Russell), unverifiable (Wilson), and a special way of advocating a certain behaviour policy (Braithwaite). From Russell's, Wilson's, and Freud's points of view, it is based on illusion, not being the precipitate of experience – its major weakness.

1.5.2 ON SCIENCE

According to Wallace, science is mainly concerned with the finding of order in things and to assign reasons for this order. The term, he argues, "... is generally applied to the result of systematically using a hypothetico-deductive method in a field of inquiry,

which yields conclusions with a high degree of probability that yet fall short of certitude." (1977, 201).

A. Cornelius Benjamin views science as that, "mode of inquiry which attempts to arrive at knowledge of the world by the method of observation and by the method of confirmed hypotheses based on what is given in observation." (Slaattee 1982, 57). Slaattee argues that science could be referred to as organised common sense. However, unlike common sense, science is more aware of the dangers of prejudice; it safeguards against biased positions by being more analytical than common sense. Presuppositions, he argues, are exposed and circumstances considered more than in ordinary common sense. Further, experiments are carried out so that certain conditions can be controlled whereby light can be shed on other factors involved. Unlike common sense, the scientific manner of thinking will be more apt to avoid the *post hoc* fallacy, that is, the notion that what follows an event was caused by that event. Scientific experiment will isolate things in such a way as to allow but one relevant factor to vary at a time. Judgement, he adds, is suspended so that a higher degree of probability or confirmation may be realised by the evidence at hand. Stressed here is the fact that method in science seeks to make it objective or bias-free.

Slaattee further draws a distinction between a fact and a theory. He notes that a fact is:

> ...whatever is the case, especially as observed in, or logically inferred from, experience. A fact is something already known, whereas a theory states things that are less observable and sometimes never to be observed, as is the case with the atom or the electron. A fact reports a single case or event while a theory states things that may refer to an unlimited number of events. Though a theory

> usually implies something universal, it has logical consequences, which are particular and relate to specific events. While facts are known and particular, theories are universal in scope and can never be known to be true. It is for this reason that the scientist almost always finds mathematics so important in dealing with theories. By formulating a mathematical proposition, he can often make predictions about concrete facts (ibid., 59).

1.5.2.1 CONTRAST BETWEEN THE "OLD" AND THE "NEW" SCIENCE

Many writers on science agree on the contrasting characteristics between the "old" and the "new" science. This distinction warrants some mention here.

The early Greek notion of scientific explanation, for instance, consisted of an accurate description of phenomena, the analysis of its main characteristics, and the relation of these to a series of universal truths already put forward. Its main difference with modern science lies in the nature of these truths, which were recognised with certainty by the Greeks, though there were varying conceptions of the same. As such, Plato's "science" consisted in tracing out from the world of the Forms the world of matter, which was a shadow of the former. Aristotle, on the other hand, held that Forms could be analysed from the perception of the senses. Either way, explanation was achieved by fitting facts into an existing (*a priori*) scheme of Forms (Wilkes 1969, 7-8). Aristotle's explanation of motion, for instance, lay in the tendency of the thing in question to get to its natural place of rest. Fire thus naturally goes up, earth down. A stone, accordingly, falls to the ground because that is its natural place of rest. Causes are similarly explained in terms of goals achieved: an animal grows because it has to become an adult; a seed germinates because it has to become a plant. The concern with the final end of processes, rather than with the processes themselves, led Aristotle and his successors to concern themselves with logical connections. They were interested more in the essence of the

entity, potential of an object or activity, not the categories of mass and force in the context of space and time, for instance (Cohen 1987, 13).

Aristotle and Plato's ideas were synthesised by St. Augustine of Hippo and St. Thomas Aquinas and adopted by the Medieval Church. It was then in vogue for one to commence from universal principles and proceed to the particulars rather than the vice versa. However, this attitude changed with the works such as those of Roger Bacon (1268) in which he insisted that scientific knowledge could only be acquired by experimentation. This paved the way for Nicholas Copernicus, Galileo Galilei, Tycho Brahe, Johanne Kepler, amongst other, who employed experimental methods in their scientific enterprises (ibid. 9-19).

It is from such advances that Newtonian physics can be seen as developing. The publication of his **Principia** in 1687 is seen by many as one of the most important developments in the history of science (Cohen op cit, 148; Paul Davies op cit, 12). His system, which remained in vogue for hundred of years, was able to successfully account for a variety of phenomena. It is still used to date, though modifications or limitations to it have been introduced.

The next great revolution came with quantum mechanics and a notable figure here is Einstein. At the macro level and at ordinary speeds it (quantum mechanics) does achieve approximately the same results as Newton's mechanics. However, at the subatomic level and at speeds approaching those of light, the differences are pronounced, if not contrasting.

The old science (before quantum mechanics) generally held that the universe was closed, essentially completed and unchanging, basically substantive, simple and shallow, and fundamentally unmysterious like a rigidly programmed machine. The new science, on the other hand, regards the world as, "...unbounded, uncompleted, ...still becoming, basically relational and complex, with great depth, unlimited qualitative variety, and truly mysterious - a restless vibrant, living, growing organism, forever pregnant with possibilities for novel emergencies and developments for the future." (Schilling, 1973:44). The latter, he further observes, represents, "...not only additions to *what man knows* but changes in the way he knows, and in *the way he feels about, responds and relates to the known and unknown*". (Ibid., 18). In examining science, it would be crucial not to lose sight of where science has come from, where it is currently, and where it might be headed to in the future. It is worthwhile to mention here that the development of quantum mechanics fuelled the tendency to relate religion to science as dimensions in the former seemed to resemble aspects of the latter.

1.5.3 THE WAY NOT TO RELATE SCIENCE TO RELIGION

Science, rightly or wrongly, has and is increasingly being applied to phenomena once considered beyond its fold and more so the religious. Conversely, religion is making use of science and scientific findings to justify itself.

Claude Lévi-Strauss sought in his works to uncover the structure of human nature, to discover the universal, basic structure of man lying hidden beneath the surface and which manifests itself in his social life as language, art, myths, religion, music, etc.

According to him, there are, "...deeper realities and deeper orders that determine seemingly gratuitous customs and beliefs." (Richard and De George: 1972, xxiii).

Lévi-Strauss' work suggests that science may be used to make sense of certain aspects of man's life such as myths and religion (cultural phenomena). He claims, for instance, that by use of certain binary (a system of counting based on two numbers: 0 and 1) relations, one set of Bororo myths could be transformed into another set of myths of the Sherente tribe (of Brazil). This to him indicates that there are deeper realities and orders in seemingly random and incoherent cultural phenomena. However, it can be posed: what is this that lies beneath the surface? What are the deeper realities that Lévi-Strauss is referring to? He does not seem to give a categorical reply and leaves the issue open to varied and conflicting interpretations: a religious person may see the supernatural, whereas a Darwinist may see natural selection. Additionally, the facts from his work, though scientific, can be interpreted outside the realm of science and yet still be taken (mistakenly) as scientific. The case of Michael Drosnin illustrates this well.

Eliyahu Rips, using group theory that underlies quantum physics formulated what is now generally referred to as the *Bible code*. Drosnin's uses this "code" in an exercise akin to Lévi-Strauss'. The code is a computer programme in which the first five books of the Old Testament, the Torah, are arranged into a continuous strand, 304,805 characters long, where:

> The computer searches that strand of letters for names, words, and phrases hidden by the skip code. [That is] It starts at the first letter of the Bible, and looks for every possible skip sequence—words spelled out with skips of 1,2,3, all the way up to several thousand. It then repeats the search starting from the

> second letter, and does it all over again until it reaches the last letter of the Bible (Drosnin 1997, 14).

Findings from this project claim that predictions (such as the assassination of Rabin[4]) can be made from the text of the Bible by use of this technique. Drosnin claims were based on an article published in a reputable mathematics journal (**Statistical Science** 1994, vol. 9, No. 3 429-438 under the title "Equidistant Letter Sequences in the Book of Genesis," by Doron Witztum, Eliyahu Rips, and Yoav Rosenberg.).

However, can such works be trusted? What really do they prove? In the case of Drosnin, the scientists who developed the code have dismissed the conclusions he draws. Rips, one of the authors, distanced himself from Drosnin's work saying that the conclusions were unfounded and distort his original work, especially the prophecies of calamities and war that lie in the future (Trull, 1997[5]). The only conclusions that can be drawn, Rips maintains, are that the Torah Codes exist and that they are not a mere coincidence.

More damming to Drosnin's claims are the findings that what he claims to be unique to the Torah can, though in a weaker sense, be applied to other texts. The contention here is that depending on how the computer is programmed, one could come up with similarly "remarkable" findings from just about any text. With this in mind Don Steinberg, (1999[6]) did such a test on the software license agreement of a computer software (Microsoft Access Developer's Toolkit 2.0).

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[4] Former Israeli prime minister.

[5] This is an Internet article "Cracking the **Bible Code**" at: http://www.parascop.com/articles/0697/biblecode.htm

[6] At the address: http://www.cnet.com/content/voices/steinberg/071697/index.htm/

Steinberg came up with meaningful and relevant phrases such as "US government restricted," "information," "inability to use," " even if Microsoft had been advised on the possibility," and "damages for loss" all intersecting the word "Rabin." In Drosnin's book, such intersections are seen as relevant and prophetic and are used to support claims that the Torah is from God, or at the very least, from a super intelligent being. However, as Steinberg wonders, could the same be said of someone in the Microsoft legal department? Surely not. Phil Stanton makes remarkably similar accusations but notes additionally that the text used omitted vowels and this made it capable of being made to fit Drosnin's fancy (1997, 35-39). This then does strongly indicate that claims, such as Drosnin's, draw conclusions that are far from being warranted by their premises and certainly not based on science. The fact that the program is computer based or the theory behind it is from quantum mechanics does not warrant the claims made. His work is speculative, not scientific. Indeed, some of his prophecies or predictions have decidedly turned out untrue. For instance, the prediction that Benjamin Netanyahu, the then Israeli prime minister, would be assassinated whilst in office did not take place (Drosnin, op cit., 59-60, 120).

1.6 THEORETICAL FRAMEWORK

In this work, we have adopted Idealism as our conceptual framework. According to the **New Encyclopaedia Britannica**, Idealism, as a philosophical term, refers to any view that stresses the central role of the mental or rational [non-material] in man's interpretation of experience. It holds that the world or reality exists essentially as spirit or consciousness, that abstractions and laws are more fundamental in reality than

sensory things, or, at least, that whatever exists is known to man in dimensions that are chiefly mental - through and as ideas. To the idealist, terms and relations logically determine one another. The ultimate reality is therefore a system of judgements or propositions, and truth is defined in terms of these propositions, and in terms of the coherence of these propositions to form a harmonious whole. This is epistemological idealism as opposed to metaphysical idealism which asserts the ideality of reality. Epistemological idealism is opposed to realism, the view that in human knowledge objects are grasped and seen as they really are – in their existence outside and independently of the mind; to scepticism which denies the possibility of knowledge; to positivism which stresses observable facts and relations as opposed to ultimates; and often to atheism, since the idealist commonly extrapolates the concept of mind to embrace an infinite Mind. The essential orientation of idealism can be seen through some of its typical tenets: " Truth is the whole or the Absolute"; "to be is to be perceived"; "reality reveals its ultimate nature more faithfully in its highest qualities (mental) than its lowest (material)"; "the ego is both subject and object." In our case,

Idealism offers a suitable framework within which mystical experiences can be analysed and understood.

1.7 HYPOTHESIS

This research has as its hypothesis the following: Rightly grasped, religion can provide criteria for validating itself. More specifically, that mystical experiences can offer strong internal support for fundamental religious doctrines.

1.8 METHODOLOGY

Philosophy has, as one of its main tasks, that of offering a complete as possible world-view. One goal of synoptic philosophy, as James Christian (1977, 40) observes is the development of an empirically sound and rationally coherent world-view to serve as an operational model for the interpretation and valuation of experience and for providing unity and consistency to life. The view considers the compartmentalisation of data as artificial and eventually self-defeating. Moreover, philosophy also has a critical aspect; it accepts nothing without first thoroughly examining it and the assumptions behind it. In view of this, diverse concepts – religion (with its subsets of faith, myth, and mysticism) as well as science – are critically examined so as to expose their chief characteristics, methodologies, and outputs with a view to determining the degree of compatibility that may accrue between them, amongst other issues, as spelt out in the research objectives.

To go about this task, the research will rely solely on secondary source of data, that is, from books, journals, magazines, periodicals, newspapers, as well as the World Wide Web (the Internet).

1.9 SCOPE AND LIMITATIONS

According to one classification, religion has two main aspects: the moral or the practical, and the intellectual or doctrinal. This research will limit its focus on the intellectual or doctrinal This research does not limit itself to one particular religion but

rather examines at all mystical doctrines be they Buddhist, Christian, Hindu, or Islamic. This is because of the similarities in the methods and pronouncements of mystics from the various faiths.

CHAPTER 2

RELIGION IN PERSPECTIVE

2.0 INTRODUCTION

Much of the discussion on religion, philosophic or otherwise, has overwhelmingly treated religion as a system of beliefs based on faith. Consequently, religion was in former times attacked or defended by philosophic means and the trend continues to date. Later on when science became influential, it was, and still is, applied to argue for or against religion. We reserve a discussion on religion and science to a later chapter. Our focus for the moment will be with the philosophic method and how it relates to religion. In particular, we critically analyse some of the major ways in which in which religion has been conceived practised as well as the academic discussion on the phenomena that is religion. We have broadly referred to these conceptions as "popular religion." We aim to evaluate its claims to knowledge and its consequent suitability for critical religious discourse.

2.1 PHILOSOPHY AND THE STUDY OF RELIGION

Systematic philosophy has been in existence in various parts of the world for over two millennia. Western philosophy owes its origin and early development to the ancient Greeks, who set out its practice and methods. Like any evolving entity, philosophy has grown and changed radically, but it still bears the birthmarks of its Hellenistic origins.

The definition of philosophy is one of the problems of philosophy, that is, it is a

philosophical question and exercise in its own right. This implies that one who is attempting a definition of philosophy is already philosophising. Etymologically, the word derives from the Greek *philia* and *sophia, love* and *wisdom* respectively, denoting the love of wisdom. A philosopher, it follows, is one who pursues such wisdom or knowledge. Pythagoras (circa 570-495 BCE[7]) in making the distinction between a philosopher and other men argued that there exists three classes of people just as there are three classes of people who attend the Olympic games. The lowest category consists of those who come to buy and sell, and next above them are those who come to compete. Best of all are those who simply come to look on. Men may be classified accordingly as lovers of wisdom, lovers of honour and lovers of (material) gain. A philosopher, it emerges, has, amongst other qualities, those of introspection and detachment: his concern is his subject for its own sake.

There is a tendency to distinguish between two senses of the word philosophy: the ordinary or commonsense meaning and the technical sense. Klemke defines the former as a set of fundamental beliefs and cherished convictions of an individual, often held in a naïve unexamined manner (1992, 2). This way of treating philosophy does not distinguish it from any other belief (including superstitions) that a person may hold. For instance, a trader may hold it as his philosophy never to mix business with pleasure, or a person may hold that ghosts possess people. Almost everybody has such beliefs, but not every body is thereby a philosopher. The technical sense of the term is, however, opposed to the commonsense meaning. Unlike the former, beliefs and opinions are not

[7]We have used the notations BCE (Before Christian Era) and CE (Christian Era) instead of BC and AD respectively. This is because of the Christian connotations of AD (the year of our Lord).

held in a naïve and unexamined manner. This is the critical aspect. However, like most aspects of philosophy, there are disputes over what this entails. In part, the controversy is attributable to the varying emphases laid on the subject matter, or on the methods that characterise philosophy. However, there are certain elements common to many of these definitions; we shall endeavour to highlight the more important amongst them. This, however, does not mean that there is unanimity on the definition of philosophy amongst philosophers. What follows therefore should be seen as tentative or working definitions of the terms involved.

One aspect of philosophy that distinguishes it from other branches of learning is its scope, or lack of it. Unlike, say, physics which studies matter in relation to energy, or biology which focuses on the study of living organisms, philosophy does not have a limited scope. As Christian observes, philosophy ponders on the largest possible perspective, the weightier more stubborn problems of human existence. It attempts to weave the interconnecting lines of *illumination* between all the diverse realms of human thought, in an endeavour to attaining new heights or insights (op cit., xix). Due to lack of scope, philosophy embodies certain other features. One such feature is that philosophy is ultimately concerned with questions of the most general kind. Thus, whereas one would ordinarily be concerned with the question of whether, say, Kilonzo is lying, philosophy will ask the more general questions: Can we know what goes on in other people's minds? If so, how? for we cannot directly perceive the contents of their minds. Secondly, evidence of all kind is relevant to the philosophical enterprise, though this rarely settles anything conclusively. This however is also true of, say, the sciences and we should view this difference as one of degree rather than of kind. It indicates that

philosophy is an on-going, ever-growing activity.

The foregoing indicates that philosophy can discourse on any subject under the sun. Nevertheless, this does not imply that it uses the methods of the subjects it carries out discourse upon since it has its own peculiar methodology. The tools that philosophy uses are creativity and critical argument. Had philosophy been only creative, it would make no serious claim to our beliefs and would, for that matter, not be radically different from the fine arts like poetry or music. Philosophers thus do not just invent views, they argue for them, and critically. This point is well illustrated by French and Curtis when they observe that:

> Philosophers expose view points to various kinds of attack - they find inconsistencies, dissect arguments that do not work, reveal inexplicit and dubious premises, discover counter examples. Philosophy progresses in large part by weeding out or modifying views that do not stand up to such criticism. Philosophic views thus go through a process analogous to Darwinian natural selection (1978, 2-3).

Hence, only the best views or theories survive, and these are held tentatively, for philosophy has no facts, theories, or truths that can be accepted as final. In brief, besides having the widest possible perspective, philosophy makes use of critical analysis as well as synthesis. Synthesis is vital for the harmonisation of knowledge. However, before any synthesis is attempted, there has to be a process of critical evaluation.

Our treatment of the definition of philosophy above has largely ignored the distinction of its various branches like epistemology, metaphysics, and ethics. This is because what is involved, even here, is the application of the philosophic method to morals in the case

of ethics, or being in metaphysics. It is the philosophic method that enables philosophy progress and makes its claim to knowledge valid and objective. This being the case, we can now look at how philosophy is applied to the study of religion.

2.1.1 PHILOSOPHY OF RELIGION

As is the case with philosophy, there is controversy surrounding the nature and definition of philosophy of religion. This can be attributed in part to the varying conceptions of what philosophy is as well as the selection of different facets of religion for special attention.

Philosophy of religion is a branch of philosophy that carries out reasoned discourse on religion. Deutch defines it as "...that branch of philosophy that seeks to understand the nature of religious experience both within and apart from the religious traditions of human kind; to appraise the claims about the nature of the universe, of God, and of human beings put forward by religious thinkers; and to examine critically the fundamental presuppositions and beliefs that inform various religious world-views." (Op cit. 387). Mugambi (1996, 21) shares a similar view. He argues that it is a specialisation of applied philosophy as are the philosophies of science, art, law, language, etc., dealing specifically with the philosophic questions that arise from religion as a phenomenon as well as from the teachings of particular religions. The **Encyclopaedia Britannica** offers the view that there are three main trends in the philosophy of religion, namely, 1) analysis and description of the nature of religion in a frame work of the general view of the world; 2) the effort to attack or defend the various religious positions in terms of philosophy; and 3) the attempt to analyse religious

language. Consequently, as Hick (op cit. 1-2) rightly points out, philosophy of religion is not a part of religious teachings nor theology and as such the religious and non-religious can and do engage in it.

Philosophy is by no means the only discipline interested in religious phenomena. Though some of these disciplines are independent of philosophy and provide it with some of its raw material, others make use of philosophy, though they cannot be termed philosophical. One such is theology. Klemke (op cit. 5) defines theology as the systematic formulation of religious beliefs accepted on faith or beliefs that are taken to be revealed from God. In theological reasoning then, at least one premise is accepted on faith. John Smith makes a distinction between philosophy of religion on the one hand, and theology on the other. He describes the primary task of theology as the formulation and elaboration of ideas and doctrines about God, man, culture, creation redemption, etc., which stand as revealed in a historical tradition such as Christianity or Judaism, whilst the philosopher confronting religion will focus more particularly upon the *nature* of religion and its relation to knowledge and the forms of secular culture, doing so from some philosophical stand point different from that of any historical religion (op cit., 328). But Smith also argues that there is a second sense to the term theology, namely, natural theology, interested in questions like: what, if anything, can we know about God and other such matters through reason alone, without appeal to revelation? In the second sense natural theology is identical with the philosophy of religion, or, at the very least, the two greatly overlap.

However, a theologian, unlike a philosopher, takes the truths of his faith as granted,

never questioning or doubting them. His task is to rationalise on his faith, and philosophy is thus a vital tool for him. For very long, philosophy had been seen as the handmaid of theology, that is, it should serve faith, not transcend, or oppose it. However, as Oruka rightly cautions, the same reason could be a hindrance to the theologian (1989, xv). The current Pope expresses this fear well when he writes that, "Recent times have seen the rise to prominence of various [philosophical] doctrines which tend to devalue even the truths which had been judged certain." (1998, 11). The truths he refers to are certain only to the believer. Philosophy (or certain elements of it) is seen as antagonistic to these *truths*. However, philosophy is a "two-edged" sword that can either support or vilify religious doctrines. To expect it to be only one-sided is to sell it short.

Radical theology goes even further and denounces the entire programme of philosophy. According to this view, arguing by reason in defence of certitudes of faith shows faithlessness. Faith, it presupposes, does not need the defence of reason; God cannot be benefited from the dialectical stratagems of the human mind. "Not reasoning but conversion, not argument but preaching, not evidence, but grace - these are the avenues to divine truth." (Ferré 1967, 23).

It is, however, our contention that, on the contrary, faith can be a hindrance to sound reasoning and truth since it is held dogmatically and uncritically. Good reasoning should be applied by the person of faith and pursued to its logical conclusions, even if such conclusions are contrary to faith. The programme of radical theology is the very antithesis to that of philosophy since it denounces reason through and through.

Philosophy of religion must also be distinguished from apologetics. The term derives from Greek and implies "speaking of" or "defence." The essential task of apologetics is the defence or "answering back" of religion, and particularly the Christian faith, against doubts and accusations. Nevertheless, to the extent that apologetics is motivated by the fixed interest of defending certain established positions against all attacks, it does not qualify to be considered philosophy at all; given its dogmatic and uncompromising nature, apologetics lacks an open mind; certain truths are taken as universal and eternally true. Ferré writes,

> If the ruling motive of apologetics is not the spirit of free inquiry, the commitment of unhindered argument whenever it may lead, it lacks the dominant concern of philosophy. Apologetics to that extent is fundamentally the expression of a religious interest rather than a philosophical one. Its resemblance to philosophy is in appearance only; it is not a meta-religious study so much as a defensive weapon against religion (ibid.).

The apologetic, then, uses philosophy as a tool of convenience, useful only when it suits his purposes. With or without recourse to reason, the assertions of religion are to be assented to. If reason supports them, so much the better; if not, reason has to give way to faith. Philosophy, then, is indeed the handmaid of theology. Though apologetics is, in a sense, at the opposite end to that of radical theology, it is clear they know which side of their bread is buttered, to use the expression. That side is not the side of reason. By embracing reason selectively, on the one hand, and by rejecting it all together, on the other, both positions portray a commitment to "truth" already defined on their own terms. Paradoxically, the rationalisation so despised by radical theologians becomes useful and necessary in defending why they disdain it.

Philosophy of religion, like philosophy itself, is a second-order activity, that is, it is over and above or apart from its subject matter. It is not a part or domain of religion but has a certain relation to it. As Klemke (op cit., 6) argues, it is not a first-order activity like religion or theology; if the later is taken to be talk about God, etc., then philosophy of religion is talk about such talk. However, being talk about talk does not mean that it is merely linguistic. The point of engaging in second order discourse is to analyse, evaluate and, if necessary, to correct the first-order discourse.

In carrying out its discourse, the philosophy of religion will rely not only on the input of theologians, but also from other scholars investigating religious phenomena from different perspectives. Two such realms are the sociology of religion and the psychology of religion. Their importance is that, they being of a scientific nature do introduce data showing the manifestation of religion in society and in the human being respectively. They do afford useful insights into the phenomena of religion and many philosophers of religion have found such input useful in their discourses. Thus, instead of being inimical to the philosopher, they can aid him in carrying out discourse on religion.

2.1.2 SOCIOLOGY OF RELIGION

Sociology of religion is an attempt to understand the role and significance of religion to man as a social being. Very simply defined, sociology is the study of man as a social being or in as far as he lives in society. Sociology of religion employs the tools and methods of sociology, which are basically those of the social sciences. As O'Dea (1966, 23) puts it, theories on religion are presented in the form of empirical material,

conceptualised as problems and empirical generalisations based on research than on abstract generalisations. This at once distinguishes it from philosophy: it has a limitation (the empirical dimension as well as the focus on man as a social being) and it is a first-order discourse.

Sociology of religion treats religion as a part of and as a product of culture, where culture is a more or less integrated body of knowledge, pseudo-knowledge, beliefs, and values that define the human situation and the conditions of action for the members of society. Culture is furthermore a creation by man of a world of adjustment and meaning, in the context of which human life is significantly and meaningfully lived. Being a product of culture, religion tends to vary from culture to culture and, even within the same culture, from time to time. Thus, dynamism in culture entails dynamism in religion.

As a discipline is bound to make its own abstractions, sociology of religion does not treat of the supernatural nor can it do so. It is concerned with beliefs *per se* be they of witchcraft, religion, magic, or superstition. It is not concerned with the truth content of such beliefs, but only upon their role and significance in human behaviour and interactions, such as the role religion plays in the maintenance of law and order. This is what Creel (1977, 7) calls the macro level. At the micro level sociology of religion will seek to understand the pattern of its transmission from individual to individual, say, to a child through socialization, or on the importance of religion in the way people perceives themselves and the world.

2.1.3 PSYCHOLOGY OF RELIGION

Psychological investigations can be regarded as a system of techniques of inquiry directed towards the understanding of what people do, think and feel. Brown (1987, 9) regards the psychology of religion as the methods, concepts, and theories of psychology in understanding the way religion is fitted into the lives of those who accept or believe in it. It attempts to grasp the central phenomena of mental life, with recourse to comprehension and understanding. It is the science of human behaviour and experience as emanating from or influencing the mental and emotional faculties. Psychology of religion investigates the psychological laws governing religious attitudes; its object is not the truth about the divine (theology), but the human reality in which belief in a divine revelation comes into being. The concern thus is not for the correctness or otherwise of religious beliefs but rather the clarification of the consciences of being religious in a certain way or of not being religious at all.

Psychologists of religion are especially interested in the effects that different religious beliefs and practices have on the integration and disintegration of personality. Thus, they may pose: Do more theists or atheists experience mental break down? Do more Protestants or Catholics commit suicide? Is the fullest development of personality possible apart from some kind of religious faith? For instance, Rodney Stark (1973) in an article: "Age and Faith: A Changing Outlook or an Old Process," argues that older people do not become more religious as they grow older; they merely tend to believe in immortality more than young believers. They often tend to pray more in private, possibly as a means of securing the right kind of life and possibly because they are more isolated and lonely.

It should not escape notice that though the sociology and psychology of religion do provide the philosopher with data on how religion is significant and operates in society and the human psyche respectively, they cannot, of themselves, settle the central issues of interest to the philosopher such as the correctness of religious principles. This is because they do not study religion *per se*, but rather how religions beliefs influence or shape social and psychical phenomena.

2.2 CONVENTIONAL CONCEPTION OF RELIGION

Part of the problem that underlies much of the discussion of religion in philosophic as well as in other circles has been the focus or emphasis given to elements of religion. Two of such conceptions have been religion seen as faith and religion seen as a system of myths. We shall discuss below these two elements.

2.2.1 RELIGION AS FAITH

As previously noted, religion is and has principally been held to be a system of precepts believed in on the basis of faith. Consequently, much of the philosophic discussion on religion has tended to follow suit. However, what are the merits and demerits of such a conception of faith? We intend to answer this and similar questions here.

Oruka (1997) distinguishes three senses of the word faith. In the first instance it is a simple, ordinary trust or confidence in some object of interest, say, a wife or a car. The justification for such a belief is based on a past record from which one gathers evidence to support the claim. However, one acquires the evidence through sense experience, not faith. Hence, sense experience and reasoning are the basis for the claim to reliability. Due to the narrowness of the range of experience in question (usually restricted to the

person in question), emotional considerations, simple and often incorrect reasoning, naïve observation, and other kinds of pitfalls, this kind of faith makes no serious claim to the kind of knowledge that is demanded by, say, philosophy or science. This kind of faith is not any better than the commonsense Slaattee refers to[8].

In the second sense, Oruka (ibid.) notes that the object of faith is a principle, a theory, or an opinion arrived at purely on demonstrable scientific or logical evidence. Examples are the laws of gravitation in physics and the law of non-contradiction in logic. Scientific or intellectual faith is held as long as there is no objective refutation to its truth claims and few people hold it without good reason. We can add here that even science finds expression in pseudo-science and in science fiction. However, these are "abuses" rather than uses of science.

The third is the spiritual or religious faith; the absolute or certain belief in all the truth claims derived from a religious system. Here, belief, as a knowledge claim, is held prior to actual knowledge and to a believer, " I know only if or because I believe" for to say that, "I believe only because I know" creates the possibility that if I did not know, I would not have believed (ibid.). Bertrand Russell has similarly defined this kind of faith as, "...a firm belief in something for which there is no evidence. We do not speak of faith that two plus two equal four or that the earth is round. We only speak of faith when we want to substitute emotion for evidence." (Hospers, 1956, 141). Stuarte Brown underscores the same view by observing that faith is commonly understood as assent to something there is no reason for believing. Faith is contrasted with what are considered

[8] See chapter one of this work.

to be matters of fact in such a way as to suggest that faith is in some way irrational and blind (1989, 138). The third kind of faith is the weakest of the three seen from an experiential and rational point of view. We can appreciate this more if we recall the position of radical theologians and further that little, if any, experience is called for prior to assenting to the objects of faith .The attitude of a doubting Thomas is a vice rather than a virtue.

This view on faith is largely attributable to Thomas Aquinas who declared that a person of religious faith is a person who has a theoretical conviction that God exists. However, this immediately creates a problem: one merely does not have to assent to the belief that there is God; one has in addition to assent to other propositions on the basis that God revealed them (Swinburne 1981, 105). Hick expresses a similar view noting that ordinarily people believe in some propositions because they can see them or prove them to be true. However, there are others which they cannot see or prove to be true, because they exceed the scope of human comprehension. Nevertheless, people are invited to believe in them on divine authority; they are said to have been revealed to the church or in the bible and believing in them is by faith (1977, 43). The point is to is be noted with respect to this position that once a person assents to the belief that there is God, and that God has revealed certain things to man, one is left with no choice but to assent to numerous other propositions as well. The major problem here is that one usually has no solid grounds for assenting to the initial proposition that God exists.

Faith in the religious sense has other problems associated with it. To begin with, there is the problem of conflicting authorities. A religious person would find it difficult to

justifying his preference for one system over the other(s). More often than not one merely adopts the religion one was born into. Even in cases of "conversion" into a different faith, the overriding consideration is not rational or empirical but sentimental. We may even grant, as Swinburne (ibid., 106) believes, that one does make a choice based on intellectual elegance of a religious system. However, once the system is embraced, dogmatism invariably ensues; one is hardly better off than when they started, or before the "switch" was made. Hence, it is often difficult to be religious in the third sense of faith and yet be rational about one's faith. One has to be sacrificed for the sake of the other. Unfortunately, it is often faith that triumphs over reason, as if believing in something actually makes it true.

Furthermore, the certitude that is claimed to follow from beliefs held on faith is difficult to uphold. For instance, asked to explain how one knows there is God, a believer can claim to have a feeling of certitude about this. Nevertheless, certitude alone can never be adduced as grounds for knowing that something is the case. Indeed, a believer of a contrary position or even an atheist can similarly and plausibly, if we grant this, claim his position right by an appeal to certitude. Hence a feeling of certitude, by itself, does not rule out being certain about contradictory or inconsistent beliefs. Certitude is often cited where no appeal to evidence can convincingly be made thus shielding the person from criticism, or from the need to elucidate the point. Hence, as Ferré observes, this attitude encourages the tendency to "forget" or suppress data in experience that conflicts with prior beliefs (op cit., 95). Consequently, believers conveniently ignore, for instance, the more plausible account that the universe is billions of years old rather than five or six thousand years old as claimed in the Christian scriptures. In general,

therefore, plausible accounts that differ from doctrine are ignored or unreasonably dismissed.

We therefore maintain that the proper and indeed more rational attitude towards faith would be to hold beliefs tentatively prior to proof or affirmation. If none is forthcoming, beliefs should be revised or discarded. Additionally, by accepting any proposition on faith, one could do well to accept a conflicting claim of an opponent who accepts such an opposing claim by faith. Faith can validate two contradictory positions and in such instances, faith alone cannot resolve the contradiction. Other means have to be used with science and philosophy being two such. Nevertheless, in the case of faith, "proof" or "confirmation" is promised in the post-mortem state but this will not do either. Post-mortem life, if anything, is already an issue begging for proof: to reason as such is to engage in circular reasoning. It is therefore manifest that the conception of religion as faith is intensely subjective, that is, it is not derived from nor can it be proved from experience; it is also rigid, that is, not amenable to reason.

2.2.2 RELIGION AS MYTH

Apart from religion as faith, religion has also been conceived of as mythical. This, to some scholars, is supposed to make it rest on more secure grounds than mere faith. There is more than one sense in which the term myth can be understood. The English language defines a myth as an ancient story based on popular beliefs that explains or narrates natural or historical events. In this sense, it may refer to folk, traditional, unreasoned, or unscientific accounts of phenomena. Under this heading could be included folk beliefs by communities of how they came into existence. A myth could

also be a widely believed but false story in which sense it is a misguided or fictitious notion. Here we can include the various notions concerned with magic or witchcraft. Ninian Smart (1973) objects to the second sense of the term and attributes its current usage to the early Greeks as well as Christian apologists who would speak of the word of God as contrasted to pagan myths. Myths, generally, have thus come to be regarded as false stories, though this need not be the case as the first sense plainly indicates. Smart uses the term myth to allow for the possibility of speaking of true myths though he does not rule out the possibility that all myths are false. It is the first possibility that the advocates of religion as myths seek to show to be the case. They however use the term in a somewhat stronger sense than this, as we shall observe later.

Smart draws a distinction between doctrine and myth. Doctrines are teachings that have to do with the constitution of the world, of the transcendent and so on, whilst myths have to do with *a moving picture of the sacred.* Hence, one characteristic of myths is that they occur in the form of stories, akin to those in novels, jokes, fairy tales, historical narratives, etc. Secondly, myths have to do with the relationship between the supernatural on the one hand and man and the world on the other. Consequently, myths occur in a celebratory ritual context. In this sense, all myths can be said to be celebrations, though not all celebrations have mythical connotations. An example of a myth in Smart's sense is Christmas, whereby, the historical birth of Christ is not so much the issue as is the "birth" of Christ in the hearts of believers, which is the celebratory ritual context.

Smart's distinction between a myth and a doctrine is neither as clear-cut nor as

fundamental as he would want us to believe. The two seem to refer to real or actual state of affairs, not imaginary ones. This, at least, is how the religious take them to be. This distinction should thus be seen as one of content, rather than truth-value, of degree rather than of kind. A myth, for all we can tell, is a doctrine concerning the relationship between man and the supernatural, and if all myths can be false, then all doctrines can be false as well. However, true or false, how can we know it? By faith? Smart's account does not provide an answer to this vital question.

Besant's account of myths has Platonic elements for it assumes the dichotomy of the real (analogous to the Forms or Ideas of Plato) and the unreal (their shadows). According to her, history is an account, albeit imperfect and distorted, of the dances of these shadows in the shadow-world of matter. Myths, however, are accounts of the movements of objects that cast those shadows. The implication here is that myths give a better account of history, science, etc., than the ordinary historical, scientific etc., accounts. She further contends that mystical accounts are given in the language of symbols, which are a pictorial alphabet used by myth writers. Thus, the sun is always the symbol of the Logos or God and solar myths are therefore stories of the Logos' activities when incarnated in man. She writes:

> He is always born at the winter solstice, after the shortest day of the year, at the midnight of 24th December, when the sign Virgo[9] is rising above the horizon; born as this sign is rising, he is born always of a virgin.... he lives through all the threatening dangers, and the day lengthens towards the spring equinox, till the time comes for the crossing over, the crucifixion, the date varying with each year. The God who is born at the dawning of December 25 is ever crucified at

[9] This is the astrological sign of the virgin

> the spring equinox... "Easter" is a movable event, calculated by the relative position of the sun and the moon, an impossible way of fixing year by year the anniversary of a historical event (1966, 110-111).

There are numerous illustrations to attest to the veracity of those similarities and examples include those of Jesus Christ among Christians, Krishna amongst the Hindus and Osiris in ancient Egypt. From such similarities two conclusions have often been drawn: that religion has a common origin - human ignorance or that religion has a common origin - the divine. Besant calls their proponents comparative mythologist and comparative religionists respectively. Kihumbu Thairu, who can be termed a comparative mythologist, argues that many of the rituals of Christianity are really for the worship of the African God incarnate, Osiris, or of worshipping the sun and the seasons (1985, 84). Though Kihumbu does not develop this argument to that very end, the much that he takes it leaves little doubt that he belongs to the former category.

Besant, on the other hand, belongs to the latter. However, we note with respect to her account that similarities between the various great figures of the world religions do not show that what they claim is necessarily true since similarities cannot constitute truth. Thus whereas the names "Krishna" and "Christ" sound familiar, both were born at around December 25, both had great perils surrounding their births, both performed miracles and so on, the similarities, however numerous and striking, cannot establish any truth save what is already believed in. Similarities between Hinduism and Christianity, for instance, do not show that any of them is valid. Nevertheless, though they may have developed independently of one another, and similarity is taken as indicting that they must have been divinely inspired, this approach cannot defeat

arguments adduced by Wilson, Freud, Russell, and others. This kind of argumentation, in other words, might show that different faiths are not mutually destructive, but it does not show that religious beliefs are not mistaken. It does not give reasons why religion as myth should be taken seriously. Hence, the attempt to portray religion as myth is not any better than religion perceived as faith: both have no sound and independent grounds to support their claims. The appeal to mythology is not such a ground. For one to assent to this account of religion, one has to have assented to some doctrine; one has to be favourably disposed into believing mythical accounts. The mythical account of religions fundamentally reduces to faith and similarity, an unconvincing combination. It is like faith since one has to believe in heavenly realities that precipitate earthly activities , yet the existence of these heavenly realties is what is at stake. As far as similarity goes, the argument boils down to: since Hinduism, for instance, is not essentially different from Christianity, Islam, or any religion (past or present), and given that one already believes in any one of these religious systems, it is then the case that all religious doctrines must be true.

Furthermore, it can be asked why a historical event should vary from year to year. Mircea believes an explanation can be found in what he terms as "mythical time." He distinguishes *sacred* from *profane* time, arguing that the religious man lives in two kinds of time, of which the more important, sacred time, appears under the paradoxical aspect of a circular time, reversible, a sort of eternal mythical presence which is eternally reintegrated by means of its rites. According to Mircea, this attitude concerning time suffices to distinguish the religious from the non-religious person; the former refuses to live in the historical present but rather attempts to regain a sacred time that,

from one point of view, can be homologised to eternity (1959, 70). Mbiti's conception of time, for the African context, the *sasa*, and the *zamani* is rooted on similar principles.

However, Smart criticises such conceptions noting that there is a need for firm criteria of what counts as (linear) time (op cit., 85). The cyclical time that Eliade describes is open to *ad hoc* interpretations amenable to any circumstance, it is general, vague, subjective and can hence apply to any conceivable situation. Indeed, its suitability in this respect is what makes it so attractive, at the expense of rationality and objectivity. Additionally, a problem with time invariably presents a problem with space. It then logically follows that if myths are not always chronological or historical, space in myths is not always literally presented, but has discontinuities or dislocations. Granted that mythic time can be definite or indefinite, mythic space can also be definite or indefinite. This leads one to naturally wonder: what is the location of mythic events and when, if at all, they did occur? If answered "in heaven," how can we know of the going-ons in heaven for that matter? These questions are in urgent need of answers.

Consequently, it should be observed that the account of religion as myth leaves room for doubt and conjecture. Events described in myths cannot be definitively defined in time or located in space, for these two concepts are warped in mythical accounts. For all intents and purposes, one is not in a position to distinguish them from fiction. It is likely that the deficiency entailed by mythical accounts is best filled by an appeal to faith, the grounds on which it rests we have already shown to be unsatisfactory. Even if we take myths to be symbolic as Besant contends, that which they symbolise will usually be believed on the grounds of faith. Unlike Plato who argues that the Forms can be

contemplated by reason (**Republic** 516b, c). Besant gives no objective means by which her "Forms" can be cognised. The ritualisation of mythical phenomena serves to offer "tangibles" and processes to believers, who need them as aids or complimentaries to faith. Rituals, however, only make people believe that they are reintegrated with some divine reality but there are no reasons to believe that they do. Additionally, it is not the case that there is uniformity and universality as far as mythical symbolism is concerned. For instance, whereas the lotus is a common in Hindu and Buddhist religious literature, it is conspicuously absent in Christianity, Islam, and other Semitic religions. This would signify that mythical language is culture-specific, not universal as Besant maintained. How to unravel is also problematic as no firm or valid criteria exist. All in all conceptions of religion as myths or as faith are inadequate, for they are not grounded on sound, objective and rational criteria, as already shown. By themselves, they can make no serious claim to our attention on their claims.

2.3 AUTHORITY, REVELATION, INTUITION IN RELIGION

Apart from the inadequacies mentioned above, we wish to further examine some of the general claims to religious knowledge that have been used to rationalise popular religious principles. We wish to establish whether they offer adequate support for their claims.

Authority is certainly an important avenue in the knowing process for we possibly cannot verify all facts for ourselves. An authority is one who is an expert in a given field and is usually recognised as such by his colleagues. However, the fact that one is an

authority in one field does not make him an authority in any area outside the said field of specialisation. As such, an expert in physics may not offer expert opinion in biology, for instance. Due to specialisation, we take on authority significant portions of what we hold to be true, confident that any error therein would have been brought to light by other authorities. We also take it that we could verify the facts for ourselves, had we cared to, and, of course, given the necessary training and apparatus.

However, authority in religion tends to go against all this. Whereas authorities do differ (as already mentioned, though this is not peculiar to religion), in the case of faith contrary *authorities* are ruled out in advance as false, because they do not accord to held beliefs, which are held on no better grounds than faith. In addition, the realities spoken of in religious doctrines ought to be accessible to anyone who took the trouble to investigate. Nevertheless, it is the case that such achievements are restricted to a few - the prophets, saints, and saviours of religions. However, hardly is it ever asked whether or how one can become an authority, or how that which is given by an authority can be corroborated. The point, here as Hospers aptly notes, is that authority can never be a direct source of knowledge, since if we have a statement on account of X's authority, X cannot know it on the basis of authority. X has to know it by reason, experience, or some other such means (ibid., 136). This point is almost always overlooked. Hence, one ought to be able to verify for himself any religious assertion (that does not touch on the scientific, historical etc., as these can be investigated by their respective disciplines) if they cared to. This is hardly ever the norm when it comes to religious faith.

Revelation is yet another mode by which it is claimed religious knowledge can be

obtained. Revelation has been used in some contexts synonymously with authority (of the revealer). This is one sense in which Ferré has used it. A pertinent question that can be asked in relation to this claim is how one chooses between authorities. If a choice is to be made between two authorities (or revelations), some criteria obviously have to be used. The criteria are either dependent on or independent of the authority (or revelation). If it is independent of the authority, then revelation is not a unique path to religious knowledge as is often claimed, that is, it is usually held that God is the revealer and reveals if, when, and to whom He chooses and the process termed unique. However, if on the other hand revelation is dependent on the authority, if it is internal to the revelation itself, the uniqueness of revelation is preserved, but at the cost of making claims to revelation hopelessly circular (ibid., 97-98). Hence, it is not uncommon to come across arguments of the sort: We know the scriptures to be true because they are from God, but we know that they are from God because His messengers say so, and we know that the messengers are from God because the scriptures say so. Revelation, therefore, when claimed to be unique can turn out to be viciously circular, or not open to corroboration. It is hence held on account of faith, fear, awe, and the like. But this will simply not do: it has to be subject to criteria - scientific, rational or otherwise - that ensure its usefulness and reliability as knowledge.

Claims to intuition are comparable to those of revelation. However, in intuition, one claims to know something quite suddenly and instantly and is convinced that what comes to him in that flash is true. Claims to intuition need not appeal to supernatural causes. Schlesinger defines intuition as knowledge that is acquired without procedure and which is not sensory or perceptual knowledge (1977, 203). Perhaps Schlesinger has

in mind, for instance, the kind of insight that a poet has that enables him to compose beautiful poetry or a scientist to come to a discovery. It is pertinent to note briefly here that the kind of intuitions above do not refer to supernatural causes as they are not of a religious nature. They are however of the same mould as the religious ones, only that a divine source is attributed to this later category. That said, it can be asked: what kinds of insights do intuitions bring to the one that claim to have them. We investigate this by an examination of how intuitions (religious or otherwise) occur.

Willis Harman, from research in psychiatry and psychology, concludes that the intuitive/creative capabilities of the mind are vaster than had previously been imagined. He adduces the example of a researcher who, having tried everything in wrestling with a problem, gets an *answer* to the problem when the conscious mind is distracted from the problem - perhaps during a walk or a nap (1981, 1046). There are the well-known example of Kekule who is said to have "figured out" the chemical structure of benzene (a chemical compound) in a dream, and Archimedes who came up with a principle in physics bearing his name, while taking a bath. Traditionally, such instances are referred to as intuition. However, in the examples above, the two were actively and seriously engaged in their respective intellectual undertakings; they were in the process of seriously attempting to solve the said problems. Had they not been, the said "intuitions" would not have come to them. This, then, underscores the fact that intuition, as commonly understood, is merely the result of some behind the scenes mechanism of the mind, not a special way of knowing. It should be seen as a natural, though unconscious, process of the mind resulting in solutions to problems currently not under active consideration, but hitherto under serious scrutiny. We note too that those who are in the

habit of serious mental engagement are bound to get "intuitions" often. As such, one can train himself so that he gets intuitions more regularly, though he may not be in a position to consciously control if, when, and how they occur. It is in the light of all this that we can see Einstein, after failing to secure a teaching position, taking up a job as a clerk in a patent office. This afforded him plenty of time to ponder and develop his theory of relativity. Intuition must have played some part in this. Similarly, Newton is said to have developed his theory on gravitation after an apple fell on him, presumably whist taking a nap. Nonetheless, it is important to note that even the cases of great intuition mentioned above, a process of verification followed. Kekule, for instance, went out and constructed a model of benzene. Intuition, we wish to point out, is not a source of infallible knowledge as some would take it to be. Any intuition or hunch must be put to the test. This rarely happens in the case of religious intuitions.

Hospers, on this topic (op cit., 137-139), outrightly dismisses the notion of intuition, arguing that what goes in the guise of intuitions are our abilities to make certain minute, sometimes unconscious, observations about people and things. These, coupled with induction, enable us to discern, for instance, the character of people rather well. Thus, intuition far from being sudden, instant, and effortless knowledge can instead be traced to observation and induction. Hospers' argument does not insist that intuition does not occur, only that he denies it is a special mode of knowledge. In this connection, it can be noted that two people can claim to know contrary propositions by intuition. There is the instance of mediums who have been known to give conflicting reports of say a person or a place. There are usually no means of independently verifying such claims save by appeal to experience, or some other mode of knowledge. As such intuition is neither a

special nor infallible mode of knowledge.

2.4 CONCLUSION

We have examined in this chapter various aspects of religion, and in particular how we supposedly acquire that kind of knowledge. We have argued that this kind of "knowledge" is, at best, held naïvely, at worst, irrationally. Given the tenacity with which religious convictions are held, one would expect that they would be the most thoroughly investigated prior to their adoption. However, the reverse is usually the case. It takes very little convincing most of the time to embrace a doctrine since many people adopt the religion they are born into. A believer in the proclamations of religion in the senses discoursed is at a loss to objectively defend and justify why he holds on to his beliefs. Similarly, it has been shown that some of the special modes by which religious knowledge is acquired are not special, or are faulty.

As such, religion conceived as either faith (the most popular), myth or some other such conception crumbles under critical scrutiny; it is hardly supported by reason nor by facts/experience, or by other plausible means of knowledge. To redeem itself from these shortcomings, religion needs to be more sensitive to rational and objective criteria. In a world largely ruled by science and reason, it cannot afford to be blind to these facts. Yet, it can be asked, is this possible? Before attempting to answer this question, it would be expedient to critically examiner science, and some of its presuppositions. This is for the reason that science is upheld by many as the epitome of objectivity and also because attempts, as already shown, have been made to harmonise it with religion. Perhaps it is on the recognition of the failures mentioned, coupled with the strengths of science that a

relationship between them is sought.

If we take Plato's simple definition of knowledge as justified, true, belief (Chisholm 1989, 90), knowledge is: 1) actually true, 2) is believed to be true, and, 3) one is justified in believing it to be true, we find that religious claims to knowledge only embody element (2) and even if we grant them (1) – that they are actually true – element (3) is usually conspicuously lacking – which point we have laboured to elucidate. It is only proper to note here that a fourth condition has been proposed to the original three. It states that one has in addition to be completely justified in accepting a proposition in some way that does not depend on false or deficient statements (Lehrer 1990, 18; Chisholm op cit., 98). For instance, a person looks at a clock that is not working, but which happens to tell the correct time. The person is justified, believes, and the proposition is indeed true. However his knowledge is dependent on a defective "statement."

CHAPTER THREE

SCIENCE: FEATURES AND POSSIBLE RELATIONSHIP TO RELIGION

3.0 INTRODUCTION

In the current chapter, we present and analyse some of the major issues, difficulties, and assumptions that characterise science and its practice. For instance, what is science? Is science limited in its scope? Can it be distinguished from other avenues of knowledge? Does science provide absolute truth? Can the scientific method be relied upon? Can science alone satisfy the human quest for knowledge? Is science and its mode of knowledge compatible with the religious? Can the two be compared and if so at what levels? Answers to these questions are vital if we are to favourably appraise science, vis-à-vis other avenues of human knowledge, especially the religious.

3.1 EARLY VIEWS ON SCIENCE

Early in its history, science was over exalted; its advantages, capabilities, and scope were overrated. Francis Bacon (1561-1625), for instance, held that the aims of science were the setting out to acquire, "...knowledge of causes and secret motion of things, and the enlarging of the bounds of human empire, to the effecting of all things possible." (Passmore 1976, 1). Descartes (1596-1650) similarly contended that by conjoining the artisans skill with the philosopher's intellect, science could generate an, "...infinity of arts and crafts, enabling us to enjoy without any trouble the fruits of the earth and the good things that are found there." (Ibid.).

Like the views by Comte and others, such views recognise no limits for science, and push aside all other modes of knowledge as science is supposed to fill any vacuum left. By stressing the "omnipotence" of science (and technology), these views overlook the fact that science does not solve problems in a vacuum; economic, political, social, nationalistic, and other factors come into play. For instance, though enough grains are produced to sufficiently feed the entire human population, there are millions without enough to eat. Additionally, gains made by science usually have attendant negative consequences; the combustion engine is associated with air pollution and depletion of non-renewable natural resources and so on. As such, even technologically, science is not the philosopher's stone that turns into gold everything it touches. Nevertheless, since the "good things" of science touch everyone and in almost all spheres of life, science presently continues to elicit sentiments similar to those held by Bacon and others. Though these relate to its practical aspects, there is a tendency to extrapolate this to its theoretical aspects. The tendency here is to assume that science can satisfactorily investigate all of phenomena, or that phenomena not investigated by science (as they are not amenable to the scientific method) are unreal or not worth investigation.

Though, less radical opinions on science later emerged, they too took a lot for granted. Sören Kierkegaard, for instance, allowed that science could investigate plants, stars, animals and so on, but not the spirit of man because to deal with the spirit of man in this manner would be blasphemous (ibid. 3). Kierkegaard, however, does not show why the human spirit should be beyond the realm of science, except for the presupposed reason that it is divine (a religious principle). Unlike Kierkegaard, F. H Bradley allows science to investigate everything, even the human being, but on condition that it makes no

pretence to discover ultimate causes, the province of metaphysics. However, as Oruka aptly notes, being empirical, science is *a posteriori* and becomes a false science if, like philosophy, it strives to be *a priori*; science would cease to be science if it adopted or approached its subject matter *a priori* (1990, 4-5). If this is what Bradley is arguing, that would be fine. Nevertheless, we suspect that this is not his argument. He is arguing that science should not investigate ultimate causes, such as God. However, what if ultimate causes can be investigated, understood, or explained *a posteriori* as Paul Davies (op cit., 8) suggests? Unless ultimate causes and kindred matters can only be investigated *a priori*, Bradley's position is untenable. This then raises the question: what exactly is the nature of, the limits, and the demarcation criteria for science?

3.2 LIMITATIONS OF SCIENCE

Science is and cannot be an undertaking without limits or bounds. Unlike the views expressed by Bacon, Descartes, and others, that created the impression that science could, unimpeded, acquire knowledge of all sorts, there are limitations and restrictions which the scientific enterprise must cope with and be restricted to.

3.2.1 LIMITATION BY PRINCIPLE

Prior to this century it was taken that the study of nature was in no way affected by the process of measuring; that observation and measurement presented reality exactly as it were. *Quantum mechanics* (the theory involving the laws of nature at the atomic and subatomic levels), however, demonstrates that every observation influences the things we observe. As Rohrlich has rightly argued, "... there is a limit to the accuracy that can be achieved in a measurement; and that these matters have nothing to do with the

ingenuity of the observer or the technological sophistication of the apparatus. These are limitations by principle." (1989 3). Consequently, from the uncertainty principle of Heisenberg[10] we note that one cannot know the velocity and position of a subatomic particle simultaneously and accurately. The measurement of the one affects the other: any measurement of its velocity will displace the particle, whilst the measurement of its position changes its velocity. In such a situation, one has to choose what they want to know with more accuracy, at the expense of the other variable(s).

The above raises a fundamental question on the nature of knowledge and the way we (can) perceive it. Is the knowledge of nature that we can have blurred or distorted, whilst in reality it exists in a sharp manner? In other words, does our observing of reality distort it? Related to this is the question: Is reality as it is blurred? Most scientists and philosophers of science seem to favour the latter. Reality is taken to be blurred and, at the subatomic level at least, one cannot talk meaningfully of certainties but only probabilities. This, however, should not be seen as implying the limitation of the possibility of knowledge: such a limitation only directs progress by telling us what is possible. As Popper aptly observes, due to our infinity of ignorance, advances in science will never cease (1974, 216). Thus, whereas we may expect scientific knowledge to grow endlessly, we should be aware of the possibilities imposed on this by the nature of reality – at least as perceived by scientists.

3.2.2 THE HUMAN LIMITATION

Another limitation is the human limitation. Whereas the human being can survive a

[10] The Copenhagen Interpretation

given range of atmospheric, thermal and other conditions, his knowledge of the universe exists well beyond such bounds. This is because, contrary to the limitation by principle alluded to above, the human limitation can for the better part be technologically overcome. For instance, whereas the human person cannot tolerate a temperature of more than 50° C, he can, say, by means of a thermometer, determine temperatures much higher than his naturally tolerable limits. A thermometer converts temperature into a length of mercury, which he can directly observe and this has the additional advantage of increasing the accuracy of the measurement. This is true of most aids, apparatus, and equipment used in science. Hence, it does follow that science is restricted in some of the things it can investigate by the tools available to it at any one time. Thus, before the invention of the telescope, what astronomers could study was severely limited. Technology can also impact the manner and rate at which scientific knowledge can be preserved and transmitted. The printing press for instance played a major role in this respect, whilst the Internet has made it possible to access the latest information as soon as it is available.

Additionally, our knowledge of the world as we experience it (common sense) gives us a feel of what is reasonable and what is not. We tend to extrapolate into believing that the world outside of this range of our knowledge is similar to it. Facts, however, bear otherwise as shown in the world of special relativity, for instance, when dealing with speeds very near those of light. It is for this reason that Rohrlich (ibid., 6), notes that the conversation from any such world to the world that we are accustomed to produces a clash of seemingly contradictory notions. This indicates therefore that caution is needed and we should not extrapolate more than we are warranted to.

Other factors peculiar to the human person can also hinder the growth of science. Religious fervour in days past, for instance, was a hindrance to the growth of science as can superstition, politics and so on. A case in point is the likely restriction on human cloning. Whereas it may be argued that this, strictly speaking, is a technological -as opposed to a theoretical - issue, it will be noted that the practical and technological aspects of science are mutually reinforcing.

3.2.3 LIMITATION BY COMPLEXITY

Nature is extremely complex and intricate: its study and understanding invariably becomes problematic. People have learnt to cope with this complexity by idealisation and abstraction. For this reason, scientists ignore certain aspects or features of the problematic phenomenon under study, which are considered irrelevant details. They thereby idealise them so that the resultant models of nature would no longer agree with reality in all respects. The results are approximations to reality.

According To Nancy Cartwright, such generalisations are misleading, if not altogether false. She argues that the laws of physics make use of *ceteris paribus* modifiers, that is, holding that all things will remain equal or constant (1983, 45). However, this presents a problem: without the *ceteris paribus* modifier, the law is false; with it is not very useful. Thus, Newton's Law of Universal Gravitation: *two bodies exert a force between each other which varies as the square of the distance between them and varies directly as the product of their masses,* is plainly false without the *ceteris paribus* clause, for there are, in addition, non-gravitational forces acting on the body, such as, electrical forces (and at

the atomic level, nuclear forces). However, there is a law, Coulombs Law that describes the electrical forces acting on a body. Neither law, Cartwright argues, truly describes how bodies behave. No charged body will behave just as the law of gravitation says, and any massive object will constitute a counter example to Coulomb's law. Accordingly, Cartwright concludes that, "There is no reason to think that the principles that best organise will be true, nor that the principles that are true will organise much." (Ibid., 53). As is the case with the limitation by principle, what organises may well not be entirely true, and vice versa.

We however note that even with Cartwright's objection, *ceteris paribus* laws are useful to science and to knowledge in general since the simplification thus achieved permits the desired solution to complex problems. Using Cartwright's examples, we note that science consists of different levels. Thus, there is a level of gravitation as well as a level of electrical forces; a level of astronomy and a level of geology. The question should not arise as to which level is truer for they are all approximations to reality; each level presenting features of reality not found in other levels. As science progresses, levels may be unified by even simpler, yet fundamental laws. It has also been found useful to use *ceteris paribus* laws: although they are approximations, they could be the best possible alternative to ignorance. As Popper (op cit.) seems to recognise, there can be no absolute laws in science, for this would imply an end to the growth of science over and above making it resemble religion, whose doctrines are taken to be true for all times and places. Nonetheless, Cartwright's argument has the distinction of pointing out the approximate nature of science even at it's best - physics. Certainty and absoluteness are not proper attributes of the scientific enterprise.

It should thus be manifest that science is not the omnipotent tool it was once held to be; it has its usefulness and limitations. Recognising the limitations it has helped us put science in its proper place in the scheme of human knowledge. It is a powerful tool, but a limited one at that.

3.3 DEMARCATION AND GROWTH OF SCIENCE

Despite the limitations alluded to above, science has witnessed tremendous growth. Considering its brief history of about three hundred years, it has made remarkable extensive and far-reaching advances, unmatched by other disciplines. It could therefore seem appropriate to ask: what is it about science that makes it what it is? That is, what are its demarcation criteria? Invariably, demarcation accounts have involved accounts of its growth. The aim of this line of inquire is to determine the uniqueness, if any, of the scientific mode of inquiry and whether it is the only or the best way to understand or describe reality.

Though writers down the ages have characterised science, traditionally, such characterisations were not offered with the demarcation problem in mind. Instead, they were offered out of difference to the historical tradition that one is supposed to define his subject matter, and to hint at an explanation of why the "new" science was so successful. Bacon was close to the problem but his aim was, "...to achieve knowledge, to lay down the strategy and tasks by which knowledge could be attained, rather than tell us the difference between scientific knowledge and other modes of inquiry." (Wisdom 1987, 42). Bacon maintained that, "...science consists in the meticulous analysis of

masses of presuppositionless data." (O' Hear 1989, 54). However, science does not consist only in the way we formulate our theories, but also of our treatment of them once we have them. Similarly, Hume made a demarcation, though between fact and sophistry, whilst Kant's basic demarcation was between knowledge of phenomena and the absence of knowledge of noumena. According to Kant therefore, philosophical and scientific knowledge lay on the same side of the demarcation line. These early accounts are inadequate. Science has since changed radically and it is only fit that we concentrate here on modern accounts as they are more appropriate, systematic, and illuminating.

3.3.1 KARL POPPER AND FALSIFICATIONISM

According to Popper, science often errs, and pseudo-science may happen to stumble on truth. He goes beyond the assertion that science is distinguished from pseudo-science or "metaphysics[11]" by its empirical method which is essentially inductive, proceeding from observation and experiment. Method could appeal to observation and still not be scientific, as is the case with astrology. A system, he argues, is to be classed as scientific only if it makes assertions that may clash with observations, and a system is in fact tested by attempts to produce such clashes (op cit., 1974, 256). A theory should expose itself to criticism of all kinds and either stand or fall. Attempts to empirically refute a theory mean its success. For instance, all attempts to refute Einstein's theory on relativity have failed and this means that it is successful, but only so far.

Popper further argues that scientific knowledge grows through criticism, whilst good

[11] Popper use the terms **metaphysical** and **speculative** interchangeably.

research consists of making bold conjectures and ruthlessly criticising them. It consists of the repeated overthrow of scientific theories and their replacement by more satisfactory ones. In testing a theory, it is preferable if it has a greater empirical content, is logically stronger; has greater explanatory and predictive power; and can therefore be more severely tested by comparing predicted facts with information (ibid., 217). If it passes such severe tests, it is said to be corroborated. Science starts with problems and not from observations; though observations may give rise to a problem, especially if they are unexpected, that is, if they clash with our expectations or theories. Science always starts from and ends with (new) problems (ibid., 222).

Popper's account has the merit of showing pseudo-scientists wrong by claiming they had empirical confirmation of their theories but at the same time refusing to indicate any conceivable circumstances in which those theories could be refuted. Kneale, in an article "The Demarcation of Science," observes that Popper's criteria was much better than the verifiability principle popular with positivists since it did not attempt to condemn all non-scientific theories as meaningless (in Schilpp 1974, 242). Though the problem of the demarcation criteria has wrongly been attributed to Popper (Wisdom, op cit 41), Popper did make a useful contribution to the problem, as Imre Lakatos in an article "Popper on Demarcation" argues. Popper for the first time gives a new role to experience in science; scientific theories are not established by facts but rather eliminated by them. Popper separated the problem of demarcation from the problem of induction, which had hitherto been intertwined (in Schilpp ibid., 252-253).

Nonetheless, Popper's account has some difficulties as well. His theory has the

implication that scientific theories can never be proved certainly true; they can only be proved certainly untrue (Brown 1986, 138). For instance, no amount of observation would suffice to show that Kepler's laws of planetary motion are certainly true. However, one instance would suffice to weaken or discredit the theory; it is possible that planets may be observed that do not describe elliptical orbits around the sun. Similarly, probability statements such as "a coin has a 1 in 2 chance of coming down heads" **P(h)=0.5**, cannot be falsified if no limit is set on the possible number of coin tosses. 10,000 successive tails would not strictly refute **P(h)=0.5**, because over a very long run of tosses 10,000 tails might be balanced out by a large population of heads. Hence, though a run of 10,000 successive tails is very unlikely, it nonetheless does not logically entail the falsifiability of the hypothesis **P(h)=0.5** (O' Hear op cit., 60). Scientific statements are usually probabilistic in nature and on Poppers accounts, they cannot be strictly refuted and therefore unscientific.

A theory may also be unfalsifiable in practise because no one has been able to think of a way of carrying out a possible falsification - an aspect of the human limitation. An example could be given of Einstein's hypothesis that light could be bent by gravitation[12]. Verification for this hypothesis came in 1919 when Arthur Eddington verified it during a solar eclipse observed in West Africa. Hence, the fact that a theory is not verifiable does not show that it is necessarily unscientific. It shows only that we do not yet know. Thus, one should guard against gliding from unfalsifiability in practice and conclude that a theory is unfalsifiable in principle. Popper himself was guilty of this error; he pronounced psychoanalysis and certain features of Marxism as unverifiable

before any serious attempts had been made to inquire into this.

Additionally, Popper's account seems to rule out from the realm of science statements such as: "Bacteria exist," "there is at least one planet," and, "there are electrons." As O' Hear (op cit, 59) rightly notes, such statements will, according to Popper, be unscientific as they are unfalsifiable. It should be clear that falsifiability is not a satisfactory account of the demarcation and growth of science. It is not the case that falsifiability *per se* is what makes science what it is or demarcates it from non-science.

3.3.2 THOMAS KUHN AND NORMAL SCIENCE

Popper's account has been disputed by, amongst others, Thomas Kuhn, who offers an alternative. Kuhn focuses on scientific crises and the relation between logical corroboration of a theory and its sociological acceptance. As already noted, Popper believes that the growth of science consists in making bold conjectures and ruthlessly criticising them. Kuhn, however, believes that this sort of activity happens rarely, only in those stages of scientific development he calls revolutions. Much of science, he argues, occurs in periods of "normal science" which he compares to puzzle solving, because the existence of a solution is assured in advance and the kind of solution wanted is known. To reach a solution posses a challenge to the skill, resourcefulness and ingenuity of a researcher. Accordingly, scientists spend their time exploiting the potentialities of existing theories or paradigms, rather than trying to overthrow them as Popper had maintained. He defines a paradigm as, "....research firmly based upon one or more scientific achievements, achievements that some particular scientific community

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[12] Part on his *General Theory of Relativity* published in 1915.

acknowledges for a time as supplying the foundation for their further practice." (Jevons, 1973, 61). Examples of paradigms include Newtonian and Einstenian mechanics in physics and the theory of evolution in biology.

To Kuhn, facts that do not fit do not, of themselves, cause the renunciation of a paradigm; an anomaly or two are not sufficient to cause the abandonment of a paradigm. Paradigm rejection is rather a three-term relation involving an established paradigm, a rival paradigm, and the observational evidence (Losse 1993, 224). However, when a paradigm is renounced, the mental change is very radical, for one sees things quite differently. It is very much comparable to what happens in a *gestalt* switch: a familiar object suddenly changes its *appearance* so that it now resembles something very different. This change, however, is in perception only for there is no change in constitution of the object so observed. Consequently, the scientific data do not for a moment change, but the human mind does impose on them more than one pattern of meaning. As an example, where Ptolemy saw a system of circles centred on the earth, Copernicus saw a system of circles centred on the sun (Jevons, op cit., 69).

Thus, whereas Popper's science is always - or at least should always be - trying to overthrow tradition, Kuhn's is for the most part exploiting its potentiality. Popper does admit that normal science exists but he deplores its existence dismissing it as bad science, done by workers who are not critical enough, or perhaps because they have been badly taught.

As Jevons rightly observes, the Copernican revolution, for instance, was something very special and it is difficult to apply Kuhn's thinking on revolutions in actual cases in

deciding how deep a paradigm has to go to constitute a paradigm shift (ibid. 68-69). He thus argues that the notion of two qualitatively distinct kinds of activities, normal and revolutionary, is hard to uphold. Kuhn's analysis describes two important elements which are not sharply separated types of activities but represents complementary aspects contributing in varying proportions to given events. He muses, "...could the double helix work be most satisfactorily described as two-thirds Kuhnian normal to one-third Popperian revolutionary science?" (Ibid., 69).

Additionally, Kuhn seems to be making science irrational. With the emphasis on conversion and commitment, research comes to appear as a matter of social psychology rather than logic. As Lakatos rightly observes, Kuhn fails to provide a rational reconstruction of theory replacement; he portrayed the history of science as an irrational succession of periods of rationality, and treated periods of revolutions as instances of "mystical conversion" (Losse ibid., 229). What Lakatos is implying, is that Kuhn's account of revolutions portrays them as lacking any systematic and objective criteria, as simply irrational. This is far from being the case.

3.3.3 LAKATOS AND SCIENTIFIC RESEARCH PROGRAMMES

Lakatos agrees with Kuhn that scientists do continue to use theories even when there is evidence counting against such theories. He argues that such continued use of theories is not irrational and criticises Popper for not distinguishing between refutation and rejection. Like Kuhn, Lakatos holds that refutation does not necessarily imply rejection. That is the much that he and Kuhn seem to have in common.

Lakatos sought to improve on Popper's reconstruction. He argued that the focus of appraisal should be on "research programmes" rather than on individual theories. According to Lakatos, "...a research programme consists of methodological rules: some tell us what paths of research to avoid (negative heuristic) and others what paths to pursue (positive heuristic)." (Ibid.). The negative heuristic of a programme isolates a "hard core" of propositions, accepted by convention and deemed irrefutable by those implementing the research programme. On the other hand, the positive heuristic is a set of suggestions for dealing with anticipated anomalies; it is a way of constructing a series of theories in such a manner that shortcomings at any particular stage can be overcome. As such, as the research programme grows, a belt of protective auxiliary hypotheses is created around the hard core of non-falsifiable propositions. Tests of a research programme are always directed at this protective belt and never at the hard core. Lakatos was of the opinion that negative tests do not refute an entire research programme as Popper insisted. Lakatos suggests that instead of rejecting an entire research programme in the face of negative test results, one would rather modify the protective belt of auxiliary hypotheses to accommodate the anomaly (ibid. 229-230).

Unlike Kuhn and Duhem, Lakatos insisted that there are rules of appraisal for successive theories, some constituting "progressive problem shifts" and others "degenerating problem shifts." A sequence of theories "$T_1, T_2, T_3...T_n$ - is progressive if 1) T_n accounts for the previous successes of T_{n-1}, 2) T_n has greater empirical content than T_{n-1}, and 3) Some of the excesses content of T_n has been corroborated." (Ibid. 231). The last statement means that some of what theory T_n says more than T_{n+1} should be corroborated. According to Lakatos, a research programme receives an affirmative

evaluation so long as it displays the power to anticipate and accommodate additional data. However, Lakatos did acknowledge that a once degenerate research programme might still stage a comeback.

Feyerabend has objected to Lakatos' account, arguing that the rules that Lakatos proposes are of use only within a stipulated time limit, in the absence of which, there is no reason ever to abandon a research programme (ibid.). However, Lakatos answered back arguing that Feyerabend confused two issues: the methodological appraisal of a research programme and the decision to continue to apply the programme. On the first point Lakatos insists that he had stipulated rules of appraisal, admitting in the process that the appraisal verdict may change with time. On the second, he argues that it is out of place for the philosopher of science to recommend research decisions to scientists. According to Lakatos, if a scientist decides to pursue a degenerate research programme in the hope that it may turn out to be progressive, that is fine. He says, "...it is perfectly rational to play a risky game: what is irrational is to deceive oneself about the risk." (Ibid., 233). To minimise such deception, Lakatos advocates the maintenance of a public record on the successive failures of each research programme.

It should however not escape notice that Lakatos' account fails to account for scientific revolutions, which, as Kuhn has shown, do occur. Lakatos also fails to explain why a given research programme comes into existence at all. Lakatos, additionally, makes science dogmatic in its resistance to change and absolute adherence to the core theories. There is no reason why the core theories should not be put to the test and dropped if need be. As James Felzer rightly observes, Lakatos' account grants the hard core of

theory "temporary immunity" without specifying how long the "temporary immunity" should last. According to this scheme, theories are retained in spite of experimental refutation and there is no specification of when, if at all, a theory is to be abandoned (1993, 339).

The above theories serve to illustrate the contention that it is difficult to pinpoint what it is about science that distinguishes it from non-science. Though it could be a subtle combination of them and perhaps more, there is an emerging and persistent unease about the supreme uniqueness of science in being the source of reliable, objective knowledge. This is a point well illustrated, by amongst others Feyerabend's theory of anarchism.

3.3.4 FEYERABEND'S ANARCHISTIC EPISTEMOLOGY

Feyerabend contends that of the two issues of *what is science?* and *what is so great about science?* only the first seems to be of interest to the majority of scholars; rarely do people ask what makes science preferable to other forms of knowledge, say Aristotelian science or Azande ideology. One conclusion in his argument is that the excellence of science is assumed, not argued for. He states that what we have is, "...a dogmatic and ritual assertion of the greatness of science" (In Howson, 1976, 314) and that the standards of science, "...far from being objective, are arbitrary, subjective and irrational." (Ibid., 321).

Feyerabend's anarchistic epistemology postulates that anarchism, not law and order, is likely to encourage progress. Given that scientists can use hypotheses that contradict

well-formed theories and/or well-established empirical results, science can proceed counter-inductively. The maxim that new hypotheses agree with accepted theories is similarly unreasonable since this preserves the older but not the better theory. Furthermore, a hypothesis that contradicts well-formed theories yields evidence that cannot be obtained in any other way. Consequently, the proliferation of theories is more beneficial for science, while uniformity impairs its critical power.

Feyerabend also rejects rules and methodologies because the analysis of complex media on the basis of rules set up in advance and without regard to the ever-changing conditions of history, will be unfruitful. Science has however been guided by such rules and methodologies, defined and separated from the rest of history (for instance, physics has been separated from metaphysic). This has led to scientific "facts" being experienced as independent of opinion, beliefs, and cultural background. Consequently, it has become possible to create a tradition held together by strict rules and that to some extent has been successful. Nevertheless, it is not desirable to support such a tradition to the exclusion of everything else, since no idea, however ancient or absurd, is not capable of improving our knowledge. This is because the world is largely an unknown entity; it would be foolhardy to restrict ourselves in advance through such methodologies for there is no telling that science will be the best nor the only way to discover nature's many secrets. A similar opinion is expressed by Bernard Baars who opines that over the long term, "...science is notoriously unpredictable." (1995, 7)[13].

[13] Internet article from the journal **Psyche** titled "Can physics provide a theory of consciousness?" 2(8) May 1995. At the address http://psyche.cs.monash.edu.au/v2/psyche-2-08-baars.html.

Consequently, Feyerabend prescribes the maxim *anything goes*, "Given any rule, however "fundamental" or "necessary" for science, there are circumstances when it is advisable not only to ignore the rule, but to adopt its opposite." (1975, 23). His conclusion is that science is closer to myths than many would care to admit; that modern science cannot be a neutral arbiter between itself, Aristotelian science, myth, magic, religion, etc. Science is but one of the many thought forms that have been developed by man, and not necessarily the best. Science only seems superior to those who have decided in favour of certain ideologies, or who have accepted it without ever closely examining its advantages and limits. He also recommends for the separation of science and state – just as state is separated from religion – for science is the most recent, most aggressive and most dogmatic of religious institutions.

Feyerabend's theory has the advantage of cautioning against rigidity in scientific theorising. Feyerabend rightly points out that science is dogmatic about its method thus making it resemble religion in that respect. Whereas we may agree with much of what Feyerabend agues for, it is contentious whether science is a religion in the conventional sense of the word. Feyerabend is, by no means, alone in holding this opinion; it has been the contention of some writers that science is indeed a religion. Raman (op cit., 211) for instance argues that:

> Their [radical scientists'] unswerving commitment to the causal and spatial-temporal, and their uncompromising rejection of anything spiritual, can only be described (in terms of its deeply felt attachment) as religious, much as they would abhor the epithet.

Raman is here implying that the holding on to certain principles by many scientists fall nothing short of being termed as religious, given the zeal and vigour with which they

hold it on the one hand, and the vigour and zeal with which they reject anything religious on the other. In a word, they are comparable, if not identical, to religious zealots.

However, this is an attitude that Richard Dawkins laments against. He rightly argues that science is not religion, as it does not come down to faith. Although it has many of religion's virtues, it has little of its vices.

> Science is based upon verifiable evidence. Religious faith not only lacks evidence, its independence from it is its pride and joy, shouted from the roof tops. Why else would Christians wax critical doubting Thomas? The other apostles are held as exemplars of virtue because faith was enough for them. Doubting Thomas, on the other hand, requires evidence. Perhaps he should be the patron saint of scientists (1997, 27).

Dawkins could not be more right. Thus, whereas there may be similarities in the manner in which the religious person and the scientist hold on to their respective beliefs, there is a wide gulf between the reasons why they hold on to the beliefs. For the scientists, it is because of the availability of carefully gathered, systematised, tested body of facts, whilst for the religious person it is the force of faith, which lacks all of these virtues of science. Thus, rationally considered, the religious person is hardly justified in believing what he believes, though it may be true. Conversely, the man of science is rationally more entitled to believe in what he does though it may be false. It will also be crucial to point out that the above attitudes are more illustrative of the people who hold them, first and foremost, and less to the disciplines (methods) that give rise to them. It is also our contention that whilst science is justified in closely embracing and defending its methodology, it should not rule out of contention other methodologies either: it is itself

a product of myths, religion, superstition, metaphysics, and so on. Furthermore, it is not the place of science to comment on other methodologies for that is the province of philosophy. Hence, and in light of Kuhn's contention that a once degenerate programme might stage a come back (or a successful one degenerate), there is no reason to suppose that science might not degenerate or the other "degenerate" enterprises make a comeback. We are not suggesting that they be accepted for what they are now (in their present state), but rather not to ignore the possibility of what they might become.

3.4 METHOD AND VALUES IN SCIENCE.

Further to Feyerabend's rejection of methodologies in science, it will be useful to examine methods from a different perspective, that is, in as far as method relates to values. This aims at showing that even at its best, the scientific method cannot be free of human values. According to Sandra Harding, methods in science are designed to minimise a researcher's bias and they include techniques such as double blind trials, randomisation of experimental trial subjects, and proper use of controls. Method has thus been broadly taken to mean,

> ...the judgements scientists make about the interpretation of data, decisions on what problems to pursue or when to conclude an investigation, the way scientists work with each other and exchange information. These constitute the craft of science, and a person's individual application helps determine his scientific style. Some methods like the design of experiments can be written down and studied. However, others are learnt through practical experience and interaction with scientists. Others yet, like curiosity, intuition and creativity largely defy rational analysis and yet they are amongst the tools scientists bring to their work (1993, 341).

The above suggests that some of the decisions and judgements scientists make are often based on appeals that could be personal, moral, aesthetic and so on. Though Davies J. T recognises that certitude and complete objectivity are commonly and erroneously believed to be the criteria of science, that science is no omnipotent goddess, his assertion that it is the scientific attitude, as manifest in theory and experiment in which scientists believe, (1965, 1) seems not to recognise the personal element involved in the scientific method. On the contrary, Polanyi argues that starting from the selection of a good problem worthy of investigation, arrival at discovery and eventual verification all involve the personal judgement of the scientist (Mbugua, 1998: 153).

Though methods are a part of science they are themselves not a product of science. Their development and use is largely because they have been shown to advance scientific knowledge. However, even when perfectly applied, methods cannot guarantee the accuracy of scientific results. The fallibility of methods means that there is no cookbook approach to doing science, no formula that can be applied or machine that can be built to generate scientific knowledge. The human (personal) element is indispensable.

3.4.1 VALUES IN SCIENCE.

As noted above, scientists use certain methods in their work. Being the principles and techniques that they employ, they can be influenced by human values. Value can clearly be seen in the formulation or judgement of hypotheses. Where the available hypotheses may explain the available fact(s) equally well, but each may suggest an alternative route for further research, how do we choose? Several criteria have been propounded for

making such a choice and they include: 1) hypotheses should be internally consistent so as not to generate contradictory conclusions; 2) their ability to provide accurate predictions, sometimes in areas far removed from their original domain; 3) simplicity and elegance, and; 4) in domains where prediction is less straightforward as in astronomy or geology, good hypotheses should be able to unify disparate observations. The above can be said to be epistemological or knowledge-based criteria for hypotheses but they are by no means the only ones. Personal values including the philosophical, cultural, and economic, can shape scientific judgements in fundamental ways as can be shown from the history of science. A case in point is the "scientific" evidence used to support racist views. Apart from race, gender, economic, nationalistic and other values can harm scientific research (Harding op cit. 342).

The desire to do accurate work is a social value as is the belief that knowledge will ultimately benefit, rather than harm humanity. Hence, though values do come into play in scientific research, we should nonetheless be guarded against values that introduce bias or distort the results of scientific investigations. As Bertrand Russell so rightly notes, "...the data of our knowledge of physics is infected with subjectivity, and is impossible for two men to observe the same phenomena except in a rough and approximate sense," (1979, 129) and Polanyi that, "...even apparently impersonal scientific knowledge is coloured by the personal commitment of the scientist." (Mbugua op cit., 152). This is because "...in all forms of inquiry there must enter a personal judgement that cannot be accounted for by rules. The decision to accept a particular conclusion as true or false ultimately rests on a person." (Ibid. 155). As Mbugua points out of Polanyi, the latter is not advocating a retreat into an irrational subjectivity; rather

he holds that though knowledge is personal, it is not entirely subjective as it is sought with "universal intent." "It is the knower's commitment to universality that prevents the scientific enterprise from being purely subjective." (Ibid.). A similar view is expressed by Morris R. Cohen And Ernest Nagel in their article " Hypothesis and Scientific Method" where they argue that a scientist aims at a universal point of view, a view that does not vary according to a particular person, place, or time (Sprague *et al* 1967, 217).

Polanyi further argues that the difference between "personal" and "subjective" lies in this commitment; the former has it whilst the latter lacks it. Responsible commitment entails openness, and criticism, not dogmatic fanaticism or close mindedness. Hence, "The freedom of the subjective person to do as he pleases is overruled by the freedom of the responsible person to do as he must." (Ibid. 157). Mbugua concludes of Polanyi, and we agree with him, that he has, "...demonstrated that in science there are no prescribed rules which, when followed, will lead unerringly to the truth. Rules of science cannot tell us when to accept or reject a given scientific theory. The decision to accept a given scientific theory as true or to reject it as false ultimately rests on the person making the inquiry." (Ibid. 159). This account also dispels the notion that science is a religion as entailed in the tenets of responsible commitment.

We have indicated above that absolute objectivity in science cannot be upheld, that method cannot guarantee truth, and that a responsible personal commitment to the truth by the scientist is a useful, if not indispensable, component of how science is conducted. Nevertheless, how much does science understand or is willing to investigate certain domains such "the personal," "the subjective" - the domain of consciousness. This line

of inquiry will serve to show how values determine the manner in which science is conducted as well as show that methodological rigidity can be a vice rather than a virtue in science.

3.5 SCIENCE AND THE STUDY OF CONSCIOUSNESS

Despite its success in the study of matter and material processes, science has not made similar gains in certain domains such as the study of consciousness. Caran, in this respect, opines that it is easier, given the right causal understanding, to *observe* our own feelings than to deal with technical complexities, to control physical phenomena outside ourselves, or to analyse the processes inside matter. Physical sciences have been tremendously successful since they do not have to deal with inner values which, though easier to observe, are more complex and whose causal logic is quite opposed to that of the physical sciences (1987, 22). Whereas methodological difficulties may be cited, they do not certainly explain the positivistic bias found in the sciences. Consequently, Willis Harman accuses scientific research of looking largely "where the light is better" - where the knowledge sought can be measured and quantified. As a result, the area of the subjective has been relatively neglected. This is partly attributable to the cultural preoccupations of industrial society, and partly to the ambivalence accompanying the exploration of mysteries - that is, the need to know and the fear of knowing (op cit., 1038).

Consequently, contrary to the attention paid to aspects of knowledge that will develop new techniques, manipulate and control the physical environment, develop and produce goods and services (what Harman calls *prediction-and-control* type of knowledge),

modes of knowledge not included in this category have been relatively ignored; their importance deemed less. At best, they have been relegated to the humanities and religion or what Harman terms as the *human development* and *meaning* types of knowledge respectively. In the former category, the will or volition has a dominant role to play unlike the *prediction-and-control* type of knowledge. Here, "objective" experimentation is not a crucial factor; rather a researcher allows himself to be changed by the process of inquiry. We can see the examples of these necessities in the professional training of cultural anthropologists and psychologists, which involve learning to be free from judging a society or another person in terms of internalised cultural preferences, accepted mores, likes and dislikes etc. In addition, as Harman argues, the reliability and replicability of findings, valued in the *prediction-and-control* type of knowledge, is not much applicable to the human development type of knowledge since the occurrence of certain phenomena, such as extra-sensory perception are peculiar or exceptional human capacities difficult to replicate.

This suggests that, apart from portraying the neglect of consciousness studies by the sciences, it also points to the need for flexibility in methodologies even amongst the sciences, for different phenomena will require and entail different methodologies. Failure to do this poses the danger of imposing the methodologies of the physical sciences, with its assumptions, to phenomena where those assumptions do not apply. It is also a reminder of the limitations, already alluded to, that beset the scientific enterprises. However, unlike the limitation due to complexity, the fault here can be seen to lie with the scientist and the conditions (cultural, economic, political, etc) in which he finds himself.

3.6 RELATIONSHIP BETWEEN RELIGION AND SCIENCE

We have already discussed the concept of religion understood as faith (conventional conception) and noted its inherent weaknesses. However, though it is the most common conception of religion, it is by no means the only one. Radhakrishnan delineates two possible conceptions of religion. *Conventional* religion is object oriented, it emphasises the object, whilst *mysticism* emphasises on experience. Of the later Radhakrishnan writes, "For them religion is more [of] a transforming experience than a notion of God. ...Belief and conduct, rites and ceremonies, authorities and dogma are assigned a place subordinate to that of self-discovery and contact with the divine." (Thomas 1969, 151). Mysticism attempts to "perceive" the *reality* that conventional religion accepts on the basis of faith or similar criteria. Whereas we have not examined mysticism in detail, it will do no harm here to analyse how science has been related to it in an attempt to validate it (mysticism). It will also serve as a preamble to our discussion on mysticism in the next chapter.

3.6.1 LINK BETWEEN MYSTICISM AND SCIENCE IS UNJUSTIFIABLE

Earlier on, we dismissed as unreliable and misleading attempts by, amongst others, Drosnin purporting a linkage between conventional religion and science. We found such attempts to be far-fetched and resting on shaky grounds. However there is still the commonly held view that modern science offers proof or vindication for mysticism. However, is such a claim justified?

Ken Wilber in the book **Quantum Questions: The Mystical Writings of the World's Great Physicists**, while conceding that there are similarities between the world-views of mysticism and the new physics, nevertheless insists that such similarities, where they are not purely accidental, are trivial compared to the vast and profound differences between them. He maintains that modern science offers no support for mysticism because religion's "...true domain is far beyond anything in reach of scientific explanation." (1985, 6). This is to say that mysticism and science deal with two different domains of reality, between which there can be no conflict nor agreement, just as there can be neither conflict nor agreement between botany and music.

Nevertheless, Wilber's analysis is not entirely accurate; it is in need of qualification. As already noted, religion (and by extension mysticism) does contain doctrines about mundane concerns about which science can have something to say, otherwise, there could have been no quarrel between Galileo and the Church. Perhaps it is at the scared/spiritual level that the two can be seen as mutually exclusive. However, even such a view has been opposed. Writers like Paul Davies, as we have seen, believe that even matters relating to creation, for instance, can best be understood in a scientific rather than in a religious context. Nevertheless, though we may grant Paul Davies' argument, it should not escape notice that it is still at the mechanistic level, that is, creation, miracles and the like are still being treated as physical processes. Paul Davies has in mind the big bang theory, the steady state theory, and other similar scientific accounts of the origin of the universe, for instance. However, religion claims to have a deeper, different level, that is, a level beyond the pale of physics or science for that matter. For instance, the notion that God is a Trinity cannot be investigated whatsoever

from the scientific point of view. At this level Wilber would definitely be right and Davies wrong. It seems then that we can only favourably compare, not integrate the two at the mechanistic level, where some of their concerns seem to overlap.

Arguments for the purported support mysticism receives from the physics rest on some fundamental assumptions underlying the latter. The fundamental difference between the old and the new science is the realisation by the latter that it can only deal with the mathematical representation of reality; the former thought that it dealt with reality as it is (Wilber op cit., 8). Thus whereas the new physics, to use Platonic jargon, gave reason to believe that there was reality outside of the cave, (that is, non-physical reality), it could not go into the specifics of that reality. Thus, the very fact that modern physics seems to acknowledge the existence of some other reality (whether that of the mystic or not) does make it sound very much like mysticism which too refers to a reality other than the physical. The assumption is then made that physics is right (in assuming the existence of such a reality) to begin with and that the "reality" it refers to is the same as that of the mystic.

However, an insistence on a direct linkage between science and religion has serious logical repercussions. For one, as Wilber rightly poses, if today's physics supports mysticism, what happens when tomorrow's physics replaces it? He writes, quoting the words of Jeremy Bernstein, "If I were an Eastern mystic, the last thing in the world I would want would be a reconciliation with modern science, [because] to hitch a religious philosophy to a contemporary science is a sure route to its obsolescence." (Ibid., ix). Lionel Rubinoff had years earlier expressed a similar view on religion when

he noted that,

> For the business of science is to be scientific, and the business of good religion is to be religious; and to recommend a religion because it is in accordance with, or verified by, or derived from science is just as silly as to recommend a scientific theory because it is consecrated by religion. In both cases the proposed criterion is widely irrelevant.(1968, 90).

The above view can obviously be extrapolated to cover mysticism.

It is in the light of the above that works such as those by Grant Jeffrey can be negatively appraised. Grant uses a scheme similar to Drosnin but draws his materials from as far a field as medicine, archaeology, astronomy, and so on. He seems to assume that to the extent that biblical teachings are similar to or amenable to scientific interpretation, they are accurate. It does not matter that all these could be coincidental or trivial, or valid as long as the scientific theories that support them are valid.

It follows then that science cannot deal with the "reality" of the mystical world and even if it could, that would be to the detriment of mysticism and probably science as its credibility could be at stake. It is unlikely that physics, and by extension science, would, in its present form, ever have anything positive to say about realms other than the physical and it is therefore futile for religion to try to justify itself using science or compare itself with it. As Wilber has so rightly pointed inorder to justify itself, mysticism (and religion by extension), to the extent that it is genuine, should be able to offer its own independent support. If religion insists on justifying itself scientifically, it should invariably be prepared to change its doctrines to reflect the ever-changing nature of science. This, we believe, is something that conventional religion, and especially faith, would not do for its doctrines are held to be true for all times and places.

Nevertheless, it is still possible and even plausible for religion to "borrow," or be corrected by scientific thought. Some passages of scriptures have been given alternative interpretations as a result of advancements in science. No one, for instance, still holds to the view that the earth is the centre of the solar system (and therefore that the sun moves around it) as the medieval Church taught based on passages from the Bible (Ecclesiastes 1:5, Psalm 104:5, Joshua 10; 13, 13). In such a case, the views held by the Church were influenced by science. Nonetheless, it should be noted that in other respects religious doctrines and science are still at odds, for instance, evolution versus creationism.

3.7 SCIENCE AND MIRACLES

Granted the above, it is arguable that there are areas in which religion and science can interact. One such possible area is the religious doctrine of miracles. Miracles, whatever they may be, are claimed to happen in the physical world, the world that is the special domain of science. As such, any interaction or dialogue between the two could possibly be encountered in this sphere. It should be noted that for a good measure, faith is held on account of miracles, and if indeed science can help religion, this is an excellent place to look.

3.7.1 TRADITIONAL CONCEPTION OF MIRACLES

The term miracle has traditionally/theologically been though of as a break in natural law. It was held that though the laws of nature were God's laws.- he could suspend them for his own purposes. Hume adopts this definition deeming it that a miracle is a violation of the laws of nature by a particular violation of the Deity or by the

interposition of some invisible agent (**An inquiry concerning human understanding** 1748, section x). Nyasani similarly asserts them to be, "...an astounding and extraordinary happening that takes place in nature but outstrips all the power of nature in its origin and explanation." (1996, 10). As such, he argues, a miracle can only be performed by a super-being (God) who is prefect and omnipotent. This conception is attributable to Thomas Aquinas who maintained that miracles are those events "...which are done by divine power apart from the order generally followed in things. Aquinas distinguishes three kinds of miracles... '(1) events in which something is done by God which nature could never do', (2) 'events in which God does something which nature can do, but not in this order', and (3) events which occur 'when God does what is usually done by the working of nature, but without the operation of the principles of nature.' " (Brian Davies 1993, 191). An example of (1) is the sun reversing its course or standing still, of (2) someone living after death, seeing after being blind, or walking after being paralysed, and of (3) Aquinas adduced the example of someone being instantaneously cured of a disease, which doctors may have been able to cure given sufficient time (ibid.).

3.7.2 CRITICAL REMARKS

Granted that miracles are a violation against nature's laws, nothing being miraculous if it happened in the ordinary course of nature, Hume postulates that there must be a uniform experience "negating" every miraculous event. Hume seems to use the terms "nature" and "uniform experience" analogously and as such anything not in agreement with that (uniform) experience was deemed self-contradictory. According to Hume, such uniform experience amounts to a proof and cannot be destroyed nor a miracle rendered

credible except by an opposite but superior proof. Human testimony is not such a superior argument. It is the case, he argues, that experience gives authority to human testimony and the same experience assures us of the laws of nature. However, human testimony is never sufficient to establish a miracle; it can never have such force as to prove a miracle unless the testimony is such that its falsehood would be more miraculous than the fact it endeavours to establish. Since, as a general principle, Hume is inclined to always reject the greater miracle, he rejects human testimony on miracles as counting against the uniform experience of nature. The other four points he gives against miracles (they are never reported by reliable persons nor performed in public; they evoke in people agreeable emotions and wish to be associated with second hand accounts thus propagating them; given the principle in religion that what is different is contrary, Christian and Hindu accounts of miracle, for instance, would count against each other; and lastly that though miracles be wrought by the action of an almighty Being, it is impossible for us to know the attributes or actions of such a being except in their production in the usual course of nature) still reduce to observation and obliges us to compare instances of the violation of the truth of men to those of the violation of the laws of nature by miracles in order to judge which is most likely and probable.

Hume sought to discount the notion of the miraculous on their own ground that they are violations of the laws of nature; that he was right in doing. However, as Gilbert Boyce A. notes if, as Hume supposes, laws of nature are founded on experience, there can be no question of violation, because laws are only progress reports. Anything may happen later but this does not justify talk of violation (1970, 267). Paul Davies (op cit 31) similarly opines that, "However astonishing and inexplicable a particular occurrence

may be, we can never be absolutely sure that...in the future a natural phenomena will not be discovered to explain it." In other words, if we accept Hume's critique, anything that happens for the first time is to be discredited. Nevertheless, something may happen or be observed for the first time, profoundly disturb the traditional body of observations and seem like a violation of nature's laws, but ultimately end up enriching our conception of nature. The point is that if we happen to observe an *apparent* violation of the (known) laws of nature, we cannot on that count term such a violation a miracle for it could turn out to be just another (lawful) process in nature.

It should be noted too that whereas in the abstract world of physics, mathematics replaces intuition and commonsense, for instance, the notion that an electron has to spin twice before presenting the same face as before (ibid., 27) and that the boundary of the *impossible* is constantly shifting since quantum physics shows that it is possible, not absurd, that "something can come out of nothing." (Paul Davies, ibid 30; Polkinghorne op cit., 47), this is not a licence that after quantum physics anything goes; it is only a caution to our intellectual short sightedness about the range of the possible.

Hume has also been accused of circularity as Clive Staples Lewis does in an article "The Reasonableness of Believing in Miracles." Hume, he notes had in essence argued that we know experiences against miracles to be uniform (have not happened) only if we know all reports of miracles are false. Moreover, we know that all the reports are false only if we know already that miracles have never occurred (in Sprague *et al* op cit., 408). He also accuses Hume of "sleigh of hand" or inconsistency. The question, "Do miracles occur?" and "is nature uniform?" are the same question framed differently.

However, Hume in **Treatise on human nature** answers "Yes," to whether nature is absolutely uniform and in his **Essay on miracles**, "No," to the question "Do miracles occur?" He gets the answer to one form of the question from its alternative form, not answering the single question he set out to answer.

Wilkes adopts a different approach to the issue arguing that Hume's account, at best, shows that miracles are improbable, not impossible. He opines that as historical events, miracles tend to be unique and unrepeatable. However, any violation of a law of nature can only be established by a repeatable experiment carried out under controlled conditions, yet the very last thing a miracle tends to be is a repeatable experiment (op cit., 119). Wilkes contention is that since miracles are unique and unrepeatable, they cannot scientifically be shown to be violations of the laws of nature. Taylor has a similar point in mind when he seeks to show that miracles cannot be refuted scientifically. He notes that those who had sought to discredit the story of Jesus changing water into wine had argued:

1. The transformation of water[14] into wine involves the conversion of some part of the chemical elements hydrogen and oxygen into the chemical element carbon, which is present in alcohol.
2. Chemical elements cannot be transmuted one into the other. (Hydrogen, oxygen, and carbon are chemical elements).
3. Therefore, the transformation of water into wine did not take place.

Taylor maintains that the second premise is in part false and in part not then known to

[14] Chemically represented as H_2O (two parts of the element hydrogen, H, to one part of the element oxygen, O)

be true. Scientific evidence then available justified the statement that the transmutation of chemical elements had not yet been observed, not that it is impossible. However, it can nowadays be shown that the transmutation of chemical elements is practically and theoretically possible. This, he maintains, shows that we cannot deny the possibility of such a change because it contravenes some scientific law (1968, 38).

Taylor further argues that science is concerned with those events which can be repeated and in different places, all circumstances except time being identical in every repetition. The less nearly the events studied by science conform to the ideal, the less certainly can scientific law be applied to them, while unique events which cannot be repeated are outside of science in so far as they are unique (ibid., 39). In the above example, whereas no water has been observed to turn into wine under ordinary circumstances, the description suggests that the circumstances were different – there was alleged supernatural intervention. Thus, the only scientific method of treating the matter would be to experiment the said change under conditions where supernatural aid was to be expected. This, however, is not likely for the laws would that apply in the supernatural realm are not known or investigated by science and few scientists, if any, would be willing to pursue such an endeavour (ibid., 40).

Whereas it can be conceded that conditions under which miracles allegedly occur are not the same as those in which science carries out its investigations and, depending on the extent of the variation, the two can or cannot favourably be compared, it is contentious whether miracles are unique and unrepeatable, that is, whether they are violations of the laws of nature. We agree with Boyce, Davies and to an extent Hume,

that it makes no sense to talk of violations of laws nature for we could never tell whether any anomaly observed constitutes a violation, or is part and fabric of nature. For instance, if the earth were to veer off its orbit, or remain stationary relative to the sun, could such an occurrence constitute a violation of the laws of nature? Could that entail a suspension of the laws of gravity, for instance? We hold that the answer to these questions is "no" since such deviations would occur precisely because they are in accordance with the laws of nature, known or unknown. Astronauts do not float in space because they break the laws of gravity but precisely because they obey them. The same is the case with metallic ships which float on water though metal is denser than water. This assertion can reasonably be generalised to cover yet undiscovered aspects of nature. Nothing could therefore be plausibly termed a miracle proper, as what it is that would constitute a violation is difficult to assess. Additionally, if miracles do indeed occur, it would be hard for science to investigate them, as it could not carry out such an investigation under conditions in which supernatural intervention was expected. It lacks the "tools" and probably the willingness

3.8 CONCLUSION

Having examined, amongst other things, the limitations of science, its demarcation from non-science, its growth, methods, and values in science, it has been argued that, far from providing absolute and flawless knowledge, as religious claims do, science does not and cannot claim to do so. This is its chief virtue for it provides room for correction, expansion, and growth with time. Though there are factors that hinder scientific progress (they dictate the quality and quantity of the scientists' output), science has endeavoured to ensure that its methodology, principles, and techniques keep errors and

bias to a bare minimum. Yet, and in spite of this, the personal element cannot altogether be eliminated from science and its methods. How responsibly scientists exercise their professional freedoms and judgements, lends universal intent and acclamation to the enterprise. Mistaken, too, is the notion that science is in a way a religion. Though similarities clearly exist in the manner a scientist and a believer adhere to their respective "creeds," there are no sound grounds to thereby argue that science is indeed a religion. The similarities end there and the scientist, by virtue of his methodology and willingness to discard what has been shown to be false or no longer useful, is rationally more justified in maintaining his beliefs than is a religious man.

Additionally, though it is unlikely that science is neither the only nor the best possible approach to the study of nature, we should not, on this count, be quick to dismiss it lest, as the saying goes, we throw away the baby together with the bathing water. The proper attitude would the be to retain science but be realistic about its limitations, eliminate certain individual biases and be more open, with due care, to the realisation that there could be complementary, if not better methods of analysing and understanding natural phenomena. Since neither science nor religion can directly borrow from the other, particularly methodologically, a respectable distance should be maintained between them, and thereby avoid unnecessary antagonism between them. They should warm up to each other, but not reasonable expect to get cosy. Even on the issue of miracles where the two are expected to be rather close, the two cannot meaningfully interact, contrary to expectations. Finally, and as a consequence of this, religion/mysticism ought to be in a position to vindicate itself. It should not rely on the tools and output of science.

CHAPTER FOUR

MYSTICISM: THEORY, METHODS AND PRACTICE

4.0 INTRODUCTION

In the previous chapter, we examined in detail some of the concepts underlying science and its practice. In the current chapter, we examine mysticism, bearing in mind the claim that it should provide independent or internal evidence for its validity. We have already observed that religion envisaged as faith or myth cannot provide independent proof and attempts to find such proofs in science are bound to be unfruitful if not self-defeating.

4.1 PLATO AND MYSTICISM

Foundations for mysticism are metaphysical theories analogous to Plato's theory of Forms (Ideas or Universals). Though a number of scholars believe that Plato, as well as the early Greek philosophers, such as Pythagoras, were mystics,[15] their conceptions are insufficient to the task at hand; the theories do not focus directly on mystical techniques and experiences but rather expound upon conceptual foundations, which are too general and logically difficult to uphold. We use Plato's theory - being the most famous and more elaborate - to highlight this.

The theory of Forms has as its foundation the notion that beyond the world of physical things, there is a higher spiritual realm of Forms. There is nothing that we observe by

[15]For instance Bruce B. Janz at http://www.augustana.ab.ca/~janzb/mysticism.htm "Who's who in the History of

the senses that endures; but contrary to these, there are general notions like "man," "triangle" or "justice" which the senses do not give us corresponding (sense) objects. Plato thought such notions are the product of reason or intelligence and that they have corresponding "experienceable objects" which are single and changeless, inhabiting a world that is unitary and eternal – not mere psychological states. Forms are not only the cause of all being, but also the cause of all knowledge; true explanation is the product of the comparison of a thing with its eternal paradigm or Idea.

Plato elaborates this idea in the analogy of the cave: he imagines men inside a cave, tied so that they can face but one direction. Behind them is a fire and in front a curtain upon which images produced by the fire are projected by movements in the background. The tied men see nothing except the screen in front of them and the images cast thereupon. A freed prisoner will gradually acquaint himself with the cave and eventually go out and see the sun (**Republic** vii, 514-516).

The analogy has the following correspondences: the tied prisoner in the cave represents illusion; the freed prisoner in the cave represents belief; looking at the shadows in the world inside the cave and the assent thereto represents reason; looking at the real things outside of the cave represents intelligence and looking at the sun represents the vision of the Form of the Good, the highest of the Forms (Brennan, 1963: 240-243). We can see that, according to Plato, the world disclosed by sense perception is appearance or semi-real only, in contrast to the "true being," the supreme rational order of things upon which the world depends and to which mind alone can penetrate.

Mysticism."

4.1.1 CRITICAL REMARKS

Plato's theory can be criticised on several counts. The "third man" argument is one such and goes: "How, ... can an individual material thing participate in a universal immaterial being? To have any relation, would there not have to be a third thing in which both share? But between this third thing and the particular object, and between the third thing and the Idea, there would have to be other relating factors, and so on *ad infinitum*....The problem is unresolved." (Girvetz *et al* I 1966. 94). There is thus an infinite regress in Plato's theory; the precise nature of the relation between an Idea and its object is logically elusive.

Additionally, Bertrand Russell (1961, 143) observes that the individual participant cannot be said to partake of the part or of the whole of the Idea of which it is a participant. This is because, if we say that the participation is full, one thing is in many places at once; and if we maintain that the participation is partial, the Form is divisible, contrary to what Plato allows of the Forms. Additionally, Ideas must be unknown to us because our knowledge is not absolute. This is to say that, that which is imperfect cannot embody the perfect; or, put in another way, the finite cannot comprehend the infinite.

Furthermore, certain objects are problematic to place. For instance, cannot definitely be said to be circular or an elliptical. Plato, however, maintained that such a figure would be a poor approximation of a circle. However, as Girvetz asks: cannot the

figure above be an example of precisely that Form and not either the Form or circle or ellipse? (Op cit., 96-97). It is therefore conceivable that we could have a multiplicity, if not an unlimited number of Forms, contrary to what Plato allows for he permits the existence of a limited number of Forms, the highest being the Form of the Good.

The concerns raised above with regard to Plato's theory illustrate lack of a clear logical and causal transition from illusion to the vision of the Form of the Good. Nevertheless, Plato's exposition has the advantage of showing that there are no good reasons to believe in the gods as depicted by the poets - Homer and others (**Republic** 365e). He seeks a religion based on rational convictions, beliefs, and truths. His mysticism is the fruit of philosophical contemplation and vision for the supra natural attained only through the intensification of the rational. It is by carrying out the activity of intelligence to its ultimate limit that the divine is reached. Plato sought to demythologise the religion of his time; his religion was subject to philosophical verification. However, there are negative consequences of tying religion intimately to philosophy as Charlesworth aptly points out: 1) religion is valid only as the philosophy on which it depends; 2) only those with access to philosophy can be religious (1972, 11). Additionally, Steve M. Cahn in an article "The Irrelevance to Religion of Philosophic Proofs for The Existence of God" shows why philosophic proofs ought not to directly impact on religious principles. He argues that religion is either naturalistic or supernaturalistic. To the naturalist, prayers, rituals, etc., are not derived from any belief in the existence of God, it being irrelevant to the aims and activities of the group. Hence, a valid proof provides him with no information he can utilise for his religious practices. On the other hand, if the proof is shown to be invalid, it casts no doubt on his religious views since these have been

formulated independently of the belief in the existence of God. However, the supernaturalist believer in God does so on the basis of self-validating proof of God's existence. A philosophic proof of God either confirms what he already knows, or if the proof is invalid, it casts no doubt on a self- validating experience (1970: 242-244).

Nonetheless, we are aware that such proofs do have their own philosophical value for the insights they bring to light and clarify. The point we nonetheless wish to make is that, given the words of prophets (and it is hard to distinguish the true from the fraud), the writ of scripture (they are many and inconsistent), cannot provide proof to their validity or truthfulness. The same is true of purely philosophic proofs, as shown above. In the case of Plato, the ascent from illusion to a vision of the Form of the Good should not be solely logical: the Form of the Good, if real, ought to be known by some means or the other - it ought to be at least an object of experience. This is the point of departure from Plato's and similar accounts, which can be termed "pre-mystical," due to their exclusion of the role of experience in the knowledge of the Forms (God, or whatever description used). Consequently, it is on the basis of a personal experience, where one senses the presence of God, that such claims should be verified. Nonetheless, such experiences must not be deceptive; one must be certain that it is God's (or some other such) presence he is experiencing. The experience must be self-validating; it must carry its own guarantee of infallibility. We proceed to examine whether this is the case, commencing with the techniques employed by mystics.

4.2 MYSTICISM: METHOD AND PROCESS

It is important to note at the onset that observation of consciousness is much easier and more direct than the observation of external phenomena. As Bertrand Russell argues the facts of physics, like those of psychology, are obtained by self-observation - not the observation of external objects as is commonly but mistakenly believed. Thus, "seeing the sun" describes an event in our head that we are knowing, the inference to an external cause being more or less precarious, and on occasion mistaken. He writes, "One may say that the data of psychology are those of private facts which are not linked to facts outside the body, while the data of physics are those private facts which have a very direct causal connection with facts outside the body." (Op cit., 1979, 129). The point made here is that, though all knowledge is internal, it is not subjective; what is subjective has to be corroborated given that hallucinations do occur, people tend to lie, and so on. Our immediate concern here is to show that i) mystical experiences are produced by a systematic, non-random procedure ii) and that the experiences so derived are reliable. It could also be the case that the experience occurred when not expected, not that the experience was unexpected

A perusal of mystical literature suffices to establish that mystical experiences are rarely, if ever, spontaneous occurrences. This is bearing in mind that the revelational and intuitive modes of religious knowledge already discussed attach the element of spontaneity to the experiences. In the case of mystical experiences, where spontaneity is judged to be the case, closer examination reveals that specific antecedent conditions obtained precipitating the experience. Thus, in cases of "spontaneous" experiences, the mystic was not consciously aware of what he was up to, but such ignorance does not

indicate that the experience was spontaneous.

It follows then that, the aspiring mystic has to undergo a rigorous and systematic routine, prior to any experiences; the kinds of experiences produced by diverse methods being meticulously laid down[16]. This should indicate that far from being mysterious and haphazard, mystical experiences are natural; they are possible, here and now, to anyone who follows a prescribed course of action. It should be noted that some mystical traditions require that certain techniques be taught only to a select few (Yogananda 1993, 275). In such an instance the role of student-teacher is very important, if the secret techniques are to be learnt (Parekh 1980, 16; Bhaktivedanta 1989, 649). Nevertheless, there is sufficient that is known even in such instances, to enable the uninitiated to carry out reasoned discourse on the same.

A fundamental requirement in many mystical traditions is the acceptance and adoption of a certain moral code and way of life. This, according to Yatiswarananda, is a prerequisite (1975; 179-81). These include practices such as truthfulness, chastity, patience, non-violence, and the like. They are a necessary but by no means a sufficient condition; they are supposed to cultivate in an individual a sense of moral responsibility, self-regulation, and discipline.

Then follows the actual practice but again the differences are very pronounced even within the same mystical tradition. For instance, there are mystics who go to extremes of self-mortification, (Buddha, for instance, in his earlier days) whilst others are content with moderate self-indulgence. It is generally believed that it is the consistency of

application of a particular technique that produces results, underlying the notion that any method is as good as the next.

However, like conventional religion, there is an insistence on faith, though it is here recognised that mere faith will not do. Faith holds out to the aspirant what is possible but it is never an end in itself; it is merely a stepping-stone, rather than a hindrance which it becomes when taken as an end in itself. In the words of Yatiswarananda, there is nothing like (blind) faith, only blindness (op cit. 42). Burckhardt similarly remarks of Sufism[17], that whilst doctrinal truth is indispensable, by itself it does not effect any transformation (1990, 85). Consequently, mystics put little emphasis, if any, on sectarianism or faith to their followers, whom, they will readily admit regardless of the formal creeds they profess (Gupta, 1970, 47: Yogananda, op cit. 389). This clearly shows that there is more emphasis on method rather than on formal faith, experience rather than authority: the mystic is willing to put to the test, to observe for himself, what he believes in. He believes, only as a first step, but will only accept and be convinced if and when he gets "proof." This is a vital difference between the mystical and the conventional approach to religion and it sets them poles apart.

Contemplation, the next step, is supposed to free the mind from the limiting conditions of the arbitrary psychic tyranny, and impurities. Natural but latent potencies are actualised, co-ordinated and eventually manifest themselves as confident joy and love as contrasted to their pre-formative expressions of fear in the face of death, etc.,

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[16] For instance Pantanjali's *Yoga Sutras*
[17] This is the mystical movement in Islam.

(Burckhardt op cit., 89). Meditation (a stage higher than contemplation) gives value to the true initiative of thought. The proper domain of meditation is the discrimination of the *real* from the *unreal*[18] and the chief objective of such discrimination is the "I," the only means of transcending illusion. Yatiswarananda (op cit.) notes that rationalisation is supposed to be complementary to mystical experiences, from which they can derive unity, purpose, and integration with other modes of experience. Rationality, according to him, is complementary to mystical experience, not a replacement and vice versa. This illustrates that mysticism does not necessarily shun rationalisation, unlike faith, which applies it selectively, or shuns it altogether as is the case with radical theology. However, in the mystical tradition, doctrine is not only supposed to be consistent with reason, it should further not contradict it (ibid.). Such a blend goes a long way in safeguarding mystical experiences from being reduced to mere sentimentalism or naïve beliefs.

4.2.1 MYSTICAL EXPERIENCES AND PSYCHOLOGY

That said, it will be observed that the occurrence of mystical experiences, and the internal changes that give rise to them can be corroborated by research in psychology; it is not a merely imagined state. In this respect Deikman (1982, 65-67) argues that we ordinarily exercise a significant selection process over the array of stimuli being presented to us all the time. For efficiency's sake, we pay attention to some things and not to others. This selection gradually becomes automated such that over time it becomes difficult to recover our perceptual and cognitive options. Mystical disciplines, however, bring about a *deautomisation* such that a new, fresh perception can occur.

[18] As conceived, for instance, by Plato.

This, coupled with an increased capacity for receptive mode function occasioned by "spiritual" training, leads to what in mystical circles is known as the "awakening of one's true nature."

Similarly, Robert Forman in an article "What Does Mysticism Have to Teach us About Consciousness" notes that pure consciousness events (PCE), which lead to enlightenment, are to be found in all mystical traditions. He argues that our minds are an enormously complex stew of thoughts, feelings, sensations and the like, plus, of course, consciousness itself. To understand consciousness as such, it is only logical that we should empty the mind of as much of its internal *debris* and *noise* as possible, which is precisely what mystics attempt to do. Whatever the technique a particular mystic may opt to use, its net effect is that of slowing down the thinking process such that there are fewer and less intense thoughts (of inner and outer stimulus). Ultimately, one becomes completely perception - and thought-free. Yet, and this is important, despite this suspension of content, one emerges from such an event confident that he has all the while remained fully awake inside, that is, fully conscious. These are the pure consciousness events (PCE). However, this is the first of many steps leading to enlightenment. Forman does however throw in a word of caution, namely that phenomenology is not science. When we describe such events, as he has done, we thereby do not gain hard scientific proof. Phenomenology can thus not serve as the basis for a theory of reality; it can only point us in a certain direction and no more (1996, 187-190).

4.2.2 DRUGS AND MYSTICISM

Contrary to what we have been discussing, attempts have been made to equate, or at least compare, mystical experiences with drug induced ones. It is argued that LSD[19] and related drugs cause chemical changes in the body akin to those produced by ascetical practices - these include prolonged fasting and other self-mortification practices (Zaehner 1972, 81). Since, the argument goes, mystical consciousness can be heightened by ascetical practices, and ascetical practices produce effects similar to those produced by psychedelic drugs, mystical experiences, and those that are drug induced must therefore be similar, if not identical.

Whereas there are some factual truths in this argument, it must be noted that most mystical traditions are opposed to ascetical excesses. For instance, in the **Bhagavat-Gita** there is the admonition that, " *Yoga* is not for him who eats too much nor for one who does not eat at all; nor yet for he whom is too prone to sleep, nor for him who always stays awake. Rather, *Yoga* is for him who is moderate in food and recreation, controlled in his deeds and gestures, moderate in sleeping and in waking." (Vi 16-77). Hence it is the case that asceticism is generally unacceptable and this is true of the Christian, Buddhist, and Islamic mystical traditions, though all have had ascetics. Additionally, whereas there may be similarity of effects produced, these, for one, relate to the physical and emotional faculties, and secondly, ascetical practices are considered as producing, for the most part, misleading, trivial, or non-mystical experiences. It is also true that the ends to which the two (mysticism and drug taking) aim at differ

[19] The LSD drug (lysergic acid diethylamide) causes hallucinations.

considerably, if not quite opposed: the mystic seeks the ultimate reality whilst the drug user seeks escape from reality. It is therefore far-fetched and misleading to closely associate mystical experience with those that are drug induced. It should also be noted that such arguments do not seek to deny the realty of mystical experience; they seek to show they are insignificant, if not misleading, just as are drug-induced states.

4.3 MYSTICISM AND THE SELF

In a sense, mysticism can procedurally be regarded as controlled *self-observation*. We say, "controlled" because no effort is spared in preparing the mind for contemplation and meditation which consists, in the main, of observation, control, and analysis of inner operations, including and particularly those of the mind. Masterly of these is supposed to lead directly and immediately to mystical experiences. We say "self" because the process is devoted exclusively to the inner realms with the self as the ultimate end. There is hence a need to analyse this concept with respect to mysticism since it is the self that mystics attempt to perceive, believing it to be qualitatively but not quantitative similar to the highest form of reality (Yatiswarananda op cit., 53; Yogananda, op cit., 148). A discourse on mysticism would not be complete if it ignored the possibility of the reality of the self, which is at the core of mystical experiences.

There generally are two trends or conceptions of the self. One is whereby the self is taken to be a relative term and the other where it is seen as absolute. In the former sense, the self is predicated upon someone or something else, such as the body, emotions, and so on. In the latter case, personal identity is taken to be something unique, enduring, and absolute (in the sense of not being relative to someone or something else) and is something one is rather than has.

4.3.1 HUME ON THE SELF

In his **Treatise of Human Nature**, Hume rejects the notion that we directly perceive our sense of identity via the senses, holding instead that it is, "...a bundle or collection of different perceptions which succeed each other with an inconceivable rapidity and are in a perpetual flux and movement." (Bk. I, part iv, section 3). Of the mind he writes that, "... what we call a *mind*, is nothing but a heap of different perceptions, united together by certain relations, and supposed, though falsely, to be endowed with a perfect simplicity and identity." (Ibid., section 6). His contention is that the mind does not furnish us with anything that is permanent and enduring, which is what anything constituting the self should be. He considers the self not to exist in death and in sleep.

Hume's insistence that (i) we have no *impression* of the self, and that ii) we could not have such an *impression* as the suggestion is self-contradictory, arises from a misuse of the terms "impression" and "idea," which denote "sensation" (internal or external) and "image" respectively. Hence, unlike, say, knowledge of colour or motion (images), knowledge of the self, is internal and intimate and cannot be represented in thought as an image, since in all thinking, the self is actually present. Additionally, contrary to Hume's second assertion, there is no contradiction involved since that which has all other experiences (self) also has a special inner experience of its existence. It would then seem to be the case that Hume's insistence that any sense of the self be grounded on perceptions is inaccurate, since the manner in which we would "perceive" the self is different from the more ordinary avenues of perception.

On Hume's assertion that if the self is permanent and identical, the impression from

which it is derived must abide without interruption throughout our lives, Macnabb contends that the self can change or suffer interruptions in its existence, and yet preserve its identify. He gives the example of a play (an analogy also used by Hume), arguing that a play is the same play even when resumed after an interval, or with a change of actors or scenery (1966, 148). Macnabb's assertion is that it is the substantiality of the self that would be affected, not its identity. However, this is contentious, for how can that which is supposed to have a permanent, abiding character admit of change? Would a change of substance not constitute a change in identity as well? Analogies can often be misleading and even where they are not, they cannot, in all respects, mirror the characteristics of the thing or phenomena they represent. In using the analogy of the play, Macnabb leaves unanswered the questions of whether the self is compounded (made up of different parts like sections in a play) or whether it is associated with materiality (as are the actors and props of a the play, the play itself being immaterial). His analogy of a play and the inferences he infers from it are misleading. It is then not the case that the self can suffer changes and interruptions and still maintain its essence, as Macnabb would have us believe. Hume had rightly pointed out that the self should be such that it remains unchanged throughout a person's life. He however failed to identify such an element, partly because of his belief that it should be perceptible via the senses.

Macnabb is right, however, when he notes that that Hume's assertion that all perceptions are separate and distinct existences, requiring nothing to support their existence and which therefore cannot belong to a self, or be connected with it is a *non sequitur*, and the conclusion is false as a matter of fact. He (like Hume eventually did) asks, "...if perceptions are distinct existences, how..., do they become united in a single

consciousness as they plainly do?" (Ibid., 149). Hume's insistence is that we require a necessary connection but Macnabb rightly maintains that this is not the sort of connection we need to explain unity of consciousness since the perceptions of any mind are never logically connected like the axioms or theorems of a geometrical system. In insisting that the connection be necessary, Hume had ruled out similarity, causation, local or temporal conjunctions as possible alternatives. Unity of consciousness need not be limited to grounds of necessary connection, as Hume had argued. In all, Hume erroneously assumed that perceptions are what would constitute (knowledge of) the self and hence wrongly concluded that, "The occurrence of my perceptions is all that is necessary for, and is sufficient for my existence. So long as they occur, I am; when they cease, I am not. Therefore, I am they." (Ibid., 146-7). Since perceptions are constantly changing, and since the self is not supposed to change, Hume concluded that the self does not exist. He failed to realise that the manner in which we could perceive the self is different from the way we perceive the non-self.

4.3.2 LOCKE ON THE SELF

Unlike Hume, John Locke maintains that a self exists and bases it on consciousness. To Locke, a *person* is a "...thinking intelligent being, that has reason and reflection, and considers itself as itself, the same thinking thing, in different times and places; which it does by that consciousness which is inseparable from thinking, and as it seems to me, essential to it; it being impossible for anyone to perceive without perceiving that he does perceive." (In Gould, 1998: 338). Locke goes on to suggest that to the extent that consciousness can be extended backwards into the past, then to that extent reaches the identity of that person.

According to Locke, the self does not change even when the material substance associated with it changes. He allows that two thinking substances may make up for one person; the same consciousness being preserved, whether in the same or different substances, personal identity is preserved. Locke seems to rule out the possibility of reincarnation or transmigration, arguing that any irrevocable lose of remembrance suffices to distinguish two distinct persons. Locke allows that: 1) two distinct incommunicable conciousnesses, acting in the same body, would constitute two distinct persons. Thus, in his words, one could be Socrates during the day and Plato during the night. 2) The same consciousness acting by intervals in two distinct bodies would constitute the same person.

4.3.2.1. CRITICAL REMARKS

It can be objected to Locke's theory that the account concerns itself with our knowledge of personal identity and not what actually constitutes it. The appeal here is to the principle that no genuine proposition can be made true by merely knowing it. To this end, Butler has argued, "And one should really think it self-evident that consciousness of personal identity, presupposes, and therefore cannot constitute personal identity; anymore than knowledge in any other case, can constitute truth, which it presupposes." (Mackie, 1976:186-187). In other words, Butler is accusing Locke of circularity.

However, Locke is not asserting that what constitutes personal identity is consciousness of personal identity, which would be viciously circular. Rather, Locke is asserting that what makes a particular experience mine is the fact that I remember it from the inside. This is a way of remembering an experience, but it does not include as a component the

actual memory that it was I who had that experience; that the original experiencer was identical with me. With this distinction, personal identity, as presented by Locke, is neither circular nor trivial, as Butler had implied. The subtle but significant distinction here is that Locke's account of remembering that I did an action does not include as a component that it was I who did that action initially. Butler however accuses Locke of asserting both.

Locke's theory also raises difficulties pertaining to responsibility for actions. According to Locke, a man drunk should not be held responsible for his actions for he is not the same person he was when drunk. Locke does however admit that human judicatures are reasonable in not admitting such explanations in mitigation for there are no objective criteria for ascertaining their genuineness, apart from the word of the accused. The point of contention with Locke is the following: granted that the drunk person might not be held responsible for what he did whilst drunk, he certainly can be held responsible for getting drunk in circumstances in which he was liable to do harm, for getting drunk is something he embarked on while sober, and he can presumably remember the earlier stages of the process. Even for the sober, Locke's doctrine can have undesirable consequences. Mackie points out, and we agree with him, that given Locke's understanding an artist, for instance, can no longer claim credit for a work he does not remember producing (ibid., 183).

To illustrate another deficiency with Locke's account, there is the example of an elderly general who remembers capturing a standard as a young officer, but cannot remember being flogged as a young boy for robbing an orchard, whereas the young officer can

remember the flogging; so the general and the young officer should belong to one unit of consciousness, and again the young officer and the boy, but not the general and the boy. This, as Mackie rightly points out, would be an instance of two persons where indeed there is only one. Locke's account of personality overlooks such a possibility. In general terms then:

> Since a person at t_2 commonly remembers some of his experiences and actions at t_1, whereas what constitutes a person at t_1 was all the experiences and actions that were then conscious, Locke's view fails to equate a person identified at t_2 with any *person* identifiable at t_1. It is only a theory of how some items which belonged to a person identifiable at t_1 are appropriated by a person who can be identified as such only at t_2. It is therefore hardly a theory of personal identity at all, but might better be described as a theory of action appropriation (ibid.).

The gist of the argument is that, given that we do not have perfect remembrance, we are, on Locke's terms, constantly changing that which we are. Thus, I am not the same person that I was yesterday or some other time in the past, nor will I be the same person in the future. Locke's theory is thus only an account of how we can identify a person at one point in time and another person at another point in time, without clearly showing how the two are the same person.

Though Locke attempted to formulate a basis for personal identity, he failed since remembrance, as he thought, could not satisfactorily account for the continuation of personal identity. He fails to show continuity of identity where remembrance fails, temporarily or permanently. Cases are known of people with multiple personalities who, on occasion, act as different persons, but we do not believe that this essentially constitutes two distinct personalities. There is also the case of people who have suffered amnesia: such persons cannot be reckoned as being different personalities on this count.

4.3.3 DEIKMAN ON THE SELF

Arthur J. Deikman proposes a theory of personality based on awareness. He argues that introspection reveals that the core of subjectivity, the "I" - is identical to awareness. But this "I" should be differentiated from the various aspects of the physical person and its mental contents which form the "self" (a mistake Hume had made). These mental contents, he argues cannot be the core of our conscious being as they are not the origin of our sense of personal existence. He argues that since awareness is the same as "I," we know awareness by being it, removing the problem of an infinite regress of observers. He argues that the "I" is the observer, the experiencer, prior to all conscious content. A process of introspection carried out to its logical conclusion leads to the disappearance of the customary aspects of personhood into awareness. He describes awareness as something apart from and different from all that which we are aware: thoughts, emotions, images, sensations, desires, and memory. Awareness is rather the ground in which the mind's contents manifest themselves; they appear in it and disappear once again. Any attempt to describe it (awareness) ends up in a description of what we are aware of.

The value of Deikman's assertion can be appreciated when seen in the light of what some authors have maintained on the self. One such is Gilbert Ryle who in an article "The Self and the Systematic elusiveness of I" argues that the "I" is elusive, as Hume had probably sensed. To illustrate this he gives the following analogy:

> An ordinary review may review a book, while a second order review criticises reviews of the book. But the second order review never is a criticism of itself. It

> can only be criticised in a further third order review. Given complete editorial patience, any review of any order could be published, but at no stage would all reviews have received editorial notices. Nor can every act of a diarist be recorded in his diary; for the last entry in his diary still demands that the making of it should in its turn be chronicled (in Sprague *et al* op cit, 318).

Ryle's contention is that in the case of the self, any description of it is logically condemned to eternal penultimacy. The self perpetually slips out of any hold one tries to get of it. However, as Deikman above has shown, this is never the case.

He (Deikman) dismisses the objection that awareness *per se* does not exist, noting that careful introspection reveals that the objects of awareness are constantly changing and superseding each other (this is an issue that Locke did not treat well). In contrast, to these, awareness continues independent of any mental contents. However, awareness cannot be made the content or subject of observation, as it is the very means by which we observe. Though it may vary in intensity, awareness is a constant. It is not an object or a thing for it lacks form, texture, colour, and spatial dimensions; it is featureless. It is therefore different from anything else we experience (1996; 350-352). The rough analogy of the eye could be given whereby, the eye is the means by which we observe, but it cannot observe itself. However, unlike the eye, the self cannot be directly observed by another person.

Rubinoff expresses an idea similar to Deikman for he argues that personality is the unity of a single consciousness or awareness. He argues that two people conscious of the same object do not thereby have the same (similar) consciousness. This is because in the act

of knowing there exists the object, the subject and the relationship between them. If the mind lost itself completely in the object under perception, there would be no differences between two or more minds knowing the same object. But this never is the case for the mind never so losses itself, only a certain relationship obtains between it and its object – a relationship which is unique. He further contends that the mind is not a thing – a thinking thing – it is the thinking itself. Its *esse* is *cogitare*. In knowing, as Locke had asserted, one is conscious of oneself as knowing, aware of one's history as an active and conscious being, contrary to Ryle's assertions. Self-consciousness is thus never the consciousness of a historical person, for if such were the case, others may know the person better (in Sprague *et al* op cit., 170-172).

Compared to Locke's, Deikman's theory overcomes the problem of remembrance. Whether or not we remember the contents of our awareness, the awareness is the substratum of those thoughts, emotions, etc. Deikman's account is closely related to mystical accounts of personhood. For example, Swami Vivekananda (quoted by Yatiswarananda) argues that:

> There is something in us which is free and permanent. But it is not the body; neither is it the mind....The body is a combination, and so is the mind; and as such can never reach to a state beyond all change. But beyond this ...is the true self of man. (Ibid., 53).

The same idea is expressed in the **Bhagavat Gita** II: 21.

We are persuaded that contrary to what Hume and others stated, a self exists and can be known and experienced, though the manner in which we get to know it is not similar to the manner in which we get to know other things, including our thoughts and emotions,

since knowledge of the self involves the suspension of the sensations and contents of the mind – it is the mind knowing itself (directly), not its contents (indirectly). Awareness is the substratum of personal identity and has a special way of knowing itself. As Locke rightly pointed out, it is impossible to think without being aware that one is thinking. Similarly, it is impossible for one to be aware and not be aware that he is aware and the issue ends there without an infinite regress as Deikman has shown. Hence it is reasonable to take it that the self exists and can be an object of human experience. That established, we move over and examine other issues relating to mysticism and mystical experiences.

4.4 MYSTICISM AND INEFFABILITY

It will be noted that the immediate data of the philosophical analysis of mysticism are not mystical experiences themselves, but mystic's accounts of their experiences. Granted that mystical experiences do occur, is it the case, as has been claimed, that mystics cannot communicate their experiences to non-mystics? Are mystical experiences of a nature that they cannot be communicated to other persons?

4.4.1 INEFFABILITY IN PRINCIPLE

Paul Henle seems to think that this is the case and presents an argument to demonstrate that mystical experiences are, in principle, ineffable. He believes that mystics' claim to ineffability is not so much a failure of thought on the part of mystics, but rather a failure of language to symbolise mystical experiences.

In an article "Mysticism and Semantics," he imagines a primitive society with a form of

ideographic writing, a number system, some notion of addition but not multiplication, the notion of a variable, and who use geometric figures for variables instead of letters of the alphabet as we do. As a result, of writing **a+b=b+a** they might write: □+Δ=Δ+□. However, they instead super imposed the symbols for the two variables, with little plus above the whole to show the nature of the operation thus  under this notation **a+b=b+a** becomes  . Consequently, by this symbolism, it is impossible to state the law of commutation **a+b=b+a**; instead one states a tautology. Similarly the rule **a-b ≠ b-a** translates to  which is a contradiction. Hence, as is the case with mystics, a person from this primitive society who defies orthodoxy and claims that there is a special sense in which the formula  is not a tautology, but the law of commutation, and the formula  is not a contradiction but the law of subtraction **a-b≠b-a**, may not be able to explain his assertions by means of available symbolism and may conventionally be accused of talking non-sense (in Cahn, op cit.,277.

The point that Henle is making is that it is possible to have a symbolism that creates tautologies and contradictions when attempts are made to formulate certain statements. Though this method is not direct or conclusive, it tells us to expect to find in the writings of mystics tautologies and contradictions. That this is so is easy to show, for instance the passage in Genesis "I am that I am," and so on. However, being semantic, the argument does not and cannot make any claim about the truth of what mystics express. Similarly, it is impossible to assess mystic's claim that ineffability of their

experiences is not only relative to our language and symbolic device, but absolutely or with regard to any language whatsoever, unless, of course, mystical experiences are revelations of deity as well as semantics. At most, a mystic can only claim that he cannot express his meaning in available symbolism and that he is unable to develop such a symbolism himself.

We are inclined to agree with Ghandi Ramachandra that, "...whereas doctrines on mysticism need not necessarily refer to the ineffable, doctrines of the ineffable are necessary in acknowledging certain dimensions of the mystical (1976, 75). This is to say that whereas ineffability is possible in principle, in the case of mysticism, it should be seen as applying only to a limited part, if at all, of its doctrines and experiences from which they derive. This is so since mystical writings contain a substantial amount of detailed description of experience, much of it highly sophisticated even by modern psychological and scientific standards. Indeed, any claims to ineffability that may be left thereafter are, as Peter Moore in an article "Mystical Experience, Mystical Doctrine, Mystical Technique" puts it, partly attributable to emotional ineffability, whereby there is an actual frustrating limitation on sharing or communicating some deeply felt and profoundly valued experience (sometimes trivial) for instance, gratitude and love (in Katz ibid., 102). They could also be "causal" in which the mystic states that he cannot understand whence or how some experience has arisen, or what the underlying conditions of this experience are. However, this kind of ineffability does not necessarily affect the mystic's ability to describe the actual contents of his experiences.

Moore further argues that even those types of higher experiences that mystics speak of as being indescribable are not necessarily beyond the possibility of communication because, "... if mystics are using language at all responsibly, then what they say about the indescribable types or aspects of experience may at least serve to define them in relation to a known class of experience." (Ibid., 105). We might also here add that there is, in mysticism, the implied notion that experiencing what is described first-hand is far better than even the best possible description, especially where the nature of what is described is very much unlike what one is accustomed to. Venkatesananda comments in this respect that a description of the reality encountered by mystics and the reality itself bear the same relation as eating a piece of paper with the word "bread" written on it and the actual eating of bread (**The Song of God**[20], 1989:47). Moore, however, is more realistic and believes that the relationship between a mystic and a non-mystic is not the same as that between a normal sighted person and a blind person, but rather between a normal sighted person and one with some glimmering of light (ibid.). The point here is that mystics do not belong to a class of persons cut off from non-mystics. Mystics were once non-mystics and therefore they must be acutely aware of both the limitations and possibilities of their attempts to communicate their experiences with non-mystics. Whatever it is that mystics "perceive" such experiences cannot be totally ineffable. We agree with Cupid's assertion that ineffability is a self-contradictory notion since no experience exists apart from language (1998, 11).

Further to the above, paradox has been one of the knotted points in theological and philosophical discussions on religion. Mystical accounts are no exception it being

[20]This is the English rendering for the **Bhagavat-Gita** and includes a commentary by him.

argued that they ever elude rational conceptualisation since one feature of mystical language is the use of paradox. However Moore believes that, "In mysticism as in other contexts, the use of paradox appears to be an example not of the failure of language but of its effective application. Indeed, the term "paradox" in strict English usage means 'a contradictory statement not literally intended.' " (Op cit., 107). Hence, a mystic's use of paradox, he argues, is not literally intended unless the mystic asserts as much independently of the paradox itself. We consider one such case.

In the **Zohar: the Book of Splendor**[21] there is an explanation concerning an apparent paradox in the book of Deuteronomy 4:24, "For the LORD *your* God is a consuming fire...."(NIV, emphasis ours), and Deut. 4:4, "But ye that cleave to the Lord *our* God are alive every one of you to this day. " The paradox here is the reference to the same God as a consuming fire and of cleaving to such a God with no ill effect. In the first passage, Moses alludes to "your God," who, apparently, consumes. However, in the second passage, reference is to "our God," an apparent reference to the superior light in which Moses stood, which does not consume or demolish. In other words, Moses considers *his* (conception) of God to be superior to *their* (conception) of God. The difference then, we opine, is one of perception rather than the actual nature of God. This becomes clearer when we consider the fact that Moses was a mystic, whilst the people he was talking to were not. We therefore agree with Moore that mystical writings so often seem obscure because they have not been analysed in relation to doctrine, practices, and institutions which form a wider frame of reference. This is to say that, just as is the case within other areas, a better understanding of mystical accounts can be achieved if it is taken

[21]A book on Jewish mysticism.

into account the background in which they were made, that is, the person making them, his audience, the culture and time in history, and so on.

Yet there is a problem in relation to this. As Katz argues, that there can be no pure (unmediated) experiences. This is to say that what is perceived by mystics is mediated or influenced by the culture he comes from. Thus, he notes of a Hindu mystic that his experience of *Brahman*[22] is not unmediated; rather, it is a pre-formed, anticipated Hindu experience of *Brahman*. A mystic hence brings into his experience a set of structured and limiting parameters of what the experience will be, and rules out in advance what is "inexperienceable" in his particular mystical tradition (op cit., 26).

He hence dismisses the uni-directional account of mysticism, in which (mystical) experience shapes belief. He holds that the relation should be bi-directional, since belief also shapes experience. He adduces as evidence the fact that mystics from different eras, cultural, religious, social and intellectual backgrounds give differing accounts of their experiences. Thus, he writes, "...the monism of Shankara is not the same as that of Spinoza or Eckhart; and that the theism of the **Bhagavat Gita** or Ramanuja is markedly different from that of Theresa of Avila, Isaac Luria, or Al Hallaj (ibid., 32).

Yet, Katz does miss a point or two. In pages 36 to 39, he gives the example of a Buddhist mystic who follows a certain regiment - the four noble truths, the eight-fold path, etc., so as to acquire a mystical experience - insisting his earlier argument that what doctrine the regiment entails spells out what manner of mystical experience the

[22] The ultimate reality in Hinduism.

mystic will have. Sticking to his example, we observe the following in relation to his argument. First is that history does not seem to bear him out very well. Buddhism grew out of the Hindu tradition and it is difficult to see why the Buddhist account of mysticism should significantly differ from the Hindu if mystical apprehensions were primarily a function of prior conditioning (by culture and religion). What, it may be asked, made Buddha have a mystical apprehensions radically different from those of orthodox Hinduism yet he was himself born and raised a Hindu? It most certainly was not Buddhism for Buddhism did not then exist. His experience gave rise to Buddhism and not the vice versa, as Katz would have us believe. Still this does not help us explain why mystical experiences do differ; it only shows Katz's criteria to be wrong.

On page 65 of the same book, Katz makes the critical remark that no mystical tradition is superior to the other. This, is inconsistent, both from the point of view of his account, and from mystical accounts on the same issue. By predicating mystical experience to factors in one's environment (mainly culture and its subset religion), one would expect a more advanced culture or religion to give rise to an advanced or more sophisticated mystical experience. However, Katz does not allow this; mystical experiences from different cultures and eras are treated as the same. Whereas we do recognise the fact that no culture or tradition is normatively better than the other, a more advanced culture, we believe, will be expected to have a more enlightened outlook, just as it is bound to have a more advanced technology. However, in his analysis Katz completely ignores the mystical doctrine that there are levels of sophistication in mystical experiences. As an example Yatiswaranarda (op cit. 28-32; 54-72), argues that the mystic (or even indeed a mystical tradition) advances by degrees, experiences higher and higher forms of

mystical experiences, until finally, he reaches the apex. By ignoring this view, Katz does not demonstrate how, if at all, such a doctrine is false. This doctrine can equally explain why mystical experiences differ, not only between mystical traditions (geographically and chronologically), but also amongst individuals within the same mystical tradition. Thus, whereas it is possible that mystical experiences are mediated, it does not seem to be the case that mediation plays a determinant role in what a mystic perceives.

Additionally, Moore, while conceding that a mystic's beliefs and expectations are likely to affect the nature of his experience and his report of his experience nevertheless argues that this constitutes no more a problem in mysticism than it does any form of experience (op cit., 107). This is a view also expressed by Everlyn Underhill who argues that mystics usually express their experiences in terms most usually founded upon the formal creed he accepts. Hence, St. Teresa interprets her ecstatic experiences in terms that are strictly Catholic, Boehme in Lutheral, Philo and the Kabalists in orthodox Judaism, and Plotinus the doctrines of paganism. Nonetheless, she argues that the attempt to limit mystical experiences to the formulae of one religious system is futile. She believes that the substance of "perception" must always be distinguished from the accidents under which it is perceived (and therefore described) for it has an absolute and not a denominational importance (1990, 526-527). Katz does not seem to have ignored this possibility.

4.5 RELIABILITY OF MYSTICAL EXPERIENCES

Katz has also objected that there are major problems involved in trying to interpret and verify mystical claims. He argues that there are no independent grounds upon which

Granted both principles, the problem of determining reliability in a given case reduces to the problem of determining whether the relevant apprehension was produced by God. Two such criteria are common. The first, the *scripture-dogma* test asserts that the revelations contained in apprehensions produced by God do not conflict with propositions affirmed by scripture or with propositions included among the dogmas, doctrines, and teachings of the Church (ibid., 219). The second, the *spiritual effects* test, asserts that the visions produce in the soul qualities such as quietude, illumination, delight, purity, love humility, and an elevation and inclination toward God. Visions produced by Satan or his agents are said to have contrary effects. We note in connection with these tests that the first is theoretical, whilst the second is practical in nature.

However, the use of such criteria raises some difficulties. As MacIntyre has rightly argued,

> We could never know from such experiences that they had the character of messages from the divine, unless we possess a prior knowledge of the divine and the way messages from it are to be identified. The decisive evidence for the divine would be anterior to the experience and not derived from it, whereas what we are concerned with here is how far the experience itself can provide such evidence (ibid., 221).

The error of circularity is suggested above. This is because the criteria the believer invokes to distinguish true from false visions are theological doctrines already believed in (scripture-dogma test). To remedy this circularity, it is suggested that: 1) An apprehension A can serve as a source of evidence for "God exists" only if (i) there is reason R to think that A is a reliable source of information and (ii) R does not entail

"God exists". Put in general terms: an apprehension A can serve as a source of evidence for a doctrine D only if: (i) there is reason to think that A is a reliable source of information, and (ii) R does not entail D (ibid., 222).

Pike however is uncomfortable with the second modification. He argues that there is a provision in mystical tradition for a true revelation to be contained in an unreliable apprehension, as is the case in apprehensions from non-divine sources. He also notes that MacIntyre's second modification does not refer to the source of the apprehension, contrary to mystical tradition, which holds that an apprehension is reliable if and only if it is from God. Pike hence suggests that case (2) must be modified and MacIntyre's criticism suitably adjusted to reflect the reality of mystical tradition.

It should also be noted that under Pike's schemata, assertions comparing mystical experiences to drugs induced ones cannot be strictly refuted since the conditionality is that the experiences be positive. There is the tacit assumption that mystical experiences can only be from God or from the Devil, the former being positive, and the late negative. He also, as noted, leaves us in the dark about the reliability of mystical experiences.

C. B Martin in an article "Seeing God" suggests elements of unverifiability and circularity in mystical accounts. He argues that if statements like "knowing colour" and "having direct experience of God" are made synonymous with "having colour sensations" and " having certain religious experiences" respectively; it is true that a blind man cannot "know colour" nor a non-religious man " have direct experience of

God" because it has previously been legislated that one cannot know their meaning without having the relevant experiences (in Cahn op cit:, 243). Such statements, he maintained, are merely psychological, not existential, as they do not admit to a society of checks and balances. He compares them to what he calls low-claim assertions - such as "I seem to see a piece of paper" - which need no further corroboration and can never be shown to be mistaken. Thus, unlike the existential claim "I see a chair," the low assertion claim makes no claim about the existence of anything, requires no tests or testimony of others, and cannot be shown to be otherwise.

Further, he maintains that low-claim statements presuppose prior knowledge of what one claims to perceive. Hence to assert, "I seem to be listening to a choir" presupposes I already know what it is like to be listening to a choir. However there is an important difference between such a claim and the claim "I seem to have a direct experience of God." It is that in the former, one's hearers are supposed to know what this entails but in the later, all normal people (non-mystics) are not expected to (and indeed do not) have such knowledge. Hence, though it is possible to teach a society of people who have no chairs, what a chair is like by drawing pictures, giving descriptions, gestures, and so on; even if one is not able to show them a chair directly, they will get a good idea nonetheless. But when it comes to an emotion like sadness, no amount of description, definition, demonstration, comparison, etc., suffices to enable the person learn what it is like to be sad. In this latter sense, one who has never been sad cannot make the assertion, "I seem to be sad" just as a person who has never experienced God can assert "I seem to have a direct experience of God." This is Martin's contention.

However, to "seem to have a direct experience of God" has been taken to be a unique and incommunicable experience. This is the sense in which intuition is commonly taken to mean. But, to go back to the example on sadness, one can hope to evoke the emotion in a learner if it is taken that sadness is part of human nature like the capacity to see light or hear sound. Taken this way, such experiences become possible to any normal person and hence verifiable/falsifiable and their learning are not circular as suggested. Additionally, what to name them is a purely linguistic matter.

It can further be noted that it is possible for professors of aesthetics and art critics, for instance, to help us have a knowledge of beauty and a finer appreciation of beautiful things. This despite the fact that they may have no sense of the beautiful in that the professor or critic has never been confronted with the experience of seeing beautiful things (there are no signs that the professor or art critic has never been stirred by any work of art). Hence, it is possible that someone can talk and increase our sense of knowing God without him ever having had the experience of knowing God. Martin's argument seems to rule out such a possibility.

We now proceed to examine whether mystical experiences can be relied upon. According to Richard Swinburne in an article "The Evidential Value of Religious Experience," a religious experience is one whereby there seems to the subject (S) to be an awareness or perception of God, or some other supernatural reality (x). He argues that S perceives x if and only if the experience of it seems to S that x is present was caused by x. S has an experience of God if and only if it is seeming to him that God is present is indeed caused by God (in Peacocke 1981, 183). It should be observed that

Swinburne is not using the word "seem" in the sense that Martin uses it above. It does not carry the sense of "it appears like" which carries a serious subjective implication, but the sense of "likely," "probable," or some other such terms.

It is often argued that an experience is evidence for nothing beyond itself, and that therefore religious experience has no evidential value. Yet this is never the attitude adopted with regard to other experiences in general: seeing a table is deemed to be good evidence for supposing that there is a table. Hence, as a general rule, and barring special conditions, if it seems to a subject that an object **x** is present, then probably **x** is present; what one seems to perceive is probably there. In other words, how things seem to be is a good ground for belief on how things are. Hence, " it would follow that, in the absence of special considerations, all religious experience ought to be taken by their subjects as genuine, and hence as substantial ground for belief in the existence of their apparent object...." (ibid., 186). He calls this the Principle of Credulity.

It will be noted that even if it strongly seems that one is talking to God or gazing at ultimate reality, that by itself is not a sufficient reason for supposing that one is talking to or gazing at such a reality. Such an experience can as well be properly described in more mundane ways such as hearing of certain noises which one mistakenly interprets as the voice of God (but which one has no good reason for believing unless further evidence is produced). However, if such experiences could be shown to be true, it would then follow that mystical experiences are not a matter of interpretation but rather of true objects of experience. We are, in addition, justified in holding many perceptual beliefs about objects having "sensible" characteristics though we may not be able to sufficiently

describe them. For instance, one would be hard pressed to say what is it about a certain voice that makes her his wife's voice. A description of "sensible" characteristics that fit her voice could apply to thousands of other women. Hence, the fact that one can recognise does not entail the fact that that one can describe, or knows what the features are by which he recognises. Hence, what is it about a voice that makes me believe it is my wife's, or what it is about the taste of a liquid that makes me believe that it is tea? This fact can also be true of mystical experience: inability to describe does not necessarily imply inability to recognise.

Swinburne considers four special considerations that could possibly defeat perceptual claims in the mystical sense as already defined. The first two show that the apparent perception was of a kind with others which proved in the past not to be genuine perceptions. The third and fourth considerations are concerned with particular perceptual claims which do not involve inductive inference from the failure of similar claims. They boil down to: since to perceive x is to have one's experience caused by x, one can challenge a perceptual claim by showing that very probably x was not there or that x probably did not cause the experience. We consider them here below one at a time.

In the first instance, it may be shown that the apparent perception was made under conditions or by a subject found in the past to be unreliable. Thus, one may show that S's perceptual claims are generally false, or that perceptual claims are generally false when made under the influence of LSD (ibid., 192). This first challenge that claims to defeat mystical claims is hardly generally available as most mystical experiences are had

by people who normally make reliable perceptual claims, and have not taken drugs.

On the second instance, one may also show that the perceptual claim was to have perceived an object of a certain kind in circumstances where similar perceptual claims have proved false. Thus, if S claims to have read ordinary sized print at a distance of 100 meters, we can test him on a number of special occasions and see if he reports correctly what is written at that distance; if he does not we have good inductive evidence that the original claims were false (ibid., 191). In religious terms, this would amount to showing that the religious perceptual claims were unreliable. If there was good proof of the non-existence of God or anything similar, that could be done. Swinburne rightly maintains that the onus of proof here is with the atheist; if he cannot make his case, the claim of mystical experience stands. In other words it is upon the atheist to show that God probably does not exist in order to defeat a mystical perceptual claim since one cannot observe, but only imagine that which does not exist. He also notes that the principle in (conventional) religion "what is different is contrary" does not hold water. Different names in different cultures can be used to describe God (see Exodus 6:2 and Acts 17:23). Thus if a Jew has a mystical experience and a Hindu similarly has one, the two experiences would conflict only if having such an experience commits one to a whole theology. This generally is not the case. We have already argued that mystics put little emphasis on sectarianism and that prior conditioning (one's cultural background) is not a necessary factor in determining the kind of mystical experience one has. The role that cultural conditioning plays is in the choice of terms and expressions used to describe the kind of experiences one has. Such choices can on occasion appear to support the above claim on cultural conditioning but actually do not. The example of

Ramakrishna is an example of the truth of this (see Gupta, *passim*) and a host of other mystics who have had mystical experiences of beyond the pale of the religion they were raised in. Ramakrishna (raised a Hindu and illiterate) is a good example. He is said to have had mystical experiences consistent with the Jewish, Christian, Buddhist, Jain, and other religious traditions. His illiteracy makes it all the more unlikely that he had external influences and the fact that he died at around 1886 when mass communication was not a reality

The third consideration which can defeat a claim to have perceived x involves showing that very probably x was not there. Very often we perceive what we take to be *a priori* improbable but we nonetheless judge our perception right. Thus, to paraphrase Swinburne's example, one may, while walking down Moi Avenue, seem to them that they see Bill Clinton. The odds are that Bill Clinton is in Washington and even if in Kenya, he is very unlikely to be walking on the opposite side of Moi Avenue. Nonetheless, experience suffices to outweigh this background evidence. As he notes, we would indeed be imprisoned within the circle of our beliefs if experience did not normally have this force. However, background or supplementary evidence can make it very improbable that x is present. Thus, if we substitute Jomo Kenyatta for Clinton in the above example, it is very improbable that he would be walking on the opposite side of Moi Avenue. Experience by itself does not suffice to push this in to the category of the probable.

Swinburne notes that there are various ways in which it can be shown that very probably x was not present as observed. One, as is the case above, is where x does not exist, x

was at some other place at the time in question, or otherwise show that x was not at the place it was claimed to be by showing that other observers who were rightly positioned, with the right sense organs, on the look out for x, and who knew x did not observe x. The more the observers the better. If they see x, then x was most probably there (ibid., 191). In religious terms, the third challenge would consist in a demonstration that God was very probably not present to be perceived; and so the subject could not have perceived him. However, if there is a God, he is everywhere. He is only not present if he does not exist. Once again to use this challenge entails showing that it is very improbable God does not exist and the onus is with the atheist. It does not avail to show that some people do not have religious experiences, for they may be spiritually "blind." Only if it could be shown that all persons with certain endowments and would perceive God, if God were there to be perceived, would the failure of such persons to perceive God count against His existence (ibid., 193-94). This as we have argued is generally, if at all, never the case since it is held that mystical experiences are natural and can be had by anyone who follows a prescribed course of action.

The claim to have perceived God may be challenged, in the fourth instance, on the grounds that whether or not x was there, x was not the cause of the experience of it seeming to someone that x was there. This would involve producing an explanation of why it seemed to me x was there, which does not involve x at any stage. To paraphrase Swinburne's example once more, it may be shown to me an actor dressed as Clinton or Kenyatta and who walked on the opposite side of Moi Avenue and therefore my experience of seeming to see either Kenyatta or Clinton was caused by the actor and therefore I had no reason to believe I saw Kenyatta or Clinton (ibid., 192). In religious

terms this would consist in showing that the experience had a cause other than God. It is not sufficient to show that a person's upbringing or his taking of drugs were necessary for them to have the experience, for these may have precisely have had the effect of allowing him to perceive what was there rather than making him perceive what was not there. One has to show that the object (God, ultimate reality etc.) was not in any way a causal factor in making the subject have the religious experience.

Swinburne notes that this is an awkward challenge to apply when dealing with the purported existence of God. There are two ways in which God can cause the experience: by intervening in the operation of natural laws, or by bringing about the operation of the laws as a result of which I have the experience. If the latter is suggested, by itself, that does not show that God was not the cause just as one cannot show that it appearing to me there is a table has a perfectly ordinary cause in processes in my optic nerves. What is at stake is whether the table caused the processes. A demonstration that God was not responsible for the natural processes which caused me to have the mystical experience can only be attained by demonstrating that here is no God - for if he existed - as defined, he is responsible for the operations of natural law. However, lesser supernatural beings, who do not control the operation of natural laws can be easily shown not to be he cause of such experiences (ibid., 194). As already argued, the notion of the interference with the laws of nature is difficult to uphold.

4.6 CONCLUSION

It has been argued that mysticism, far from being a spontaneous occurrence, is the precipitate of a rigorous and systematic routine that almost assures the experience to the

aspirant. As such mystical experiences are natural and not special modes of knowing as it is claimed of say, intuition. We have laboured to show why such perceptual claims are not and should not be considered as unreal, and if real, misleading. The latter can be the case if they are similar to drugs induced state, which we have shown they are not.

The onus of the current chapter, with respect to mystical experiences of God, is that unless there is a demonstration that very probably God does not exist, those who have mystical experiences purportedly of God ought to believe them genuine. Thus, it follows that mystical perceptions ought to be taken at their face value in the absence of positive reason challenging them. It should therefore not be the case that perceptual claims are guilty until proven innocent- this, even in the general sense, would give no knowledge at all. Mystical perceptual claims, therefore, deserve to be taken as seriously as perceptual claims of other kinds.

CHAPTER FIVE

SUMMARY AND CONCLUSION OF THESIS.

In many cultures of the world, religion and philosophy have harmoniously existed and in Oriental societies, the two could hardly be separated. Indeed, there was a time when religion was at the centre of all of man's activities including the intellectual. Until relatively recently philosophy was in the West held to be the handmaid of theology, in which role it was supposed to defend and augment doctrinal truth.

The onset of the Enlightenment in the West showed that philosophy could be a double-edged sword; it could, with similar efficiency, be employed against religion. The rise of empiricism, at about the same time, heralded a sudden and drastic conflict between doctrine, on the one hand, and *truth* as discerned by science on the other. Unlike the rivalry between religion and philosophy that tended to be abstract and mostly inconclusive, that between it and science elevated it to a level where religion felt threatened in a real, more apparent manner. Many scientific findings in conflict with religious doctrines could simply not be argued away or shown to be otherwise outside the realm of science.

It is on the strength of this that this thesis began by arguing that religion conceived as faith or myth offers little, if any, convincing reasons why its doctrines should be believed, even if true. There is no clear or convincing appeal to reason, or any other convincing mode that would give credence to such claims. We have argued that in its

extreme versions, reason is denied altogether and even in its more moderate forms, reason is applied selectively. This betrays lack of concern for truth other than what is already believed in. Hick (op cit 1977, 42) is right, therefore, in observing that the definition of faith given by theologians and used by scholars in the discussion of religion is seriously inadequate for the task.

Yet, and in spite (or, more likely, because) of the manifest shortcomings of faith and myth as conceptions to religion, attempts were made to compare, if not harmonise them with science. Perhaps there was a genuine concern or belief that the two could be reconciled, that they could somehow accommodate each other, that this line of thought developed. Nevertheless, it is still doubtful whether this was not an admission by conventional religion that it could not offer its own proof and had to rely on science to accomplish this goal.

However, as we have argued, science hardly has anything to gain from such an association and it is religion that stands to gain the most. Nevertheless, such an effort is bound to fail, as there is no scriptural sanction on how theology can go about borrowing from science. It has also been argued that religion would not stand to benefit from associating with science since the later is ever changing in the light of new evidence. However, religion, in the sense we are discussing, is very resistant to change on doctrinal matters. Hence, to profitably and honestly carry out such associations, religion should be prepared to change doctrine in the light of scientific changes, which is doubtful it is willing to do. Otherwise, it should resist altogether from seeking scientific "rubber-stamping" of its doctrines; science cannot be the handmaid of theology. It has

additionally been observed that any possible outcome of this endeavour cannot be termed a scientific principle nor a religious one. Indeed, if religion were vindicated by science, it is plausible to argue that religious assertions could not be possibly known prior to the advent of science approximately three hundred years ago. This is however discordant with the religious view, where "knowledge" of religious principles is perceived to be stronger the more into antiquity one goes. The bottom line here is that religion has to offer its own proof for its doctrines. Conventional religion fails in almost all respects to do this.

We have argued too that in spite of its numerous successes, science has a scope and a limit. It is not an omnipotent "goddess" that solves each and every problem. Part of the reason why religion sought to associate with science could be due to this assumption. The seemingly middle ground between science and religion – the miraculous - does not offer much hope either that the two can co-operate meaningfully. Even at this level, the fundamental differences in methods, concepts, and the nature of reality each seems to address precludes the possibility of any meaningful exchange or comparison. We have argued that any thing demonstrable by science cannot at the same time be termed miraculous: miracles are supposedly a violation, suspension or transcendence of the laws of the nature, yet science operates strictly within the realms of natural laws. As the adage goes: the business of religion is to tell us how to go to heaven, whilst the business of science is to tell us how the heavens go.

Even quantum physics does not help in this respect either. Indeed, it can be quite opposed to religion and more so to mysticism, which it supposedly closely resembles.

This is because by presenting a picture of reality that is essentially probabilistic, it goes against the grain of religious thought which is essentially deterministic. Einstein words to the effect that, "God does not play dice" is indicative of the religious attitude. By showing that it is in principle impossible to know certain occurrences (such as the location and velocity of a sub atomic particle at a given point in time) simultaneously and accurately, quantum mechanics seems to negate the concept of the omniscience of God[23], which is at the heart of every religious sentiment.

Nevertheless, if at all science and religion can interact, the proper domain in which this dialogue could be carried out would be within the purview of philosophy. Philosophy alone has the requisite resources to meaningfully weave the interweaving or connecting lines of similarity between the whole range of human experiences, of which science and religion are component parts. As such, religion by itself is as ill equipped for this task, as is science. It is our persuasion that neither a religious nor a scientific principle, can weave a synoptic view of the whole of reality.

This work had set out to investigate independent or internal evidence that religion may offer to validate its claims without relying on science and its vicissitudes; conventional religion and its uncertainties. For this task, mysticism was chosen and critically analysed. It has been argued that mysticism constitutes a method, which when applied consistently, yields definite religious experiences to anyone adopting its techniques. As such it is a departure from the seemingly unverifiable since unrepeatable religious

[23] As an omniscient God would deal with certainties and not probabilities at all levels of existence, as Einstein's adage above tries to show.

experience as commonly understood. As indicated, claims to religious knowledge by revelation, intuition, and so on do not amount to much as their sources and epistemic value are suspect.

On the contrary, mystical experiences have been shown to be of a kind that can be relied upon as providing affirmative and independent or internal support for their claims. It is not the case, as some have argued, that that such experiences are as imaginary, useless and misleading as drug induced ones nor is it the case that they cannot be corroborated as they are unique and unrepeatable. On the contrary, they do admit to a society of checks and balances, as is the case with other trustworthy sources of knowledge.

It is a recommendation of this work that religious convictions be proportionate to the evidence at hand. Religious beliefs should not be exempt, as they usually are, from critical scrutiny as to their epistemic value or worthiness, lest the grounds on which they rest remain precariously shaky. Appeal to man's highest endowment – reason – should play a prominent, though not exclusive role in making informed judgements on such matters. Experience, should supplement it. A combination of the two is a sufficient safeguard against deception - from within or from without. It is only in this manner that religion can shake off the dubious distinction of subjectivity and irrationality that have often, though not mistakenly, been used to describe it. It is only then that the events that happened in Kanungu[24], Uganda for instance, could be put to an effective halt, as fanaticism and dogmatism are replaced by the order and harmony implied by the

[24] Apparently a thousand members of a cult were killed by their leaders, who had taken possessions of all their wealth, under the impression that the world would end at the beginning of the millennium.

integration of (critical) reason and (controlled) experience. This would make mysticism a mode and standard by which individuals can base and assess their religious beliefs. Beliefs in, this case, would be proportionate to the evidence at hand, as is the case everywhere.

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