THE INVERSION THEORY OF TRUTH
Part 1: Avoiding the Trap of Thinking Knowledge can be True
Part 2: Investigating the Consequences for Philosophy, Religion, Humanism
and our Place in the World

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INTRODUCTION

It isn’t hard to do. Scientists tell us that all the people in the world are descendants of a group of only a few thousand people that lived in Africa less than 100,000 years ago, so it is possible to imagine that we could all live as one. Now, twenty years into the third millennium, there are eight billion more people and counting. Even so, experts insist that the earth’s resources are still sufficient to feed every one of us, and to provide each child with an opportunity to prosper, if it wasn’t for colossal issues of mismanagement. These issues are so pervasive that they can’t be fairly attributed to the misguided work of individuals. On the contrary, it seems that we must blame our very human nature; that it is still mired in the consciousness of our primitive ancestors. It seems well suited for internecine tribal conflict, but not for the co-operative husbandry of the global ecology we have overrun.

This state of affairs could be shrugged off as merely unfortunate were it not for its inescapable dynamic. Within the next few decades the population of the earth will increase by 50%, while the amount of resources, including drinking water, will shrink. Mankind will be faced with problems of unprecedented gravity. Although people can be remarkably adept at solving problems, and there is, in theory, a brief window of time in which to solve these problems peacefully, time is running out. Unfortunately, headlines of every daily newspaper trumpet the extravagance of human folly. It is easy to despair of the future that it will involve rather a lot of calamity, catastrophe, and cataclysm. For starters, we simply can’t afford any longer to squander our resources on military spending. President Eisenhower’s observation that every dollar spent on weapons is bread stolen from the mouths of the hungry becomes increasingly important each year. There is only one thing more disastrous than preparing for war, and that is fighting it. The immediate casualties are bad enough, but the consumption of energy, the pollution, the destruction of infrastructure, and the disruption of another generation’s education are all costs that Planet Earth can no longer afford. Every military action of this century will seriously short-change the future of our children. There can be no moral justification for starting a war, and serious consideration should be given to ending them unilaterally, if necessary.

What can we do? Scientists are busy improving crop yields, discovering new drugs, and learning how to consume energy without contributing so much to global climate change. This won’t save our future unless politicians and religious leaders listen to the scientists. The answer is to confront the root of the problem deep within our human nature, to examine the issues that perplex it, and to force it to acknowledge that modern problems need new solutions. Resolving the so-called “riddles of our existence”, using logic and reasoning, is not the hardest part of this process. Resolution is no good without a response. The solution to the human dilemma must be broadcast to the broadest possible audience by as many influential thinkers as possible. Even scholarly articles and best selling books seem impotent as the battlefield in the war over public opinion has moved on to Facebook and fake news.

The needless extermination of over a billion people that we can expect if the coming century goes wrong will not be caused by technology, nor will technology be able to stop it. The 21st century holocaust will be driven by mistaken ideas, much like the 20th century one was. The problems that we will need to solve in order to survive cannot be solved if mistaken ideas underlie the attempt. Foremost among these ideas is the notion that there is an Absolutely True God who created us in His image, and that He left us a Holy Book detailing how we are to repay Him for His ongoing concerns about our destiny. While this concept could provide useful
stability in the long-ago days when human populations were isolated from one another, it is quite disastrous now, when populations overlap, and their gods are in irreconcilable disagreement. By implication, your neighbor, in worshiping B, is perceived to insult and deny all who believe in A, and human nature is still poorly tolerant of such an insult. Religious leaders claim that only an Absolute God, and not science, can provide the moral framework in which to solve problems faced by society. The fallacy of that assumption can be demonstrated clearly by traveling to a different part of the world, where one will observe that the religion that made one a “pillar of society” at home now makes one a criminal living outside the law of God. But meanwhile, a scientist can travel all around the world to meet other scientists who will all agree on how to define the laws of physics, and how to use them. It is imperative for our survival that the factions of clerics with their fractious codes of morality all step out of the way of the community of scientists and social reformers, and I mean especially those clerics whose idea of morality is to suppress each and every new idea.

The notions of God and his morality are called Absolute ideas because they are based on a concept of truth that can be known with a certainty which is absolute, and therefore good. The problem with absolute truth is that it brooks no disagreement. For people beholden to absolutely true ideas, any suggestion to the contrary is not only a threat to the fabric of their universe, but is also a denial of absolute Good, and is therefore Evil. That is why the belief that truth can be absolute, with its associated development into the belief that God is absolutely true, is so extraordinarily inflammatory and provocative of violence between people who hold opposing truths. So it is necessary to take apart the whole question of whether truth can be known with certainty. Chapter 1 is a philosophical study of that question. It is discovered that Truth has never been the subjectively certain knowledge of the world around us that it has always been thought of. Rejecting the Correspondence Theory of Truth, I propose, instead, what I call the Inversion Theory, and explore its ramifications. Along the way, new discoveries are made concerning the nature of truth and falsehood, and the fact that knowledge is necessarily uncertain is proved through logic. A philosophical requirement for Faith is affirmed, that being a Humanist faith in the power of our individual and collective knowledge to solve problems. The philosophy of scientific discovery is analysed, and the worlds of knowledge are arrayed in accordance with the ideas of Sir Karl Popper. As an exercise to demonstrate the power of inverting the conventional idea of truth, I used it to tackle Alfred Tarski’s truth definition in object- and meta-languages, exposing and correcting a flaw in his logic. This enabled me to solve the self-referential Paradox of the Liar based on the distinction between truth and best knowledge. The development of the Inversion theory of Truth predicts that the works of historical famous philosophers will be incorrect due to flawed premises as to the nature of truth and knowledge. In Chapter 2, these flaws are discovered and it is shown that the resulting self-contradictions can be resolved by treating Truth as uncertain. Because all knowledge of the objective world is uncertain, by extension, knowledge of God is uncertain. This is the starting point from which one can strive to defuse the hatred between people with opposing views of the truth.

In western culture, it is common to instill in children the belief that a jolly elf will reward them once a year for their good behavior, by the improbable means of climbing down the chimney, and flying around the world in a deer-drawn sleigh. Simultaneously, many of these children receive religious indoctrination. They are persuaded to believe that there is an Absolute God who will reward them after death for a lifetime of obedience. Strangely, although almost all children outgrow their belief in Santa, a large multitude persist throughout life in their equally improbable belief in the Absolute God. Much of the reason for this, I suspect, is that no alternative has been developed and popularized which can fulfill the same need for reward.

The majority of religions win adherents by offering them rewards that are literally out of
this world. Chief among these is an after-life where the true believers will go to Heaven, and non-believers, together with other miscreants, will be punished. In order to be sure to live forever, followers of different holy prophets will do things to ruin the lives of perfect strangers, be it by voting against funds for family planning or be it by volunteering for a suicide bombing. Despite the Faustian nature of the bargain being struck (Who did the 9/11 hijackers really make a deal with, God or Satan?), believers are always certain that the prophet’s promise will be kept.

Preachers win converts easily by promising the ultimate reward. Imagine a preacher who promised his followers they would all win the $10 million lottery within 5 years. Who would not wish to believe in the teachings of such a wonderful man? Why not go out and get $2 or $3 million in debt, since we will be sure to recoup the money soon? It is my job to be the unpopular teacher who says “I wouldn’t count on winning that lottery if I was you”. The message may not be as joyful, but you can see the importance of keeping the message real.

In order to wean people away from destructive Absolutism, it will be necessary to give them something that is better than the certainty of eternal life. This is a daunting challenge, although other philosophers, with phrases like “God is dead”, and “Religion is the opium of the people”, have had some success. The philosophy developed in these pages is a Humanist philosophy, with emphasis on the ability of each of us as individuals, and as members of a collective Humankind, to solve the problems of our existence relying only on logic and reason. Because it needs a name, I call it Personal Humanism. It does not promise Life after Death, although it does point out why the credibility, morality and utility of that concept cannot be maintained. What Personal Humanism offers in place of eternity is reality: the knowledge that we are completely free, that we are in control of our own destinies, that we alone bear full responsibility. Our achievements will live on after us, and our community is an extension of our interaction with it. More importantly, it offers the guarantee, not possible through religious belief, that existence is real and not a solipsism. It is not a trade-off that will satisfy everyone, but it may introduce many to a more thoughtful and tolerant place.

For a philosophy to be valuable, it must stand up to an examination of its moral and ethical implications. It must be possible to demonstrate that people who accept the ideas will lead good, constructive and responsible lives, and that societies governed by its precepts will be orderly and humane. The later chapters of this book examine in depth the way we interact and the way we are governed. First of all, there can be no meaningful discussion of ethics if people’s behavior is either predetermined or randomly instigated. This obvious fact presents a problem which religion is completely incapable of solving, and neither do I know of any other philosopher who has completely solved this riddle. In this chapter, I demonstrate how we can know that Free Will is genuine, within our conscious volition, and yet impossible to be predestined. In this way we can solve the Problem of Theodicy concerning Good and Evil. An ontology of Human Rights, rights for animals, and the differences between Legitimate and Illegitimate behavior is developed into a theory of Personal Humanism. Many problems associated with the Culture Wars are actually found to be caused by absolutist assumptions, and Chapter 3 shows how humanistic relationships would solve them to the benefit of everybody. In Chapter 4, altruism, conflict and the genetic inheritance that binds us into cooperative societies is explored, as well as further exploration of personality development. The “hard problem” of consciousness is considered in the context of entropy. This leads to a discussion of the modes of economic theory that can best provide for the Utilitarian dream of the greatest happiness for the greatest number. The “Science of Political Economy”, by Henry George, is brought up to date and it is shown how 20th century theories are destined to fail from failure to take George’s ideas into account. This can be used to support the Open Society of Sir Karl Popper. Nevertheless, the 21st century imperative is one of limits to growth as we stretch the bounds of sustainability on
our planet. Climate change and associated migrations will destroy much of which we take for
granted today, and it is unlikely that currently accepted societal mores (conventional morality)
will successfully cope. A new political economy will be needed, and I provide a George-based
economy for the future society in which robots and computers have been trained to perform all
human labor. By the time the last page has been turned, this book will have covered all the bases
of a Grand philosophy, from a justification of its underlying epistemology to a socio-economic
type designed to bring opportunity, justice and prosperity to all who survive. Imagine.

The chapters that follow will discredit some cherished ideas with arguments that are
original, and to which no counter-arguments have yet been formulated. Perhaps, in some sense,
the arguments have always been there, like an undiscovered continent, or a mathematical proof,
waiting for someone to set them down. Religion is based on Faith, not knowledge. Faith must be
Uncertain; it cannot be Absolute or it would be minus its most critical ingredient: after all, God
could come down and manifest Himself to all if He wanted to. Instead, one has to Hope that
one’s Faith will be vindicated, and to show Charity to those Faith lies elsewhere. Religious
adherents could, with gratitude, regard the argument from solipsism as a new challenge for their
Faith to overcome, and could then be satisfied that their Faith has overcome all possible
arguments. It is not a belief in God that I try to show is wrong, but a belief in an Absolute God,
or, indeed, in an Absolute anything else, such as the Zeitgeist, that motivated the Communist
regimes of the Soviet Union, China and the Khmer Rouge. Neither do I advocate an Absolute
atheism, but rather a Humanism based on our talent for solving problems using falsifiable
knowledge. This work may reveal to some that their Faith has been misdirected, but I would
hope to persuade others that their Faith is stronger, more sophisticated, and less controversial by
being uncertain. It is my hope that many will be awakened to the power of Personal Humanism
to reorder for the better the relationship between ourselves and our society. Perhaps, seeking
wisdom, some people may open up this book, and discover how to open up their eyes.

The sonnets heading each chapter are part of a series I wrote during my student days,
inspired by, and within, the named establishment close by to the college.

How to Skim through this Manuscript
For readers who are not very interested in philosophy, some of the headings cover ground
that is quite technical, designed to hammer down academic distinctions, and which can be
skipped without detracting from the basics of the philosophy. For those who wish to stick
just to the point, I would recommend these headings:
Chapter 1:
It is okay to skip the headings: Thomas Kuhn and the Structure of Scientific Revolutions
and: Self-reference and Paradox, and the discussion of the logic of Alfred Tarski.

Chapter 2:
It is safe to skip from Descartes through the individual philosophers, but read Hegel,
Relativism and Pragmatism if possible, and then, within the heading of Religious belief
in God, read Logical Arguments for God, Entropy and the Very Beginning, To What
Purpose, The Primary Act of Faith, The Argument from Solipsism, and Personal
Humanism.
PART ONE: Avoiding the Trap of Thinking Knowledge Can Be True
Sonnets from the Southern Bar 1

Life from the unliving atoms of the Earth we wrest
And all the powerful images of our thoughts do search
To comprehend the mysteries enshrouding of their birth
And we listen to the molecules that may answer to our quest
The wonders of the firmament succumb to scientific test
But behold in our souls the same spiritual thirst
That awed our Pagan forebears in their woodland church
While faeries and daemons from the shadows spied their guests.

The mystical focus of our life lies not behind some shining gate
Retiring through which, Challenge to wreathing posies is reduced
And to Adventure, Hymns; nor can we say “Live but for the moment, let tomorrow ever wait”
But picture Opening time and a tumultuous youth
  With outstretched arm and glass a-swill
  Calling: I am alive and intend to drink my fill!
CHAPTER ONE
METAPHYSICS; THE NATURE OF TRUTH AND KNOWLEDGE

"Know thyself" said the inscription over the oracle at Delphi, and many centuries later came the Latin answer: "Cogito, ergo sum." No matter what else is held in doubt, no matter how much else we might wish to deny, we know that we exist because of our self-awareness. Accepting this as the one indisputable fact of philosophy provides a sound base from which to launch our exploration. "Thyself", in fact, is the relatively easy part, the word "Know" is where we find the problem. More important is the reward that will return to an investigation of the dictum "Know Knowledge." Our understanding of everything else is limited by the quality of our knowledge, and most of us realize that our understanding can often be confounded by errors, doubts and duplicity. Since humanity first began to introspect, there has been an argument as to whether the limits to our knowledge are essential or whether they can be transcended: whether or not the foundations of our knowledge will ever rest on the unchanging bedrock of absolute certainty. Philosophers have sought from the study of knowledge itself some clue as to the nature of this bedrock certainty, in order to enable us to recognize it, should it ever surface in the quarries of scientific endeavor. Such a pleasant conceit could then be used to fill the gaps in our scientific knowledge, to reconcile conflicting hypotheses, and to shape our ideas into a systematic unity of all knowledge. The convoluted mental constructions that have risen to the command "Know Knowledge" constitute a metaphysical domain called epistemology.

Few people can be satisfied with the progress made in centuries of studious inquiry into the nature of knowledge. The field of study has become bogged down in disputes characterized by the seeming impossibility of any conceptual method ever being developed that might resolve between the different schools of thought. In this sense, it could be considered futile ever to dabble in metaphysics. One might as well ask, with apologies, two people, blind from birth, to dispute the difference between the appearance of the color red and that of the color green. Not only would it be impossible for them to arrive at any sensible conclusion, but even if they were to, the entire issue is one that most people take for granted anyway.

An examination of our basic assumptions reveals that knowledge is defined, according to the Concise Oxford Dictionary (Oxford, Clarendon Press, 1964), as a "familiarity gained by experience". Knowledge implies an understanding of the meaning of our experience. The term "meaning" signifies that the experience is somehow represented in terms of symbols, and the term "understanding" implies an analytic facility that gainfully manipulates the symbols. The study of knowledge has been concerned with the proposition, as also expressed in the Concise Oxford Dictionary (under Philosophical usage), that knowledge can be defined as "certain understanding, distinct from opinion". In this chapter we will consider the representational symbols of meaning in an effort to discover whether any conceivable analytical facility could be capable of "understanding" them with "certainty". This will elucidate several important properties of knowledge and define its relationships within experience. For instance, what we think we know may be false. Almost equally dysfunctionally, what we know, we may think to be true. The concepts of Falsehood, Truth and Knowledge then invite reappraisal in terms of these properties. We will begin by examining the objective state, the subjective state and the derivation of meaning.
The Objective and Subjective States

I would like to start by dividing the world into two separate, different but co-existing realms. We could call them World 1 and World 2, following precedent, and, indeed, later we will examine their interaction to form what is called World 3. For the time being, however, I must stress the importance of conceptualizing the difference between Worlds 1 and 2. First I will describe them, then I will suggest what I consider to be appropriate labels for them, and then I will discuss definitions for these labels. Please bear in mind that the names and definitions are less important than the concept itself.

To conceptualize World 1, imagine that the Universe began in a "Big Bang", the stars and planets formed, and on Earth there existed mountains and rocks, rivers and the sea, but not a trace of intelligent life. All the objects in the Universe would exist in World 1 each as they are in themselves, without anyone having any knowledge of them.

World 2 occurs over a thousand million years later, as life evolved to that very pinnacle represented by philosophy students. These sentient beings are able to perceive World 1, analyze and understand it, and create mental models of their experience which are used to guide their behavior. World 2 is our conscious representation of World 1. I shall be careful to define my terms in this chapter, as I wish to introduce some new ones, and argue against the standard usage of "true" and "false" in particular. As a result, this entire work of philosophy could be dismissed as a mere reshuffling of standard definitions, but that would be wrong. The implications of a change to the meanings of truth and falsehood as they apply to knowledge, when followed through, enable us to reconcile the disagreements between all the philosophies that have gone before.

Many philosophers in the past have identified a distinction between the objective and the subjective. The word "objective" has been used to describe facts about an object that are interpersonally accessible, i.e. that anyone can experience, such as the fact that it is a certain color. I will use as a starting point the dictionary definitions:

"of or relating to an object existing independent of mind, belonging to the sensible world and being intersubjectively observable" (Webster's 7th New Collegiate Dictionary), and:

"belonging not to the conscious, or perceiving or thinking subject, but what is presented to this, external to the mind, real." (Concise Oxford Dictionary).

In other words, the word "objective" refers to World 1, and by extension, the state of being in it. When we wish to describe the object as it exists in World 1, we will refer to it as being in the "objective state".

The word "subjective" has been used to describe a person's conscious experience, such that, in saying that an object is a certain color subjectively, we are describing something about the observer rather than about the object. Definitions include:

"characteristic of or belonging to reality as perceived rather than as independent of mind" (Webster's 7th New Collegiate Dictionary), or

"belonging to, of, due to the conscious, or thinking, or perceiving subject or ego, as opposed to real or external things" (Concise Oxford Dictionary).

In other words, the word "subjective" refers to World 2, and, by extension, the state of being in it. When we wish to describe the state of being of an object within the purview of an observer, we will refer to the object as being in the "subjective state" of that observer.

There may be some who have difficulty accepting that an object exists in these two mutually exclusive groups. This problem may be solved by way of the indisputable axiom of
Descartes; "Cogito, ergo sum", which can be split into two parts. Clearly, "I think, therefore I am, subjectively", is a given, being a statement of self-awareness. "I think, therefore I am, objectively" is also necessary if we are to accept "Cogito, ergo sum" as a statement designed to communicate our condition to second parties. If we cannot accept our objective existence based on our thinking of it, then we are rejecting the existence of the material world and everybody in it. If each of us is able to accept the statement "I exist objectively", as well as the statement "I exist subjectively", then we are prepared to benefit from the very different powers that we, as objects, are able to obtain from a simultaneous existence in two mutually exclusive states.

The Objective State

This is populated by a universe of objects and events, some of which we are aware of, and many of which we are not. From a philosophical standpoint, there is an interesting distinction to be made between objects in this state: that between objects which have been perceived, understood and known, versus objects which have not been mentally processed, and are unknown. Here, we are drawing a distinction between two objects, or the same object over time, based on a property which is NOT possessed by the object in itself. The properties of being perceived, understood, and known are attributed to the object during the course of its being experienced, and, as a result of this experience, the object becomes subjectivized, or transferred to the subjective state.

The Subjective State and Essential Falsehood

The subjective state is the culmination of our active perception and understanding of the objective world. It depends, therefore, on active biological processes, both conscious and subconscious, requiring sensory organs and nervous integration which for each species of animal is an inborn characteristic. The resulting experience gives the illusion of "containing" the objective world within it, whereas it is, of course, contained by the objective world. This is just the first of many illusions that subjective experience conceives, and they are consequent to the attribution to objective objects of the extrinsic property of "being known". Because our experience of an object involves a considerable element of illusion, we can derive an original and unorthodox definition of falsehood. Falsehood is the experience of any quality or concept which lacks an objective existence. Since the very property of "being known" is included within this definition of falsehood, all knowledge of the objective world, counter-intuitively, is basically false. However, this very basic level of falsehood, which we may call "Essential Falsehood", has minimal practical impact on our affairs. It is necessary to understand what the effects of Essential Falsehood are and what are the limits of its influence.

Essential falsehood is incorporated by the information-processing infrastructure of our sense organs to become integrated step by step into our perception. Vision, our most sophisticated mode of perception, is inherently unfaithful to the objective world. The very colors that our two blind metaphysicians were arguing about are merely differences in the energy of massless particles called photons, which are perceived as color by the brain. To oversimplify, what happens is that a neutral object reflects light predominantly of one wavelength, then photo-receptive cells respond selectively to that wavelength, then the brain deduces what color the object should be, and then we experience that color - one could almost say "imagine" it. Nothing
is really colored except our image provoked by those photons. Since color is something we subjectively perceive, which objectively doesn't exist, it is an essential falsehood. The auditory equivalent of this illustration is better known. What happens when a tree falls down in the middle of the forest? If no one is there to hear it, we reason that, objectively, it sends compression waves of various frequencies through the air, but that this, in itself, does not make any noise. If someone is there to convert these air waves into perceived noise through the biological engineering of his ear and brain, then it is experienced that the tree made subjective but not objective noise. Color and sound share the analogy, for objects have no color unless someone is looking at them. Color, like sound, is the product of the interaction between the object and a subject.

I have read of philosophers who categorically state that the tree falling in the forest makes noise, not merely vibrates the air, even when no one is there to hear it. To which I answer with this experiment. Instead of a tree, imagine an ordinary whistle. Suppose I’m deaf, and you are 2 miles away, but I blow it as shrilly as I can. You say it made noise, not merely vibrated air, even though no one heard it. So now I pick up a high-pitched “dog whistle”, and blow it right in your ear. You & I hear nothing, so it makes no noise. Presumably, it vibrated the air, but no more. However, Rover has just run in from the next room - he heard noise. This principle has been applied to the development of ring-tones for cell phones that are too high pitched for adults to hear, even though they sound out loud and clear to children. (1) Therefore, we see that a noiseless vibration of the air will create sound in the minds of those individuals equipped to hear it.

One can go further and mention that one in 100,000 persons are reported to share a neurological condition called synesthesia, whereby sounds are able to evoke the visualization of corresponding colors. This implies either that perceptive processing by these people is more inventive than it is for the rest of us, or that the rest of us are blind to an important natural property of falling trees and compression air waves, giving us a false impression of our world.

Representational Inexactitude and Active Subjectivism

If subjective knowledge of the objective world contains inherent "essential" falsehood, it is valid to question whether the world actually exists as it is represented to us by our senses. The answer is disquietingly limited to either "not exactly" or "absolutely not". To these possibilities we assign the terms "representational inexactitude" and "representational uncoupling". They differ from representational exactitude, which is the impossible condition whereby our senses mirror the objective, without distortion, into the subjective. This situation would require the known object to be identical with knowledge of the object, which would require a thing outside the mind to be identical to a thought inside the mind. I hope to show why it is reasonable to believe in a special case of representational inexactitude, namely that the subjective knowledge of each individual in a species improves on the objective world by highlighting that information it gathers which is of particular use to it. This theory may be called Active Subjectivism. The emphasis that an individual will accord to aspects of its perception, and hence, to a large extent, the form its knowledge will take, will depend upon its biological requirements. Active subjectivism allows a selectivity in knowledge processing that ensures optimal speed and efficiency. In the late 1950’s, neurophysiologists demonstrated that the eyes of a frog will forward to its brain only the information it needs for survival. For instance, out of reflex, the frog will snap forth its tongue in a fly-catching movement whenever a black spot moves across its visual field, no matter what the spot actually is. Furthermore, the frog seems oblivious to
stationary stimuli. Therefore, what you or I might not recognize until we had tracked it down by its noise and then observed the shape of, the frog has recognized as its next meal on the basis of a single moving image. Clearly, this difference in response time is critical to the survival of an animal that depends on flies as a staple of its diet. Contrariwise, it would not help us to perceive flies in such a batrachian fashion not only because flies are not a popular menu item in polite society, but also because a frog, it was concluded, “will starve to death surrounded by food if the food is not moving”.

In contrast, if we were to take the extreme position of representational uncoupling, we would adopt the argument that not just some part of our experience is a falsehood but that ALL of it is, even to the point of maintaining that the material world doesn't exist. The full implications of such a stance will be discussed at the close of Chapter 2; suffice it to say now that such a universe is totally contrary to common-sense and would alienate everybody except the person who maintained that view: for if, indeed, it were correct, nobody else would exist. Nonetheless, it is important to remember that the adoption in this work of a material world of representational inexactitude is a matter of faith and not logical proof. The only role for logic in these pages is to show where competing philosophies, striving for representational exactitude, can be reduced to exhibit internal inconsistency, incompleteness, and ultimately, representational uncoupling despite concession initially of an equivalent degree of faith.

In summary, subjectivity is the experience of a small domain of the objective state - that with which we are familiar - which has adapted through evolution to enrich and improve upon its raw material. Subjective experience of the objective state is more than a mere copy of it; it is a method by which the intellect can extrapolate from our experience both abstract thoughts and ideas that help us compete for biological success.

**Objects, Events and Ideas**

At this point, it is necessary to enter into our discussion of objective and subjective a new distinction: the ability to distinguish between an object or an event and an idea. For example, David Hume applied the terms "matters of fact" and "relation of ideas" to his discussion of the subjective state, but his concepts need to be extended to the objective as well. "Matters of fact" were things knowable through experience, constituting the domain of genuine knowledge. "Relations among ideas" were formal principles of logic, knowable by introspective reflection. Their referents in the objective are respectively the objects themselves, and the laws that govern their behavior.

By object or event, I include all things, objects and happenings, and changes of state. Objects and happenings are related in as much as happenings cannot occur except to objects, while objects comprise temporary assemblies of smaller objects, which have happened to conjoin. Precedence for this classification, objects being treated as events of uncertain substance or duration, was acknowledged by John Dewey. Therefore, in the category of "Event", I include the objects and the happenings to which they are intimately bound. Which brings to mind Carlo Rovelli, who, in “The Order of Time”(5), gives this unforgettable description of the importance of objective events: ‘A stone is a prototypical thing; you can ask where it will be tomorrow. A kiss is an event. It makes no sense to ask where the kiss will be tomorrow. The world is a network of kisses, not stones.’

By "Idea", I include all theories, thoughts, relationships, inferences and extrapolations, which imply a degree of analysis, and which serve to explain or account for the interactions of objects and their happenings or events. The categories of Events and Ideas are mutually exclusive.
EVENTS may be both objective and subjective. An objective event is that simple, unadorned object already discussed, isolated to a specific time and location. A subjective event is our perception of the event or our experience of it, and it is known with a degree of certainty that corresponds to the trustworthiness of our senses.

IDEAS also may be both objective and subjective. An idea extends from and, in so doing, relates one event to another. In the objective state, an idea is the relation between cause and effect; they are the physical laws governing the interaction between one object and another, as they would occur in the absence of a human observer.

Within the subjective state, ideas link events in a process of understanding whereby their meaning is transformed into knowledge. These ideas are experienced as thoughts within our minds. The intent or content of thoughts is formed by our expectations or experience and is expressed in the meaning of statements drawn from them. It has been recognized that thoughts are not arbitrary patterns of activity within our brains, but instead, are highly structured according to syntactical rules of language. The work of Noam Chomský and other psychologists suggested that the infant mind possesses linguistic parameters, including possible sets of grammar and syntax, which are resolved according to cultural factors during different upbringings. By using such rules of sentence construction, we develop both a deep language structure (giving semantic meaning) and a surface language structure (giving strings of phonetic utterances) that constitute a generative grammar. This enables us to issue well-formed sentences. In short, man has evolved as a manipulator of symbols with respect to inborn mental structures, which vary only superficially from one language to another, such that their meaning is understood and can readily be conveyed between individuals. Our ability to generate meaningful sentences is taken for granted by Active Subjectivism on the same biological grounds as is the belief that our subjectivism is a successful adaptation to improve on our objective chances of survival. Therefore, it is axiomatic that any well-formed sentence has meaning and is a subjective idea. "Cow the boat with beat Jumped laugh" is not a well-formed sentence, is not a subjective idea, and has no meaning. But "The cows are flying low across the basement" is a well-formed sentence. It has meaning despite being blatantly false, because cows can be imagined to fly across a basement, as we learn when we're old enough to watch cartoons. Other well-formed sentences are descriptions of subjective events within our past experience, which are either inwardly thought or outwardly expressed. Some well-formed sentences are self-referential or paradoxical, and we will consider their special significance later.

Types of Subjective Falsehood

These subjective ideas are known with a degree of certainty that corresponds to our mental trustworthiness or that of our reporter. This is not necessarily very great. In the expression of an idea, the objective event may be misstated by telling a deliberate lie as might the defendant in a criminal trial, or by our being mistaken in our perception as might be a witness in the same courtroom. In this respect, the term "known falsehood" can be defined as a statement which contradicts our experience, and an unknown falsehood is one which in retrospect, stands corrected by our subsequent experience. These definitions can both be derived from our original definition of falsehood, although it is necessary to interpose a degree of faith, as previously mentioned. Starting with both 1) the premise that falsehood is located in the subjective state, as being an experience without an objective base, and 2) the faith that the subjective state serves as an inexact representation improving on the objective state, we are able to distinguish essential from superessential falsehood. Essential falsehood is the process whereby the property of
having-been-experienced is attributed to the objective state. This degree of falsehood cannot be avoided, and we can never know the degree by which it misleads us. For practical subjective purposes, it is irrelevant, as long as we are content in our faith that it is acting on the objective world in a manner advantageous to ourselves. Superessential falsehood is any subjective manifestation which, in addition to not being identical to an objective base, is not even the result of an essential operation on an objective base. In other words, such falsehoods are completely untied from objective reality. To the extent which they can mimic essential falsehoods, they are biologically disadvantageous. Fortunately, it is possible to determine the extent to which superessential falsehoods are misleading with respect to material objects. This ability depends on a certain property of matter which must be taken on faith: that it behaves consistently with respect to our experience at all times. Acting on this assumption, we develop, upon receipt of a claim made about a material reality, expectations about how an encounter with it would be experienced by ourselves. If the original claim was spurious, then the extent to which it was misleading is measured by the difference between our expectation and our experience. Both the claim (our expectation) and our interpretation of the experience are subjective ideas. When they contradict each other, or prove different, it is the expectational idea which is by definition super-essentially false. In this determination, the essential falsehood of all experience is not a factor. The act of acquiring an experience which contradicts an expectational idea is called the "disproof" of that idea. The idea is then, by conventional usage, with which the remainder of this book will accord, held to be "false". There will probably be other spurious ideas which relate to material we have not yet encountered. These ideas, while super-essentially false, are not yet disproven, and, in a hypothetical sense, can be regarded as unknown-false.

The Concept of Truth

It has been said that philosophers, however much they may disagree about most things, use the word "Truth" as a property of propositions, sentences, or beliefs, i.e., as a property of subjective ideas and never of things, or events in the objective state. The word "True" is defined in the Concise Oxford Dictionary as:

"1. In accordance with fact or reality, not false or erroneous" and
"2. In accordance with reason or correct principles or received standard, rightly so called, genuine, not spurious or hybrid or counterfeit or merely apparent".

These definitions are descriptive of the "Correspondence" theory of truth. Other theories of Truth, the Coherence Theory, the Performative Theory, the Pragmatic Theory and the minimalism of Frank Ramsey are all 'subjective' theories of truth which ultimately depend on correspondence. Because of the essential falsehood in our experience, the Correspondence theory has problems with respect to the description of our interactions between the objective and subjective states. This difficulty is only made worse by the fact that, when we use the word "True", we think of something that is somehow both complete (has 100% integrity) and self-consistent (is unable to contradict itself). Since it would be impractical to dissociate the concept of "Truth" from these connotations, it is my belief that "Truth" should be re-defined to be that which is both complete and self-consistent. According to my "Inversion Theory of Truth", the word is no longer applicable to descriptions of interactions between the objective and subjective states, i.e., the result of any process of subjectivisation. (I do not believe that such usage has ever been justifiable). The following examples demonstrate where reference to the
“Truth” is appropriate.

First of all, the objective state can be imagined to be both complete and self-consistent, even in the absence of being experienced. Hence, the objective state is "true" in itself, even though, subjectively, this "truth" is unattainable. Second of all, there are purely intrasubjective ideas, impossible for another party to directly experience, that could also be considered "true". It could be true for me to say that I would prefer a red car over a blue one, but it could not be "true" for me to say "That is a red car". To say “That is a red car” is subjectively true of my perception-based conclusion as to the color of the vehicle without being "true" of the car itself. It would be true for me to say “I enjoy strawberries”; being a form of true knowledge about one’s subjective self. And romantics will be happy in the knowledge that true love is still true. Having said that, even intrasubjectively true ideas can be misleading. When we feel a pain in our leg, the pain is actually being experienced in the brain. As a consequence, people can feel a “phantom pain” in a limb that has been lost in an accident. Likewise, after an injury to the ear, a person can experience a persistent ringing, or tinnitus, and know full well that it doesn’t refer to any external sound. And of course, the brain itself can dream, or become disordered, permanently or transiently, leading to many bizarre experiences which, while intrasubjectively true, are unmoored from the objective reality.

Either way, the word “True” must be redefined. “True” may be defined as (1): “A fact or reality, containing no falsehood, pertaining directly to objects or events or ideas in their objective state, or, to a description of subjective introspection” - (Objective truth) or (2): “In accordance with fact or reality, pertaining to objects, events or ideas in their subjective state, but containing an essential degree of falsehood” (Subjective truth).

If you wish “Truth” to refer to subjective statements about an objective world, you must use the Subjective definition (2), whereas if you wish “Truth” to refer to that which is “not false or erroneous”, you must use the Objective definition (1). Either way, the dictionary definition is no longer adequate. The Objective truth definition 1 is technically a “Mutually Exclusive Subjective and Objective Realms Theory of Truth”. Since this will never be adopted into common speech, it might be catchier to refer to the “Separate Realms Inversion of Truth Theory” instead. In fact, one could argue that the pain we feel from a stubbed toe is a result of active subjectivism from a World 1 object that just happens to reside within our body, that to say “I perceive the car as red” describes active subjectivism from our objective eyeballs, and that to say “I am happy” is our conscious expression of a process taking pace in our World 1 limbic system of the brain. From this perspective, Truth as certainty applies only to one realm, the world of objectivity, and so “Inversion Theory” is actually most apt.

But if millions of undisputed statements of fact are no longer to be considered "true", what can we say of them? First, we must examine types of subjective idea in more detail.

**Types of Subjective Idea**

The subjective idea is our means of describing or connecting subjective events. There are two categories of subjective idea, according to the quality of information conveyed.

**FIRST** are purely INTRASUBJECTIVE ideas. They may lack an objective referent, for instance, “I am happy”, or they may have an objective referent, such as "I support Manchester United", or they may be descriptive of the subjective process, as in "I perceive the car to be red". These statements may be considered “True”, as they contain no essential falsehoods.

**SECOND** are INTERSUBJECTIVE ideas that are purely analytical of the objective, such as, "That is a red car". They may be directly or indirectly predictive. In the above case, by
inference, one would indirectly predict that any other person, if asked, would agree that it is a red car. Directly predictive ideas are of Non-falsifiable and Falsifiable types.

Intersubjective Non-falsifiable Ideas typically describe objects that are inaccessible to direct observation and make predictions about them that cannot be disproven. Religion is a classic example. The ideas of religious theory are meaningful, and seem not without consequence, for the consequences of ignoring religious instruction are widely touted. But the theory cannot be tested. No conceivable observation would ever force a spiritual leader to admit that his religion had it all wrong. All possible states of affairs fit the theory and, hence, paradoxically, no actual state of affairs can be claimed as supporting evidence for it. There is no observational difference between it being false or not, and, therefore, as theory, Non-falsifiable ideas have no scientific utility.

Intersubjective Falsifiable Ideas make predictions concerning certain events which can be observed, corroborated or rejected. It is characteristic of meaningful statements in this class that they may be falsified by observation, but never verified. This doom of the idea was first recognized by David Hume, and it takes two forms. That an event A always precedes an event B doesn't prove the idea that A causes B, (i.e., that we understand it properly) nor does it prove that repeatable consistency is infinite (i.e., that the future will resemble the past). One may suggest that the future will resemble the past in the sense that the laws of nature will not change, but that would be to beg the question: the laws of nature are only assumed on the basis of their apparent unchangeability. Ever since that realization, scientists have been left unable philosophically to justify or validate their work. In this vein, the great twentieth century logician, Bertrand Russell, supplied us with the famous "chicken analogy of induction": that of the chicken, being fed each morning at the same time, inductively reasoning that it will always be catered to in this way, until one morning, it meets quite a different fate. Russell despaired that we might never have a logical basis to prove the truth of any idea or theory. As he put it, "All our knowledge of truth is infected with some degree of doubt, and a theory which ignores this fact would be plainly wrong."

Karl Popper and the Principle of Falsification

Hume suggested that laws thought "true" today might possibly change and no longer be "true" tomorrow. This is a situation that few scientists would be able to handle with equanimity. Therefore, it is a matter of faith among scientists that matter exists, and that laws of physics are inviolate (the future will resemble the past). For instance, lacking faith in physical constancy, we might say instead that every event is directed by God to whatever outcome He pleases. If such were the case, all acts of scientific prediction would be futile, and any conceivable event would have a ready explanation. In such a world, we would be limited to Non-falsifiable subjective ideas. Our completed investigation of this problem will return to faith as the only logical solution to the problem of physical constancy. In the meantime, we must deal with the question of whether we properly understand the laws of physics. Sir Karl Popper disproved that a law can be known as true, by showing that tomorrow's observation may contradict it and demonstrate today's understanding to be faulty. Popper's Principle of Falsification does not address the possibility of arbitrary changes in objective Physical law. Our own inability to "know" objective laws is irrelevant to the question as to whether they can change. Popper did not address the possibility that the sun might not rise the next morning, or that the apple dropped tomorrow might fly heavenward, although he did point out that within our current frame of existence, the sun rising in the morning is contingent on spatial reference.(9) Hence, Pytheas of Massalia, the Greek explorer who told of a "land of the midnight sun" was disbelieved for centuries as "The
Liar”. One might point out a temporal reference, too: in 5 billion years the sun will be a Red Giant of sufficient size to engulf the earth entirely. In both special cases, there won’t be a sunrise in the morning. To Popper, the assumption of inviolate laws is unstated, and any change in their status is due to a change in our ideas about them. It is essential to make this assumption, stated or unstated, in order to avoid the alternative necessity of regarding the daily rising of the sun as being analogous to a nearly infinite series of tossed coins landing "heads up". Because such a highly irrational possibility would defy logical consideration, we incline to the objective state as self-justifying. Only upon the assumption of inviolate physical laws can we speak of a Falsifiable subjective idea as being a "theory" and not just a random sequence. It is only as a "theory" that we can use it to make valuable predictions. A faith in objective constancy is required if we are to use Popper's falsification system.

The principle of Falsification addresses not physical law but our understanding of it. It demonstrates that no theory can ever be proved, because it is always possible that future cases will be discovered which are not as the theory predicts. So, although we can never be certain that a theory is correct, we can, so long as it makes satisfactory predictions which remain uncontradicted, use it as a good working basis until it is disproved. It is considered in the meantime an addition to the body of our knowledge.

As Popper realized, a striking example of this is Newton's Law of Gravity. This law did more than merely make correct predictions; it brought order out of chaos and revolutionized science. It stood for over 300 years, providing a complete understanding of the cosmic forces for generations of Royal Astronomers. If ever a theory could be said to be proved, it was that one.

In spite of this, when, in 1919 Sir Arthur Eddington undertook an expedition to Principe Island (W. Africa) to make certain observations of a solar eclipse, he proved Newton's theory to be flawed. Specifically, he showed that light from stars behind the sun was deflected by the sun's own gravitational field on its way to the Earth. This result did not accord with Newton's theory of gravity, but had already been predicted by Albert Einstein on the basis of his General Theory of Relativity. Einstein's theory included an explanation for all the successful corroborations of Newton's theory, but was able to explain much more. It superseded Newton's theory and took from it the title of "knowledge". As a young man, Popper was particularly impressed by a certain boldness of Einstein's theory. In vogue at the time were two other theories described as scientific - those of Freud and Adler. Proponents of the latter two theories soon became practiced at "explaining away" observations of any description. Soon it became clear that there was no possible situation which would cause them to say; "Well, the theory's stumped. It must be wrong". On the other hand, Einstein's theory went out on a limb to make an obscure prediction that could easily have been disproved. The probability of Eddington's observation being in agreement with Einstein’s prediction, as opposed to any other number selected at random, was extremely small. From this developed Popper's realization that the "content" of a scientific idea is inversely proportional to its probability (see “Popper” by Bryan Magee, Fontana Modern Masters, 1975, Chapter 2). This valuation of a theory based on its openness to extreme criticism was a unique feature of what Popper called “Critical Rationalism", and distinguished it from other views of Rationalism, where Rationalism is the view that Reason is the chief source of and test of knowledge.

Although Popper’s theory is regarded as insisting that theories must be discarded as false if a new observation conflicts with it’s prediction, in practice, there are 3 alternate options. One can use the discrepancy to formulate an additional new theory, or predict a new discovery. Or one can challenge the discrediting observation.

For instance, Norwood Hanson in “Patterns of Discovery”,(11) discusses how the recent observations of Mars by Tycho Brahe were used by his student, Johannes Kepler to test the
Heliocentric model of Copernicus. When Kepler found an 8 minute discrepancy between prediction & observation, he could have concluded that Copernicus was wrong about the sun being at the center of the Solar system. But Copernicus' theory subsumed the Ptolemaic belief that planets described circular orbits. Kepler worked out that if the orbits were elliptical instead of circular, Tycho Brahe’s observations would fit, and indeed, the Ptolemaic system of mathematical fudges, his “epicycles”, would no longer be necessary. The result was Kepler’s Three Laws of Planetary Motion. Another example concerns measurements of the orbit Uranus made in the 19th century which did not comply with the predictions of Newtonian gravity. Instead of discarding the theory, astronomers reasoned that an undiscovered planet must be tugging on Uranus. This triggered celestial observations resulting in the discovery of Neptune, and eventually, Pluto.

An observation that falsifies an established theory may itself be open to question. Astronomer Carl Sagan famously said “Extraordinary claims require extraordinary evidence”, a rewording of Laplace’s Principle: the weight of evidence for an extraordinary claim must be proportioned to its strangeness. A discrediting observation could result from faulty experimental technique or design of the experiment, bias in analyzing the results, or even outright fraud. Mathematicians use Bayes theorem to assess the likelihood of an event, based on prior knowledge of conditions that might be related to the event, to evaluate such probabilities.

Also, the nature of the science determines the nature of the prediction it will generate and the type of observation that might falsify it. A “hard” science may predict that if you measure a certain planet or a particle under certain conditions at a certain time, you will find it in a certain position. A “soft” science, on the other hand, may predict that if you enact a social program, after a year or so you may be able to measure certain benefits to a certain percent of people. Or a protocol to test the efficacy of a diet or a drug to ameliorate a certain medical condition may result in a cure or an improvement in only a percentage of the study group. These results are much less amenable to being falsified by a single observation, but they can be discredited.

While it is possible for an observation to falsify a theory, there is a sense in which that falsification is never absolute. For instance, Professor Naomi Oreskes described how, in the 19th century, Lord Kelvin, using his “ Doctrine of Uniformity”, disproved the theory that the solar system could be much over 100 million years old.(12) This he did by measuring heat flows and comparing them to those which could be generated by the earth and the sun’s gravitational collapse. Of course, this was before anyone knew of radioactivity and all the heat derived therefrom, and he also assumed that the Earth began as a molten ball. This demonstrates that a good theory may appear to be falsified if it is built upon a significantly incomplete theoretical background, and that falsification of a theory can result from a defect in either the theory itself or the assumptions made in trying to falsify it. In modern cosmology, theorists will routinely hedge in order for their hypothesis to be correct, some additional hypothesis needs to be advanced and/or corroborated in order to explain certain observational discrepancies that indicate large gaps still remain in the state of our best knowledge.

Meaningful ideas which are both sensible and falsifiable have been described as answerable to the Principle of Uncertainty, by analogy to Werner Heisenberg's theory of atomic particles, of the same name. Heisenberg stated that we can make a statistical approximation of the position and of the angular momentum of electrons orbiting an atom, but any gain in the precision of our understanding of the position of the electron involves a corresponding sacrifice in the precision of our understanding of the angular momentum, and vice versa. Both these parameters are objective events, but when we come to form subjective ideas about them, any certainty we achieve in one direction is balanced by uncertainty in the other.

Popper's crucial recognition was that although a subjective idea may eventually be
disproved, it may have (1) a utility in our practical affairs until that date and (2) a contribution to make towards a more complete understanding of phenomena even afterwards, but only under one condition. The condition that must be satisfied before an idea has utility, what he called the Criterion of Demarcation between science and doctrine, is that it must be falsifiable by observational evidence. Although it can't be proved true, it must be possible to prove it false, and its credibility resides in its ability to weather experiments designed to falsify it. The more numerous, diverse and sophisticated are the attempts it survives, the more its prestige grows. It is recognized, nonetheless, that it may one day be falsified, and subsequently, improved on. Professor Jeremy Shearmur, who once worked as Popper’s personal assistant, points out that Popper considered non-testable ideas to be potentially important, even useful.(13) Ideas from philosophy, religion, psychoanalysis, etc., serve as what he called “metaphysical research programs”, which, like his own ideas on Falsifiability, can guide and inspire scientific work, without being testable, as long as they are open to critical discussion. Scientists, thus, follow a process of conjectures and refutations; starting with a problem to solve, they rely on inspiration guided by tests. To the extent that inherent biological bias in our perception leads us astray, said Popper, we can “allow our hypotheses to die in our stead”. Crucial to all this is interaction with other scientists, to obtain a social account of objectivity; the objective state being of too cosmic a scale to be understood by any small group of people alone.

Popper’s Criterion of Demarcation brought him into sharp conflict with the then prevalent philosophical school of Logical positivism and, in particular, Ludwig Wittgenstein. This school sought a criterion of demarcation between linguistic sense and non-sense, and believed that to have meaning, a sentence must be logically true, or else observationally verifiable. They insisted on interpreting Popper’s criterion as distinguishing between sense and non-sense, not between metaphysics and science, so they could not understand how falsification was significantly different in principle than verification. To the Positivists, as long as a sentence described a possible observation, which could verify it or not, the sentence was meaningful. To them, that was all that mattered.

Popper’s ideas have fallen out of fashion, according to certain philosophers. This seems to be due to Popper’s denial that science proceeds by induction, i.e., by finding confirming instances of a conjecture. Popper maintained that confirming instances never verified, but only corroborated, a theory that could be falsified by a single blow. Most scientists, however, work by a process of trying to find confirming, not falsifying instances, to back up their ideas. Mathematician Martin Gardiner, in “A Skeptical Look at Karl Popper”, (14) considered betting on a horse race. “If Popper’s horse won, would he cry out ‘Great, my horse failed to lose!’” Likewise, wrote Gardiner, physicists perform experiments to detect the Higgs Boson hoping to prove that its associated Higgs Field, as predicted by theory, really exists. But the process of induction that confirmed the Higgs Field also falsified the theories of other physicists, who had denied its existence. In my opinion, this is in accordance with Popperian principles. The discovery of the Higgs Boson did inductively “prove” that the particle and its field exist, but it could only corroborate (in a Popperian sense) the theory that explained and predicted its properties (the so-called Standard Model). Indeed, the discovery of the Higgs raised many new problems for physicists, and the future of the Standard Model is by no means secure. This theory, in a larger sense, could be deeply flawed, and subsequent observation may favor alternative explanations. No amount of induction will ever prove or verify it.

Logical positivist philosophers, such as Rudolf Carnap, who wrote “Introduction to Philosophy of Science” (Basic Books, 1955) with an introduction from Martin Gardiner, maintained to the end that Popper never said anything about induction that they themselves had not already proven. As a group, they never did understand the Criterion of Demarcation. While
scientists may proceed according to a process of inductive corroborations, their entire enterprise is governed by Popper’s criterion.

**Thomas Kuhn and the Structure of Scientific Revolutions**

Subsequent to Popper’s work on Falsification, an American philosopher, Thomas Kuhn, took issue with the objectivity of Popper’s view, and claimed that scientists were conditioned by subjective cultural influences until a change in the balance of evidence leads to a “Paradigm shift”. In practice, a new theory will have to outperform the explanatory power of an older one with respect to more than one problematic piece of data before it becomes generally accepted by the majority.

Thomas Kuhn, in his book “The Structure of Scientific Revolutions” (University of Chicago, 1962), explored the development of scientific theory in detail. He described how a paradigm may enter a period of “crisis”, inadequately explaining new observations, and requiring “ad hoc” assumptions in order to avoid increasingly contradictory evidence. A “revolutionary” idea, or “new paradigm”, may (a) help explain the crisis issues better, but often not fully, and may (b) have some problems accounting for issues long ago settled by the old paradigm. Experimental resolution of (a) may be decisive or not so, of (b) may be rapid or delayed. Academics of the “Old school” may cling to the old paradigm. They may exhibit conceptual inflexibility and not see the problem - Kuhn uses as analogy the “Gestalt switch” of a reversible image that could appear to be a rabbit or a duck depending on how you look at it. He maintained that holders of the “old paradigm” would see, say, the duck, and would never be able to see the rabbit, whereas for holders of the “new paradigm”, the situation would be vice versa, and thus they could never constructively debate each other(15). They are, he said, “incommensurable”. Personally, I think this to be extreme, especially in the “new” to “old” direction. “Old paradigmers” may feel their reputation to be threatened, and be reluctant to give up a world-view they grew up with. And at least early on, there may be no clear experimental or logical reason to compel acceptance of the new. Nonetheless, both Kuhn and Popper are in agreement as to how the new ideas become chosen. The first step towards victory is aesthetic. If the new paradigm has no ad hoc-isms, and shows symmetry or “beauty” of logical exposition, it will attract early key adherents out of a sense of faith that it will prevail. Further observations should favor the new over the old theory, the importance of which has been better understood since Popper’s work on Falsifiability. Thirdly, if the new paradigm explains observations that hadn’t really been thought about before, or makes novel, counter-intuitive predictions that are then confirmed by observation, it will win over the majority of doubters. Kuhn attributed some of this acceptance of the new Paradigm not to genuine progress, but to “bandwagon effects”.

Kuhn considered that “hard” science is typically preceded by a period of diversity of ideas and debate over fundamentals, which solidifies around a set of ideas that survive a period of intense criticism and counter proposals. This, for Kuhn, is where science, or “normal science” begins, and proceeds through a process of “puzzle solving” to expand its boundaries without anyone thinking to challenge the core constructs.(15) During normal science, it is assumed that the scientists will be able to solve each part of the puzzle, and failure to do so would reflect poorly on the individual scientist rather than on the scientific paradigm. Over time, anomalies that had been mentally set aside begin to accumulate, until the paradigm breaks down. Then begins a period of diverse opinion and argument over philosophy and method, what Kuhn called “extraordinary science”, before a new paradigm emerges. Supporters of Kuhn’s perspective
argued that, compared to Popper, he gives a more realistic description of normal science; that Popper treats extraordinary science as if it were typical. Popper, who had been concerned about over-specialization in scientific education, was dismayed that Kuhn advocated for this as being normal.

Having made valuable points, Kuhn unfortunately proceeded thus: “Still more men, convinced of the new view’s fruitfulness, will adopt the new mode of practicing normal science, until at last only a few elderly holdouts remain. And even they, we cannot say, are wrong.” “We may, to be more precise, have to relinquish the notion, explicit or implicit, that changes in paradigm carry scientists and those who learn from them closer and closer to the Truth.” “The transfer of allegiance from paradigm to paradigm is a conversion experience that cannot be forced ... paradigm change cannot be justified by proof.” “Inevitably, those remarks will suggest that the member of a mature scientific community is, like the typical character of Orwell’s “1984”, the victim of a history rewritten by the powers that be. Furthermore, that suggestion is not altogether inappropriate.” “The very existence of science depends upon vesting the power to choose between paradigms in the members of a special kind of community.” These and similar comments in the last chapter of his book had two implications. First, to his critics, his disregard of empirical problems as mere anomalies, and his touting of “bandwagon-” and “gestalt-effects” seemed to remove science from the realm of rational enterprises. Kuhn seemed to suggest that scientific progress might not be possible, and worse, that this is not only how science is but how it ought to be.(15) He wrote, concluding part VIII, that “The entire process may have occurred, as we now suppose biological evolution did, without benefit of a set goal, a permanent fixed scientific truth, of which each stage in the development of scientific knowledge is a better exemplar.” He asked why scientific communities should be able to reach a firm consensus unattainable in other fields. He claimed, erroneously, as any follower of Popper knew, that: “It is not only the scientific community that must be special. The world of which that community is a part must also must also possess quite special characteristics, and we are no closer than we were at the start to knowing what these must be.”

Secondly, Kuhn can be taken to imply that paradigms are overthrown and replaced with no more purposefulness than are women’s fashions restyled in Paris every Fall. This in turn has led to many relativist schools of philosophy claiming that science is “just another way” to view the world, co-equal in validity with religion etc., and that “the forms taken by accepted scientific theories, at any level, have as much to do with ephemeral factors of politics, personal influence and historical chance as with reality”(16). That Kuhn meant to disavow these views can be ascertained by his closing paragraph: “Any conception of nature compatible with the growth of science by proof is compatible with the evolutionary view of science developed here. Since this view is also compatible with close observation of scientific life, there are strong arguments for employing it in attempts to solve the host of problems that still remain.” He further denied criticisms that his work promoted irrationality and relativism in a postscript to the 3rd edition written 7 years later, in which he concluded that “the notion of a match between the ontology of a theory and its ‘real’ counterpart in nature now seems to me illusive in principle”. Whereas Popper was aspirational towards a scientific explanation of the objective state, Kuhn was ambiguous as to whether science only generated abstract explanatory frameworks. Thus part 6 of his postscript ends “Though the temptation to describe that position as relativistic is understandable, the description seems to be wrong. Conversely, if the position be relativism, I cannot see that the relativist loses anything needed to account for the nature and development of the sciences.”

SUBJECTIVE ideas, in summary, are either introspective, or, if they describe the world
outside, they belong in categories according to whether or not they make predictions that can be tested. They derive their utility according only to the extent that any predictions, which describe events, are found to agree with observational evidence, and most especially so, if this agreement would be otherwise considered highly unlikely. An observation which concurs with the theory is not a proof but serves as corroborative evidence. It is interesting to note that the Concise Oxford Dictionary offers for "corroborative evidence" the simple word "adminicle", which would be a nice word to put into general use.

Knowledge

By now we have seen that it is a biological characteristic of our species that all thoughts expressed in well-formed sentences are ideas with meaning. We have further seen how these meaningful ideas can be divided into different classes. This done, it is possible to isolate the natural properties of knowledge. We can do this through a process of subsetting. The universe comprises 2 states - the objective and the subjective. The subjective state is the world of our experience, and comprises perception (of events) and meaning (of ideas). Meaningful ideas comprise those which don't make falsifiable predictions (metaphysical, spiritual & introspective) and those which do. Of those meaningful ideas which do make falsifiable predictions, some will have already been proved false (falsehood, historical knowledge), and some will not yet have been disproven. It is this final category which constitutes all knowledge of the world around us including hypotheses under investigation as well as Best Knowledge, i.e. theories with a high degree of corroboration, and many, many adminicles. We define general knowledge, according to Popper, as meaningful intersubjective ideas, which make many falsifiable predictions, and which have not yet been disproved. Note that we are not talking about self-knowledge, or any related spiritual ideas, which are purely intrasubjective, and which cannot be directly co-experienced with others. The following properties of knowledge are salient.

1) Knowledge is uncertain. To qualify as knowledge it must continue to offer new falsifiable predictions, and it is likely that some future prediction of any given knowledge will prove false.
2) Knowledge has a content which is inversely proportional to its likelihood. A theory whose predictions will tolerate observational results within only a very narrow range will be of greater utility than a theory whose predictions could be satisfied by almost any observation (provided that the observations indeed coincide with the permitted range).
3) Knowledge has a utility proportional to its content, and its utility is a value judgment concerning the practical application of knowledge in problem-solving. The basis of this value judgment is ultimately biological in as much as successful problem solving is requisite for the survival of species.
4) Knowledge with a high degree of corroboration (or best knowledge) exists in competition with hypotheses of lesser corroboration. It is the aim of these hypotheses to make a prediction which if corroborated by some future evidence, will disprove the best knowledge currently until then available.
5) Knowledge, in spite of the fact that it may eventually be disproved in this way, is still valuable, as it enables us to solve problems successfully until then. Its eventual replacement indicates only the promise of more successful problem-solving.
6) Knowledge depends on experience. To the extent that the subjective state is at fundamental variance with objective nature, knowledge will incorporate unreliable evidence. This may affect its quality in a metaphysical sense, but not its value, or utility in problem-solving, since the problems are equally influenced by the objective/subjective dichotomy. Sometimes knowledge is
even best expressed metaphorically, or by analogy. This introduces an acknowledged layer of super-essential falsehood into the description, but makes descriptions of, for instance, curved space-time, extra dimensions & quantum dynamics easier for the layperson to comprehend than the mathematical scribbles that spew forth onto the blackboard of the professor of physics.

From the foregoing, it is clear that knowledge can be given an adequate definition and characterization without use of the word or the concept of "truth". Indeed, the introduction of this concept into philosophy, metaphysics and epistemology has sown nothing but confusion. "Truth", as used by philosophers and laymen alike, is used to express a property of propositions, sentences or beliefs. Thus it is thought of as a property of subjective ideas, concerning events or ideas in the objective state. Hence it is commonly assumed that "knowledge" is equivalent to "knowledge of the truth", even though knowledge is both uncertain (from (1), above) and to some extent unreliable with respect to the fundamental variance between the subjective and objective states (from (6), above). “Truth” is not a good word to describe the interaction between the objective and subjective states. It is fine for describing purely subjective states of mind, and it could be used, I think, in fairness, to describe the objective state including mathematical and physical relationships. Critical rationalists view Truth as being objective, independent of social or individual perception, and thus being the real goal for knowledge to aspire to. Adoption of a “Mutually Exclusive Theory of Subjective / Objective Truth” avoids the type of embarrassment demonstrated in the following example:

The concept "Truth" has been defined by Popper thus: 

For any sentence "x", "x" is true if, and only if, it corresponds to the facts, x. This he exemplified as follows:

"Smith walked into the pawnshop at 10:15" is true if, and only if, Smith walked into the pawnshop at 10:15.

We can examine the problem of correspondence with the help of Smith, who, as we have seen, walked into the pawnshop at 10:15. The truth of this statement about Smith lies in its correspondence to the facts, and it is true if, and only if, Smith walked into the pawnshop at 10:15. In “Smith”, Popper made an interesting choice of statement of a historical fact to present as his example. He could have chosen a contemporary fact, such as “The Tower of London overlooks the Thames”, or a religious claim held as fact by believers, such as “Thor has magical a hammer named Mjolnir”. He could have chosen a scientific statement of fact, although these take the form of historical or contemporary facts, i.e., “Birds evolved from dinosaurs”, or “The Sun is a nuclear fusion reactor, converting hydrogen into helium”. Popper could also have chosen an explanatory statement, or statement of theory, instead of the unvarnished fact. Thus, “x” could equal “Smith entered the pawnshop because he wished to reclaim an item”. But can the word "Smith" correspond to the person Smith? The word "Smith", for instance, has remained unchanged since its first appearance in this context in 1963. However, the person Smith, especially after serving so many years as an example of epistemology, can be assumed, at least, to be a much wiser man than he was when he entered the pawnshop at 10:15, if, indeed, the time was exactly 10:15. Besides doubt as to the identity of "Smith" and the correspondence of words to items (important, for instance, if Smith were pleading insanity before a jury), there is the question of evidence. On the basis of whose testimony can we validate the statement, even whose wrist-watch? And what if the witnesses contradict themselves? Can a "true" statement, which might later be contradicted, about a person, who is now a changed person, or even dead, have any meaning? All these statements could, indeed, “correspond” to the truth, while at the same time, possess a degree of uncertainty about themselves. The problem of correspondence means that "true" statements exist, but they fall within a blur of inherent uncertainty. This blurring is reminiscent of that described by physicist Carlo Rovelli in his “The Order of
Time”(5), as an uncertainty in the way that we perceive the macroscopic world, and an entropy that quantifies our uncertainty, (while being determinant of the variable we recognise thermodynamically as Time). As a result of this “blurring”, we can neither make nor recognize true statements. Within that blurred uncertainty, truth resembles a stopped clock; even when exactly correct, it cannot convey that precise information. (As I’ll demonstrate in Chapter 4, by analogy to the entropic blurring of our perceptions creating Time, the entropic blurring within Active Subjectivism underlies consciousness).

Popper recognized that the “truth of a statement” is a regulative idea, analogous, in its accuracy, to the measurement of a length, which can never be exactly attainable, but which is close enough to be functional. It has what is called a “truth content” dependent on its proximity to the truth, but also how focused that proximity is. At 10:15, the statement: “It is 10 o’clock” is false, but it agrees correctly that the time is neither 8 am nor 2 pm. It is more useful than the “true” statement: “It is between 7 am and 3 pm” because, being less likely to be correct, it has a high information content. Popper realized that content is inversely proportional to likelihood. False information inaccurate only to the degree of 15 minutes bests a “true” statement that is 8 hours vague. In fact, it accommodates our quest to know the time with a much smaller degree of blurring. Paradoxically, the true statement with the highest possible information content would be so accurate, with so little blurring, that the probability of its being measurably true approaches zero. This is so at odds with the conventional definition of truth, implying something that is both 100% complete, 100% certain and fully self-consistent, that confusion is bound to result.

Clearly, the phrase "knowledge of the truth" is oxymoronic. The full intention of our meaning is conveyed by the word "knowledge". Thus "Smith walked into the pawnshop at 10:15" is knowledge if, and only if, Smith walked into the pawnshop at 10:15. By "corresponds", we mean that the knowledge "is the best description" of the event. "Smith walked into the pawnshop at 10:15" is knowledge if, and only if, there is corroborating evidence in the absence of disproof. Nonetheless, we must acknowledge that Smith, were he a murder suspect, may have engineered the supporting evidence to create an alibi. Our job would then be to try and falsify it, so we cannot say our best knowledge is certain or true. When using the "Correspondence" theory definition of "truth", we must remember that "knowledge of the truth" is both uncertain and unreliable; when using the "Inversion" theory, we make it clear that we are limited to an honest account of the "best of our knowledge".

Interestingly, on August 22, 1992, a Federal appeals court in California ruled that a defendant's First Amendment rights had been violated by a lower court’s requirement that he take the standard pledge to tell "the truth, the whole truth, and nothing but the truth". Mr. Wallace Ward had insisted on pledging instead to speak with "fully integrated honesty" (17).

In 2012-3, non-academic philosopher Keith Sewell published “Leaving Truth”(KSMarine Services, 2013), in which, beginning with the answer given by Socrates to the question: “What is Knowledge? - Knowledge is justified true belief’, he arrived at the same conclusion. To be both “Justified” and “True”, Sewell maintained, was cognitive dissonance. It is not only sufficient, but it is preferable to define Knowledge in two words, as “Justified Belief”. The addition of the “T” word, our ideas are in agreement, has been responsible for nothing but confusion and strife since Plato first reported on the Socratic conversation in his “Theaetetus”. It took two millennia, but finally the problem of in what sense belief can be justified was solved, with Sir Karl Popper’s publication of “The Logic of Scientific Discovery”(18) introducing the Principle of Falsification. And so it is our “Best Knowledge”, and not the “Truth”, that stands alone in the state of our human affairs for both its practical utility and the beauty of its reasoning.
Relationships Between Objective Things and Events

Just as subjective ideas link and relate subjective events, so too do we surmise the existence of idea-like relationships in the objective state. An objective idea can be thought of as a theory which requires no one to physically think it or put it into words but which is nevertheless applicable to objects or events no matter what or where they are. For example, if four outer planets condensed around the primordial sun and then four inner planets condensed subsequently, we have 4+4=8 whether or not any alien observer performs the calculation. Similarly, if we have a 3 by 3 array, mathematics acts independently of any potential observer. They may be arranged as 9x1 or 3x3 or 3+3+3, but whether they are thought of as such or not, the different sums co-exist with the array and have the same answer.

Mathematics, in short, is a category of idea that while nominally subjective, in that we can think about it, is really a subjective rendition of objective field vectors in space-time. The objective ideas described by mathematics govern every relationship or behavior in the Universe at the objective level. Geometry, in particular, concerns the coordinates and dimensions of the space-time continuum. Since Einstein's work on Relativity, it has been realized that there is no such thing as a time interval or distance, but rather that these are relations between events, or, in other words, ideas. The same process that created space and time also created matter and those laws of physics that have been observed to govern matter: Heisenberg's Principle reveals matter to be "governed" in terms of the probability of certain interactions or collisions taking place, and the theory of probability through which behavior is expressed is also part of the objective idea of mathematics. Ludwig Boltzmann had already shown that Entropy, the behavior of the universe whereby it increases in disorder over time, is a matter of statistical probability. Therefore Universal physical laws are objective ideas in the same sense as mathematical ideas are. Why then is our knowledge of physical laws uncertain, whereas our knowledge of mathematics is certain? The answer is merely that our knowledge of both is incomplete. When we discover our theory of a physical law is broken, it doesn't invalidate all the theories of calculations based on that law to date; instead it extends our knowledge of the law (in a changed form) to cover new events not previously experienced. The Law's description of previously experienced events is usually included unchanged in the new assessment. In effect, our knowledge is uncertain because it is incomplete. Our knowledge of mathematics, too, is incomplete, for the simple reason that we can never know the answer to every mathematical sum. Many entire theorems can never be proved because of this.

For a system to be complete, it must be able to prove whether any and all of its member formulae were either true or false. To be consistent, it must contain no errors, i.e., no two statements or formulae which contradict each other. It is now known that no mathematical theorem can be both consistent and complete. In 1931, mathematician Kurt Godel proved that any complex collection of axioms, such as the axioms for the theory of finite sets, leads to a system containing "undecidable theorems": statements that could be neither proved nor disproved on the basis of those axioms. Any system of axioms will always be incomplete and even inconsistent, containing statements that can be both proved and disproved. Furthermore, some undecidable propositions will not be provably undecidable, and in some cases it will be impossible to decide whether the decidability of a proposition is decidable.

Self-Reference and Paradox

The one particular property of ideas that made this finding inevitable is that of
self-reference. Because expressions of mathematical logic have the ability to describe their own behavior, they are able to give rise to the paradox named after Epimenides the Cretan (or Liar). Epimenides was quoted as saying "All Cretans are Liars". Were that to be the case, he, as a Cretan, would be telling the truth, whereas, were it not to be the case, he, as a Cretan, would be violating the truthfulness of all Cretans. Specifically, Godel proved that for any formal logical system complex enough to be interesting, there is expressible within its own terms a proposition to the effect that: "This Statement is not provable". If the statement is not provable, then the system is incomplete, while if it is provable, then the statement is false and contradicts itself. Therefore, he proved that our knowledge of mathematics, once thought to be ideal, shares the same imprecise status as our knowledge of the empirical sciences, once thought to be inferior.

**Theories of Truth in Tarski's Language**

Alfred Tarski, founder during the 1920's of the modern logical theory of truth in language, published his seminal “Logic, Semantics and Metamathematics” in 1956. He had no illusions about the existence of definable truth in colloquial languages, which he deemed impossible, together with "the consistent use of its conception in conformity with the laws of logic". We can examine this default by developing a series of statements within the Epimenides paradox. By solving them in turn, we can further elucidate the relationship between knowledge and conventional truth. The formulation already given ("All Cretans are liars") can be solved by distancing ourselves from the absolutist "all." If we assume that only some Cretans are liars, then we can understand the contention of a lying Cretan that all Cretans are liars. In so saying, he is honoring his personal code of always lying without there being a concomitant need for us to adopt the reverse of his statement: the sentence simply remains a lie.

Another version of the paradox has it that Epimenides said "I always lie." A lie, or superessential falsehood, is a falsifiable idea which the speaker knows to be false but which may pass as knowledge until disproved by others. If here we refuse the absolutist "always" and assume that Epimenides only sometimes lies, then we see that he could without paradox either claim his knowledge: "some of my statements are lies", or by lying, claim "all of my statements are lies."

It is also possible to express this paradox as a couplet, thus:

1) The next sentence is false.
2) The previous sentence is true.

By developing their implications we conclude 1) “The next sentence is false” is true because 2) says it is, and 2) “The previous sentence is true" is false because 1) says it is. This creates a new iteration of this couplet as follows:

1a) The next sentence is true.
2a) The previous sentence is false.

By developing their implications we conclude 1a) “The next sentence is true” is false because 2a) says it is and 2a) “The previous sentence is false” is true because 1a) says it is. This creates a new iteration of this couplet as follows:

1b) The next sentence is false.
2b) The previous sentence is true.
This would conclude “The next sentence is false" is true and "The previous sentence is true" is false.

We can continue this derivation ad infinitum, but already a pattern is clear. The sentences (l) and (2) are not simultaneously both true and false, but alternate between truth and falsehood as we think about them. But this is still an unsatisfactory state of affairs for a concept of Truth and Falsehood which is supposed to be both complete and consistent.

**Solving the Epimenides Paradox**

A key distinction of the Inversion Theory of Truth is the division of falsehood into “not yet disproven” statements, which contain essential falsehood, and “already disproven” statements, which contain superessential falsehood. The essential falsehood is what makes not yet disproven statements interesting, compared to tautologies and definitions. Once disproven, they still have knowledge content, but they are no longer “best knowledge”. This version of the Epimenides paradox can be resolved by foregoing the absolutist assumption that what is not false is true. Instead, we will assume that what is not false is knowledge, defined as “meaningful subjective ideas which make falsifiable predictions and which have not yet been disproved, but which are uncertain”. We may also deny absolute certainty to allegations of falsehood, or disproof, since, as we have seen, these, too, may be mistaken. Reconstructing the paradox to accord with the properties of knowledge, we begin:

1) "The next sentence has been disproved, though not with certainty.”
2) "The previous sentence has not been disproved, but is uncertain.”

What this couplet is saying about itself, and continues to say through any number of iterations, is that it is uncertain whether or not it has been disproved, and hence, that it is undecided. This, unlike being simultaneously true and false, is logically permissible.

With this couplet, we have jettisoned the conventional concept of truth, which gave an inconsistent answer, and relied instead on our concept of knowledge. In so doing, we have gained both consistency and the result, already put forward, that knowledge is uncertain.

Tarski, in Logic, Semantics and Metamathematics, Chapter VIII, the Concept of Truth in Formalized Languages, considers the following couplet:

1) The next sentence is c.
2) C is not a true sentence.

He infers, by substitution, that "C is true if, and only if, C is not a true sentence," creating paradox. This he could have avoided by foregoing the absolutist view that "not true" means "false". A thing "not true" can still mean "best knowledge". "Not true" can mean either "not disproven yet", or "already disproven." Reconstructing the couplet and its inference, we conclude that "C is best knowledge if, and only if, C is uncertain knowledge." Far from being paradoxical, this is in full agreement with the conclusions presented earlier in this chapter.

Nevertheless, Tarski persisted with the concept of truth, attempting to produce a definition consistent with logical usage. Borrowing mathematical symbols from an earlier, unsatisfactory attempt to eliminate the Epimenides paradox (in Whitehead and Russell's
“Principia Mathematica”), he created formal languages within languages: these were called "metalanguages". Ideas could be represented within a Formal language by strictly formulated strings of (mathematical) symbols, and these could be manipulated by means of strictly defined logical operations to produce logically valid consequences of inferences. By translating the symbols into those of a symbolically richer (but fully inclusive) metalanguage, sentences of metalanguage referring to themselves in their original linguistic formulation could be constructed. Using this hierarchical "language of the calculus of classes", Tarski hoped to create a formally correct and materially adequate semantic definition of the expression "true sentence". What he described as a "special peculiarity" of the calculus of classes, with respect to colloquial languages, was responsible for what he considered to be his success. Two such features that I can identify include, firstly, a complete absence in the former of any appeal to empirical evidence, and secondly, a recursive definition of correspondence (or "satisfaction" of a sentential function by a sequence of objects). A recursive definition is one which seems to define a thing in terms of a simpler version of itself. Neither feature inspires much confidence.

In the summary concluding Chapter VIII, Tarski attempted to outwit the paradox in the following way (using this particular form of symbolic mathematical language): We can construct a sentence X of an object science, satisfying "it is not true that X is an element of the class of provable statements, if, and only if, ‘p’", where p represents the whole sentence X. Translated, this means we can construct the sentence: "This statement is false if, and only if, it is true". Using the language of the calculus of classes, Tarski was able to reduce this to: "X is an element of the class of true statements" (XeTr), "X is not an element of the class of Provable statements" (XgPr) and "the negation of X is not an element of the class of Provable statements" (XePr), in order to conclude that X, while actually undecidable, is, at the same time, true.

Tarski continued: since X is true, it is also true in metatheory, the theory constructed in metalanguage. Since its expression in metatheory contains no specific terms of the metatheory, it can revert to the theory as a decidable sentence: hence truth can be defined provided the science is enriched by the introduction of variables of a higher order. But in making this assertion, Tarski serves only to re-introduce Epimenides’ Paradox: for now he has a decidable sentence that nonetheless contains both (XePr) & (XePr) - (meaning that neither X nor its negation are provable), i.e., the sentence is undecidable.

It is left for me to recall Tarski’s earlier warning that "should we succeed in construction in a metalanguage of a correct definition of truth, then the metalanguage would acquire that universal character which was the primary source of the semantical antinomies in colloquial language".

However, by discarding absolutist assumptions and denying that any true statement can be known, a satisfactory statement can be produced. In particular, note that "X is an element of Disproved Statements", (XePr), is not identical to "X is not an element of Provable Statements", (XePr). Indeed, the only elements of Provable Statements are tautologies, together with definitions and their logical extensions, which form a tautologous network of "if...then" statements contingent upon our accepting the definition. For X not to be an element of Provable Statements, it may either be a self-contradictory or an empirical observation, and if the latter, it is not necessarily an element of Disproved Statements. Also, we have seen that disproved statements can be falsely disproved, hence disproof isn’t certain. The statement:

"This statement is false if, and only if, it is true", must therefore be rephrased:
"This statement has been uncertainly disproved if, and only if, it hasn’t yet been disproved".

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This is equivalent to saying: "This statement asserts about itself that it can’t be decided certainly (disproven) until it is disproven"; in other words, our final decision in this case must be that it is undecided. Likewise, consider the statement:

"This statement is the negation of itself", or, "This statement is false."

We can say of the statement:

1) If false, it is knowledge (since its predicate agrees with this premise)
2) If knowledge, it is tentatively disproved (its predicate denies its own premise) and
3) If tentatively disproved, it is not yet disproved (by denial of its self-denial)

Again, we have determined that the statement cannot be decided certainly, and must remain undecided.

This sort of result can be expected from the analysis of linguistic form conducted by Douglas Hofstadter. He defined two terms:

1) Syntax: predictably terminating tests to show if a statement is well-formed, and
2) Semantics: open ended tests approaching but never reaching meaning.

He noted that the act of interpreting statements involves establishing the implications of all its connections to other formed statements: an object's meaning is not localized within itself. Aspects of its meaning will be hidden arbitrarily long. Thus Epimenides Paradox can be true if, and only if, it is false. (Hofstadler uses "true" and "false" where I would use "decided" and "undecided"). In the mental processing of symbols by which the brain classifies statements as true or false, the act of classification seems to disrupt the processing of the symbols. Hofstadter suggests that the brain can never provide a fully accurate representation for the (classical) notion of truth; that it would require physically incompatible events to occur within the circuitry of the brain.
Rejecting the Law of the Excluded Middle for the Excluded Affirmation

The absolutist assumption which has to be dropped to allow the resolution of the various versions of Epimenides' Paradox has a name within the study of logic. It is called the Law of the Excluded Middle, which asserts that every statement is either true or false. This is one of two logical suppositions that Tarski maintained were essential inclusions within the language of calculus of classes. Falsehood is treated by Tarski as being the mutual opposite of Truth, presumably irrespective of whether the nature of any given statement's status is known to mankind or not. There is nothing wrong with embracing such a comprehensive scope within the attribute of falsehood. It accords with the description of falsehood as that which though subjectively experienced, does not exist. However, a fully comprehensive scope does not alone guarantee mutual opposition to truth. For instance, a falsehood that does not objectively exist can no more be paired with its opposite than can be the concept of nothingness. For instance, because lies refer to conditions that don’t exist, or objective nothingness, attempts to win corroborative support for subjective, superessential falsehoods eventually fail, and it is this that provides the basis for Popper's theory of falsification.

The utility of Popper's theory depends on knowledge of falsehood and not falsehood per se. Thus for practical purposes we may treat subjective falsehood as equivalent to "known" falsehood, or the already disproven, with anything else being "possibly false". But even if the concept of "false" is expanded beyond that of "already disproven", to include all statements which will ever in the infinite future prove to be false, one cannot currently label Falsehood to be the mutual opposite of truth. This is because two types of falsehood - the known false and the unknown false- cannot be balanced in opposition to a single kind of (unknown) truth. Overriding this fundamental asymmetry of status creates the type of error-in-logic formally known as a disjunctive syllogism, whereby one proclaims the truth of one of a number of theories on the basis of the falsehood of another. In this case, we would be ignoring the unknowable percentage of statements that will remain undecidable even when resolved to within infinite limits.

My Theory of Subjective Uncertainty which has been advocated in this chapter would suggest 3 possibilities for any proposition:

1) that it is considered disproven
2) that it is not yet considered disproven
3) that it is undecidable

This could be called the Law of the Excluded Affirmation. The criticisms of currently popular philosophies that follow in the next chapter are really nothing more than a demonstration of the effect to be gained by changing our logical exclusion. (Replace the Excluded Middle with the Excluded Affirmation.)

This technique works for any self-referential statement where there is an asymmetry between the two sides of the paradox. For instance, in the original version of the Epimenides paradox, the symmetry of “All Cretans are liars” is broken by denying that liars have to lie all the time. In 1902, Bertrand Russell was stumped by his discovery of the following paradox: “Let R be the set of all sets that are not members of themselves”. If R is a member of itself, then, by definition, it must not be a member of itself. If R is not a member of itself, then it must be a member of itself. This superficially resembles Groucho Marx’s quip that he would never join a club that would allow him as a member. In the case of Russell’s Paradox, one can achieve a weak break of symmetry by allowing part-time membership, alternately allowing and denying membership for self-referential sets as one reads through the paradox. As for Groucho, however,
his case is best resolved simply by not applying to join any clubs.

The other law of logic critical to Tarski's project, that of Logical Consequence, did not escape infection with Tarski's concept of provability, as the following illustration from the language of the calculus of classes demonstrates. Imagine the sequence:

Ao. "O possesses the property p"
Ai. "I possesses the property p"
An. "n possesses the property p"

Correctly, he points out that the sequence does not prove:

A. "every natural number possesses the property p".

Therefore, Tarski proposed sentence "B". B states that Ao, Ai,.., An are provable, not that they have been proved. He reasoned that if B is proved, then A is proved. He then said that if sentence B is replaced by sentence B', the arithmetical interpretation of B, then a rule is formulated which doesn't deviate from the rules of inference with respect to

1) conditions of applicability
2) the nature of conceptions involved in its formulation, and
3) its "intuitive infallibility"

Tarski said that the rule B' is equivalent to an extension of the concept "a sentence proved on the basis of rules hitherto used", which, thus extended, can be extended ad infinitum. But Tarski was wrong. By asserting that "Ao, Ai,..An" are provable, one is asserting that they may be disproved. Therefore, all one has to do is falsify the next term in the term sequence, An+1, (by means of the discovery that "n+1 does not possess the property p") in order to negate the notion that "if B is proved, then A is proved".

To conclude this discussion of Truth, I bear in mind another quotation from Tarski: "Whoever wishes to pursue the semantics of colloquial language with the help of exact methods will be driven first to undertake the thankless task of a reform of this language". I would like to claim the presumption that by replacing Tarski's conception of truth with a satisfactory definition of knowledge, we can eliminate glaring and unresolved inconsistencies in favor of a theoretically desirable uncertainty. I will discuss more of Tarski’s ideas in Chapter 2 under the subject of Relativism.

**The Scientific Act of Faith**

The strength of the ideas we have discussed is that they recognize knowledge to be "of experience" and not "of truth", and that by analogy to subjective events that incorporate falsehood, knowledge incorporates uncertainty. Just as it is the falsehood of the subjective event that enables us to "improve" on the objective reality, so it is the very uncertainty of knowledge that leads to progress in science and technology. In contrast, as we shall see, denial of the uncertainty leads to religious division and strife.

The uncertainty of our subjective experience leaves our best scientific knowledge both uncertain and imprecise. In addition to that, the scientist is granted no guarantees that the Universe won't change overnight all of those characteristics that we know as its "laws". Science can still be performed on this basis, even though religion cannot. Nonetheless, it is tempting for the scientist to believe that scientific laws are inherent characteristics of, and have remained unchanged since, the creation of the Universe. In doing this, we claim for them an objective
existence independent of our own presence and ability to observe, test, and attempt to falsify them. This is equivalent to saying that even though we will never know them completely, they do exist and will probably always continue to exist. "We physicists", writes Steven Weinberg in "Dreams of a Final Theory"(23), have "a belief in the objective reality of the ingredients of our scientific theories" and "a powerful impression that the laws of physics have an existence of their own". Most scientists would deny those schools of philosophy that read laws "into" nature rather than "out of" nature.

Taking this step creates a closed philosophical system. Any questions whatsoever can be explained by saying that even though we don't understand it now, that is simply because our knowledge of the laws of Physics is still incomplete, and that eventually we will approach an understanding of it. This is an article of Faith just like any religious Faith. It is a faith not in God, but in the capacity of the mind to understand the Universe.

Consideration of Universal laws as being objectively constant is an act of Faith. Most scientists and, for practical purposes, almost everyone has that faith, but it isn't essential for scientific observation. It should be noted that Religious faith specifically does NOT grant that the Universal laws are objectively constant. Although God may be believed to be the controlling force of the Universe, there is no reason to assume that God will always wish to run things as they are now. Indeed, various religious ideas specifically predict that God is inclined to change the laws of Physics arbitrarily to suit Himself: i.e., miracles, virgin birth, resurrection, the second coming and the end of the world.

This idea of the closed philosophical system can be represented in the form of a matrix to make explicit the relationship between its parts:

<table>
<thead>
<tr>
<th></th>
<th>EVENT</th>
<th>IDEA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective State</strong> (True)</td>
<td>Facts</td>
<td>Universal principles of cause and effect: Mathematics, physical laws</td>
</tr>
<tr>
<td><strong>Subjective State</strong> (Experience)</td>
<td>Perceptions</td>
<td>Meaningful Theories</td>
</tr>
<tr>
<td>Non-falsifiable (metaphysics &amp; religion, spiritual and introspective)</td>
<td>Falsifiable (and historic knowledge)</td>
<td>FALSE</td>
</tr>
</tbody>
</table>

This matrix, in 2x2 form, makes it clear that meaningful theories bear the same relationship to mathematics as perceptions do to objective events; similarly, mathematics bears the same relationship to facts as these theories bear towards perceptions. What is objective is incontrovertible; what is subjective is subject to falsehood and uncertainty.

**Evolution of Ideas within a Closed Philosophical Matrix**

The matrix above is not a static description but a dynamic one. This can be demonstrated
by describing the difference between our own subjectivity and that of other people. Our subjectivity can be said to result in the production of ideas. These ideas may be as fleeting as the patterns of brain activity that generate unspoken thoughts, or they may be ephemeral speeches carried across the air, or they may be encoded in written form as part of a permanent record. When transmitted to another person, one's own idea can be just as thought-provoking as any other object in the environment, and this often results in still further ideas becoming established as expressions in the environment. It has been noted that ideas are capable of taking on an evolutionary identity all of their own. It is pertinent to summarize the opinions of:

1) R.W. Sperry, the neurophysiologist, in “Mind, Brain and Humanist Values,” 24(1965) wrote that ideas cause ideas and help evolve new ideas. They interact with each other and with other mental forces in the same brain, in neighboring brains, and in far distant brains. And they have also interacted with the external surroundings to produce an unprecedented evolutionary leap, equivalent in significance to the emergence of the living cell.

2) Molecular biologist Jaques Monod, in "Chance and Necessity" 25(1971) remarked on the "abstract kingdom", which he called an "ideosphere", by analogy to the biosphere. He claimed that "ideas have retained some of the properties of living organisms", that they can perpetuate their structure, breed, fuse, recombine, and segregate their content. They evolve their selection on two levels - that of the mind and that of performance. If it alters human behavior to confer a selective advantage on a believing population, it is promoted by virtue of its own value to the population (its own success), and also by that population's success in relation to others. An idea's capacity to become held has little to do with its "truth", and neither does its subsequent performance. Ideas with the highest invading potential, Monod said, are those that explain humanity by assigning us our place in an immanent destiny, in whose bosom anxiety dissolves.

3) Richard Dawkins, evolutionary biologist, in “The Selfish Gene” 26(1976), gave a name for the unit of replication and selection of an idea in the ideosphere - a meme. (This coinage was the original derivation for the internet sayings popular today, which are, indeed, replicating ideas within the ideosphere.) It exists in a "meme pool" and competes with others for attention. They are susceptible to distortion, mutation and competition between mutants as well as other memes. Some discredit or contradict others, and others form groups which are mutually self-reinforcing, i.e., church, architecture, rituals, music, art, and writings, together with belief in God, life after death, fear of hell-fire, and the meme of "blind faith", which secures its own perpetuation and that of the whole group by the unconscious expedient of discouraging rational inquiry.

4) Douglas R. Hofstadter, 27 introduces self-reference, by adding to a system of ideas (a "scheme" of memes) the final "hook". This is the instruction: "It is your duty to convince others that this scheme is true." He cited a letter from Donald R. Going, of Oxon, Maryland, who noted that many doctrines are special cases of a statement V (for villain): "The villain is wronging the victim", which, together with a self-replication "hook", implies that we must convince others of this villainy. He parodies this by proposing a type V statement: that "self-replicating ideas are conspiring to enslave our minds". If we accept this type V idea, then we must distrust as conspirators all ideas of type V, and if we apply the self-replicating "hook", we are contributing to the very villainy we seek to denounce. This is, he suggested, an example of Epimenides' Paradox; named after the man who claimed to always tell lies.
5) It is my belief that early in our history certain tribes of man evolved from being capable of primitive communication to being able to transmit ideas. Thus advantaged, they must have been able to evolve rapidly over rival tribes and obviously became predominant. Then groups whose common ideas, however far-fetched, resulted in social cohesiveness, prevailed over their enemies and their societies became successful. History documents successful societies in many different times and locations whose communal behavior was, to say the least, bizarre. What is happening? Sir Fred Hoyle and Chandra Wickramasinghe maintain that since then we have been evolving towards an intelligence bequeathed us during the formation of the present universe, while Pierre Teilhard de Chardin would say that since then our minds have been evolving spiritually towards the day when we can all come to know God. The ideas in paragraphs (1-4) above imply that man's mind may have ceased to evolve directly after thinking the first idea, and has since become a mere medium for the expression of memes, which have evolved in their own independent way since then. In support of this conclusion we should note it is a truism that human nature has remained unchanged... But, the ability of memes to propagate like living organisms is not enough to cause evolution of ideas - there must also be a source of new ideas. Very few people generate a single new idea in their entire lifetime, and the odds against it becoming accepted are heavy. That is why the evolution of society is so painfully slow. But, nonetheless, it can be said with confidence that we are dealing with organic and not abstract evolution. Memes can only evolve through new ideas, and these can be created only by the minds of persons, who, in turn, can only evolve via genes. This chain fixes memes as a substrate of mind (and hence genes) and not vice versa. This chain is annotated in the following diagram:

<table>
<thead>
<tr>
<th>GOVERNANCE</th>
<th>GENES</th>
<th>WILL TO REPRODUCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic Rules</td>
<td>Transcription</td>
<td>replication</td>
</tr>
<tr>
<td><strong>INTRACELLULAR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geometric Principles</td>
<td>Morphogenetic field</td>
<td>meiosis</td>
</tr>
<tr>
<td><strong>ORGANISM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Environmental Factors</td>
<td>Survival instinct</td>
<td>Evolution</td>
</tr>
<tr>
<td><strong>MIND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consciousness</td>
<td>Thoughts</td>
<td>Gratification</td>
</tr>
<tr>
<td><strong>IDEAS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>Proselytisation</td>
<td>MEMES</td>
</tr>
</tbody>
</table>

Societies have evolved to protect those members who, although important, will never contribute a new idea themselves, while, at the same time, society is evolved through the minds of certain members who can receive ideas accepted by that society and use them to create new ideas. In answer to the paradox, it is not self-replicating ideas that are conspiring to enslave our minds, but our gene pool (i.e., mostly other people's genes) through the society that has come to
represent it, that is conspiring to enslave our minds by the use of self-replicating ideas. Fortunately, our minds, having broken free from the control imposed by the pure self-interest of our genes, also remains more than a blank slate for the expression of memes from the environment. In fact, a complex mind, which awaits examination in a later chapter, is necessary to adopt thought-out behaviors for which it considers itself responsible.

**Popper’s Theorem of World 3**

The previous discussion is a natural introduction to WORLD 3, the autonomous realm of ideas. This construction of Sir Karl Popper is based on his dynamic theory of the formation of knowledge, with which he replaced the age old and inadequate concept of Induction derived from Aristotle. Popper begins not with an observation out of the blue, but with (1) a problem - an observation that specifically contradicts the current body of accepted knowledge. (2) A proposed solution, i.e. a new theory, is thought up to explain the contradictory observation. (3) Testable propositions are deduced from the new theory. (4) Observations and experiments attempt to refute the new theory and finally, (5) A preference is established between the new theory and competing ones. The replacement of an old theory by a new one was named a “change of Paradigm” by Thomas Kuhn, whose book “The Structure of Scientific Revolutions” introduced the term “Paradigm” to mean “the current body of accepted knowledge”. It is fair to say that it usually takes many problematic observations to threaten the theoretical basis of a paradigm, because, at first, scientists will ignore or “explain away” such counter-instances. And old paradigms are never rejected until the theoretical basis of an improved paradigm has established itself through steps (3), (4) and (5).

The origin of the "current body of accepted knowledge" with which any new observation may fatally clash is itself always the stage (5) of a prior process, when a preference has been formed by most scientists between a new and competing theories. Hence there is a regress of conflicting ideas that extends all the way back to the theories of Aristotle himself. Ultimately it is our expectations, not our knowledge, that is challenged by a new observation, and our ultimate expectations are inborn. These expectations are incorporated in the process of converting objective events around us into subjective ones, so that if we "see" a branch in front of us, and we reach out and touch it, we expect to "feel" it. Popper was struck by the fact that even our power to make observations is based on theories incorporated by living organisms in the evolution of their sense organs.

As British philosopher and author Bryan Magee put it: Popper's theory of knowledge is coterminous with a theory of evolution. Problem-solving is the primal activity, and the primal problem is survival. All organisms are constantly, day and night, engaged in problem-solving; and so are all those evolutionary sequences of organisms - the phyla, which begin with the most primitive forms and of which the now-living organisms are the latest members. In organisms and animals below the human level of sophistication, trial solutions to problems exhibit themselves in the form of new reactions, expectations and new modes of behavior. In the biological process of evolution, seen as the history of problem-solving, one development was of an importance above all others. The development of language made the development of abstract reasoning possible, and marked the emergence of Homo sapiens from the rest of the Animal Kingdom. During the process of civilization the dynamic nature of the formation of knowledge leads to the creation from what Popper called "World 1" (objective things) and "World 2" (subjective minds) a "World 3" of objective structures which are the products, not necessarily intentional, of the subjective minds, but which, when once produced, exist independently. We may explain how this happens by using the 2 x 2 matrix of Truth and Meaning in a dynamic rather than static context.
We begin with a set of objective events related by a set of objective ideas, or the laws that govern them (World 1). The objective events are perceived subjectively with the formation of subjective ideas and thoughts (World 2). Behavior then creates objective events, or new sets of objects and happenings, related by a set of subjective ideas, or the thoughts that led to their creation (World 3). From this point onwards, objective events are governed by subjective as well as objective ideas. Subjective ideas and thoughts lead to a change in objective events (speech or books or monuments, etc.) which leads to change in subjective perceptions. These interactions in turn cause change in subjective ideas, and so the process is a helically dynamic one. Sir John Eccles, in espousing Popper, wrote in “The Understanding of the Brain” that Cartesian dualism became unfashionable with many people. They embrace monism in order to escape the enigma of the brain-mind interaction with its perplexing problems. But Sir Karl Popper and I are interactionalists, and what is more, trialist interactionalists! Eccles was, in fact, a Catholic, and his dualism was a denial that death marked the end of being a person, but rather, held the possibility that our spirits, God given, might survive independently. Nonetheless, he provided a useful illustration of Popper’s three worlds:
<table>
<thead>
<tr>
<th>WORLD 1</th>
<th>WORLD 2</th>
<th>WORLD 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Objects and States</td>
<td>States of Consciousness</td>
<td>Knowledge in Objective Sense</td>
</tr>
<tr>
<td>1) Inorganic matter and energy of cosmos</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2) Biology structure and actions of all living human beings and human brains</td>
<td>Subjective knowledge: perception, thinking, emotions, dispositional intentions, memories, dreams, creative imagination</td>
<td>-</td>
</tr>
<tr>
<td>3) Artifacts</td>
<td>Material Substrates of: human creativity, tools, machines, books, art and music</td>
<td>Records of Intellectual Effort: philosophical, artistic, technological, scientific, theoretical systems, scientific problems, critical arguments</td>
</tr>
</tbody>
</table>

I have redesigned the table into a diagram to emphasize the progressive nature of this process over time.
This diagram demonstrates the dynamic interaction between the 3 Worlds. It depicts the contents of the table rearranged as a helix with the time axis downwards.

The solution of problems by creation of objective events from subjective ideas leads to structures that may become a centrally important part of the animals' environment: the bee's hive, the bird's nest, the beaver's dam. For humankind, the next most important advance after the development of language was the development of writing. Now, not only could our behavior be converted into objective events, but so could our knowledge; into tablets, parchments, monuments, manuscripts and books. This "objective knowledge", as Popper calls it, carries with it the same uncertainty of content that it had as a subjective knowledge, but it shares with objective events and ideas that quality of existing independently of being known. People have developed these World 3 structures into schools, academies, libraries, churches, militias, institutions and governments: in short, all the paraphernalia of society; yet World 3 can be seen to depend on a process of continuous change. This continuous change guarantees for humankind a history without any need for a driving force such as postulated by the German philosopher Georg Hegel. Instead, society changes through problem-solving, in a helical fashion through time from one problem to
the next. The recognition that the function of society is collective problem-solution has explicit
implications for the manner in which society should run, as detailed by Sir Karl Popper in “The
Open Society and its Enemies”. 29

World 3 as Arbiter Between “True” and False Knowledge

If society is to solve its problems successfully in the 21st Century, reasonable definitions
for Truth, Falsehood, Knowledge and Meaning must become established, and belief in
Absolutism must perish. It is necessary to recognize that all of experience including perceptions
and knowledge is both uncertain and partially false. Since propositions, sentences and beliefs are
expressions of our perceptions, experience and knowledge, then they, too, must contain
uncertainty and inherent falsehood. Falsehood is found in the very act of our each perception.
Noise, color and tactile sensation are just examples of things which we experience that have no
existence outside our experience. The very act of perception furnishes us with knowledge of that
which isn't so

In spite of this, current philosophical teaching insists that, "One cannot know what isn't
so. If anyone should know 'p', then 'p' must be true. If not, then the person only thinks he knows
it". (Here, 'p' is a symbol used in logic to indicate any particular concept). Such a view cannot
possibly be acceptable. It begs the question to say that 'p' must be true unless the knower is
mistaken, because no cosmic grader has been defined to mark our knowledge correct or
incorrect. In contrast to this impossible situation, I submit that there is no difference subjectively
between knowing and thinking one knows, at least until a falsification event occurs, which is
why incorrect views are always maintained so stubbornly. To demonstrate how this can be, let us
arrange the following discussion into categories. We will divide the world into the 3 categories of
Karl Popper. World 1, in which we have a genuine, material, concrete object; World 2, in which
we have the subjective, mental evaluation of that object in the minds of two individuals, A and
B; and World 3, in which we have the collective subjective evaluation of that object in the minds
of all humanity, from classical authorities to refereed journals, sworn affidavits and unsolicited
testimony, from videotaped interviews of eyewitness accounts to personal communications from
a third party.

We will further divide WORLD 2, according to my own classification, into the Subjective
Event, in which the object is directly experienced or perceived by individuals A and B, and the
Subjective Idea, in which the object is considered, possibly in its absence. Let us suppose that A
and B have either never seen the object in question or have not seen it for a long time. Let us,
Furthermore, suppose that A maintains the object to be white, while B insists that it is black. Here
we have a difference of subjective idea. The traditional argument would maintain that if one of
the individuals knew the object, then the other only thought that he did. To find out the "true
opinion", the traditionalist would presumably confront both A and B with the object. Now they
are no longer experiencing the subjective idea but are instead contemplating the subjective event.
If the object happens to be white, runs the argument, then B must acknowledge the view of A to
be well proven.

But let us suppose that confronted with the object, A still maintains that it is white, and B
is equally adamant that it remains black. Now we have a difference of subjective event between
two people, or a difference in subjective experience if you will, of the sort that is all too common
in everyday life. There is no way of refereeing this dispute by going closer to WORLD 1 than
our subjective experience. Between that experience - the subjective event - and the genuine
object, or objective event, is a gap of independent existence that we cannot hope to bridge. The
only authority we can consult, the ultimate arbiter in this situation and also those situations in
which we cannot return to or confront the subjective event, is WORLD 3. If all documented evidence referred to the object as being white, then we would have good reason to vindicate the view of A. But we could not be certain, because it only takes one valid experience to the contrary to falsify an argument (Popper). Therefore, the doubt raised by B must persist, and its importance is equal to the extent that his testimony is credible as a valid experience.

And what if we find that even in WORLD 3, opinions are sharply divided? Let us say the problem is whether a Divine Vision, such as Fatima, is either a lie, or hallucination (opinion white) or a manifestation of God (opinion black). Note that one mustn't fall into the trap of asking if it is "real" or "unreal". Even if it began as an outright fabrication, it has entered WORLD 3 and is now at least as real Huckleberry Finn or Tom Sawyer. WORLD 3 consists of records and reports, all of which are "real". Conceding that "Huckleberry Finn", as a work, is real (i.e., has existence), we must ask if it is biography or fiction. Conceding that Fatima was real, we must ask if it was deception, hallucination or manifestation.

In answer to my own question, I find that even in WORLD 3, we cannot distinguish between:

Statement A: A knows ‘p’ is white and B only thinks he knows that ‘p’ is black and
Statement B: B knows ‘p’ is black, and A only thinks he knows it is white.

In my view, and, arguably, that of Popper and that of Hume, this situation is accommodated by saying that knowledge, by its very nature, must be uncertain. By the traditional view, either A or B knows "The Truth", but we don't know which of them knows it, and therefore the Truth is still uncertain. The only way for the Truth to be certain is for it to be put securely away, by definition, in WORLD 1. This is the world of objective events and ideas, and here we can never directly experience it. If philosophers are to persist in applying the word "True" to aspects of our experience, then it must be done in full awareness of the fact that "Truth" is both uncertain and partially false.

**The Philosophical Requirement for Faith**

There is only one kind of faith that can be philosophically justified and that is a faith that averts absurdity. By absurdity I mean solipsism or the belief that one is all alone in an imagined Universe, that, in fact, lacks material. Any philosophy that advocates an absurd position fails on the ground of common sense. We cannot use it to construct a way of life.

If we allow a faith in material, it is but a small step to add that this material should be governed by immutable laws, and that the only uncertainty in these laws is the uncertainty inherent in our knowledge of them. We believe that material and the laws that govern it go hand in hand.

A faith in material and in law is not very personal and unlikely to be considered an adequate substitute for, say, a faith in God. However, it is a necessary first step.

It enables man to aspire towards an understanding of the Universe, which would otherwise be impossible. This is important because people, as Popper demonstrated, are problem-solvers, who from the earliest times have been concerned with understanding the Universe and have exhibited a tremendous preoccupation with their minds. Hence, it is by no means an ill-fitting faith for us to believe that the human mind, the problem-solver, is capable of eventually solving almost any problem and understanding nearly all things. This single belief cleverly subsumes the two beliefs that came before it, since it would be impossible for us to ever understand all things either if material didn't exist or if physical law was capable of random mutations. And our impersonal and remote belief in material and law has been converted to a faith so personal, optimistic and compelling that it surpasses belief in God Itself for immediate
relevance. Only in the few moments of a mystic’s lifetime that he or she spends actually "united with the Godhead" can a religious faith come as close to home as a faith in the power of one's own mind.

It is remarkable that a faith in the human mind to solve problems is simultaneously a faith in the mind of the individual believer and a faith in the collective minds of all Humanity. This brings the cumulative success of human evolution to bear on our individual concerns and, at the same time, ensures that our efforts are an integral part of something much greater. This identification of the individual believer with Humanity as a whole is a thorough philosophical justification for the principles espoused in the “First and Second Humanist Manifestos”. Therefore, the most intimately personal of all possible faiths proves to be a brand of Humanism now commonly referred to as "secular Humanism", and this form of Humanism is proven to be the only faith that it is logically permissible to believe in. This fusion of Humanism with a faith in the power of our own faculties, if it needs a name, can be labeled Personal Humanism. Like Humanism in general, as outlined in “The Humanist Manifestos”, it has implications that may call for a drastic revision in the way people conceive of their human dignity. Such revisions ought to facilitate a more logical approach to problem-solving in our interpersonal domain. Chief among the rewards of this is the recognition of our right to exercise our own judgment.

Because no Supreme Being is an Absolute judge of our actions, it means we must act as judge for ourselves. We are able to exercise the full degree of existentialist, subjective freedom. Whatever we judge to be the right behavior in a circumstance is what we must try to do. Assuming that we are innocent of any intent to do harm, there is no need to recognize the right of anyone to contradict us or to make us feel guilty for acting in accordance with our judgment. Necessarily, in our innocence, we are free from all guilt and all sin.

Just as we suffer from guilt and sin if we fail to realize our Freedom, so will we also be punished if we fail to accept in full our own Responsibility. Without God, we cannot pray to an outside force for guidance or feel that our actions are in any way being supervised by a benevolent agency. This realization should help us to avoid rushing headlong into foolish predicaments, since it will finally be our own responsibility to extricate ourselves. Also, because there is no Supreme Being to take care of us, we learn that it is both hopeless to rely on Providence and futile to hope for an eventual fair world or improvement in one's lot that one hasn't worked for. The new faith tells us that to be underprivileged is, quite frankly, a serious problem, but that by applying our mind to the problem, and by taking responsibility for it, we may hope to solve it by ourselves, or with a little help from our friends. Therefore, Personal Humanism encourages self reliance and will motivate people towards success in overcoming problems that conventional faith may encourage them not to tackle.

Personal Humanism emphasizes that we all have the strength to handle our freedom and our responsibility. But dignity is not composed of strength alone. For our lives to have dignity, they must have a meaning. The very term "meaning" is intimately associated with mind. It is in consideration of this that the great neurologist, Professor Sir John Eccles, came to adopt a personalist philosophy - that central to our experienced existence is our personal uniqueness. Concluding “The Understanding of the Brain”, and despite religious-based dualism, he wrote, "I think that my personal life is given to me by my brain and is undoubtedly dependent on my brain, coming to an end, for all I know, when my brain ceases to be... My coming-to-be is as mysterious as my ceasing-to-be. I believe that there is a meaning to be discovered in this personal life of ours. I believe that we have to live life as if it is a great adventure, and I believe that we have to recognize this in all others". And in concluding “Facing Reality"(31) Eccles wrote “Because of the mystery of our being, as unique self-conscious existences, we can have hope as we set our own soft, sensitive and fleeting personal experience against the terror and
immensity of illimitable space and time. Are we not participants in the meaning where else there is no meaning? Do we not experience and delight in fellowship, joy, harmony, truth, love and beauty where there else is only the mindless universe?"

Individuals derive their dignity from their meaning, and we have seen that people, like other animals, have evolved as problem-solvers. We, therefore, derive our meaning from the nature of the problems which during our lifetime, we are able to solve. These include the problems of learning to speak, to interact, to get through school, to find a job and a mate, in addition to the problem of what to say or do at any given moment to make a good impression. It is on the basis of their solutions to these problems that a person will be remembered.

This is a philosophy that has emphasized the importance, in solving problems, of obtaining best knowledge through observing the principle of falsifiability. So does it, in fact, make any predictions that can be falsified? Well, philosophy is not like a “hard” science, that trades in observable details of the objective world. Instead, it remains tightly bound within the subjective world of logic, reason, and ideas. Nonetheless, there are 2 sorts of predictions that can be tested. Number one: that it can be used to analyze the writings of other philosophers to reveal previously unobserved core logical inconsistencies, inconsistencies that then go on to invalidate much of what they are trying to say. The second set of predictions are of a very “soft” social science sort: (a) that people who adopt this philosophy will be, on the whole, happier with it than they were before (not applicable in countries where apostasy is punishable by death!) And (b), that societies that elect to govern themselves according to these principles, if that were to ever happen, would be happier, more equitable, innovative, educated & prosperous societies than their neighbors.

Those "emotional-strong people" who elect to adapt this new philosophy will be faced with issues requiring judgment and responsibility, freedom of choice between "right" and "wrong", an absence of sin or guilt, a requirement to create peace and happiness, a proscription against greed and aggression; all this in the real world today with human nature as synonymous with Human Frailty as ever it has been. How all this can be achieved without society flying to pieces is the subject of Part Two of this book; but first, we will examine currently popular philosophies to demonstrate key flaws that render them incapable of meeting these needs, as a test of the first prediction noted above.
Chapter One Glossary

Active Subjectivism: The process whereby the subjective knowledge created by each individual selectively improves upon the objective information available to it.

Best Knowledge: Falsifiable ideas which have been tested and not disproven yet.

Correspondence Theory of Truth: That the object in the Subjective state can be described in a manner that exactly matches its Objective state.

Disproof: An observation or series of them that contradict the expectations built upon the predictions of a theory.

Essential Falsehood: The attribution of the property ‘having-been experienced’ to the Objective state; the difference between the object in the Subjective state and the Objective object, as an unavoidable result of creating an experience.

Events: All things, objects, happenings and changes of state.

False: Of statements, contains a fact which has been disproven.

Falsehood: Of experience or ideas, any quality that lacks an objective existence.

Falsifiable Ideas: Subjective thoughts about objects that are accessible to observation and which make testable predictions that can be corroborated or falsified.

Historical Knowledge: Falsifiable ideas which have been tested and disproven.

Ideas: All theories, thoughts, relationships, inferences, extrapolations, and laws.

Intrasubjective: That which is experienced only through introspection.

Intersubjective: That which can be experienced by multiple people.


Knowledge: Familiarity gained by experience; A certain understanding, distinct from opinion. (Concise Oxford Dictionary)

Meaning: The capacity to be understood by manipulation of mental symbols representing objective events and ideas in order to achieve a specific subjective idea.
Mutually Exclusive Subjective and Objective Realms Theory of Truth: Statements can be “True” if they are introspective subjective statements, and the Objective state is genuine, real, not spurious, or hybrid, or counterfeit or merely apparent, but statements about the Objective state cannot be in accordance with reality; they are uncertain, incomplete and contain essential falsehood.

Non-falsifiable ideas: Subjective thoughts about objects that are inaccessible to observation, and make predictions which cannot be falsified.

Objects: All things, events, happenings, and changes of states.

Objective: Of or relating to an object existing independent of mind, belonging to the sensible world and being intersubjectively observable. (Webster’s 7th New Collegiate Dictionary); Belonging not to the conscious, or perceiving, or thinking subject, but what is presented to this, external to the mind, real. (Concise Oxford Dictionary)

Objective State: The state in which the object exists, independent of any observer.

Ontology: Metaphysics concerned with the essence of things or being in the abstract.

Personal Humanism: A faith in the collective mind of all humanity including our own minds to be able to achieve dignity through solving problems based on the immutable objective laws of physics and our own active subjectivism.

Representational Exactitude: The impossible condition whereby the senses exactly reproduce the Objective state.

Representational Inexactitude: The condition whereby our senses create an experience necessarily different from the objective state.

Representational Uncoupling: The condition whereby there is no relation between our subjective state and the objective state.

Subjective: Characteristic of belonging to reality as perceived rather than as independent of mind. (Webster’s 7th New Collegiate Dictionary); Belonging to, of, due to the conscious, or thinking, or perceiving subject or ego, as opposed to real or external things. (Concise Oxford Dictionary)

Subjective State: The state of the object as a perception in the mind of the observer.

Superessential Falsehood: Any subjective manifestation, which, in addition to not being identical to the objective base, is not even the result of an essential operation on an objective base; An unnecessary degree of falsehood, representational uncoupling, a “lie” known to be false within subjective terms.

Truth: In accordance with fact or reality, not false or erroneous; In accordance with reason or correct principle or received standard, rightly so called, genuine, not spurious or hybrid or counterfeit or merely apparent. (Concise Oxford Dictionary)
Understand: Comprehend, perceive the meaning of; grasp mentally, perceive the significance or explanation or cause or nature of. (Concise Oxford Dictionary) To have completed a process of subjectivizing the objective state by the appropriate manipulation of mental symbols, so as to obtain a constructive relationship with external events and ideas.

World 1: The Objective State

World 2: The Subjective State.

World 3: Objective structures which are the products, not necessarily intentional, of subjective minds, but which, once produced, exist independently. (after Sir Karl Popper)
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Sonnets from the Southern Bar 2

Foolhardy the explorer who would venture to explain
The limits of poesy, and why I cannot pen
How “This is now” grew out of “That was then”
Nor how the mind all knowing fits inside a tiny brain.
To locate a Theory of Everything in a sonnet’s quatrain
Soberly plumb the meaning of place and time when
My wit impressed women and won respect of men
Blind Tiresias! This memory mocks at laughter and pain

So join me in this research at the very source or well-spring
Together we can draw upon that ferment which so long
Inspired flights above the level poem into soaring song
Here rhymes enjoined to humour form the bonds that stretch to belching
   The value of this philosophy of foolishness is clear
   Poems, songs and friendships grow when nourished well with beer
CHAPTER 2
THE NEGATIVITY OF ABSOLUTISM; ENTROPY AS A POSITIVE FORCE

Throughout history, mankind has sought certain knowledge in the form of philosophical arguments that could be proven to be absolutely correct. It must be admitted that these efforts have borne fruit, with the result that many Absolutist and/or Relativist doctrines have been propounded, all of which claim to be true, and none of which agree with any other. In the previous Chapter, I have attempted to demonstrate that the traditional epistemology has been wrong at the most fundamental, definitional, level. Not surprisingly, therefore, efforts to build a coherent edifice based on an inverted theory of Truth have been as successful as it would be to construct a luxury automobile in which the engine had been installed upside down and backwards. Not only would the resultant vehicle be inoperable, but it might even be dangerous to switch on the ignition! In this Chapter I have examined some of the more famous philosophers specifically with respect to their subjective theories of truth showing how this generated fallacies that corrupted the remainder of their work, thus producing contradiction and inconsistency which rendered them useless, even dangerous, in practice.

I wish to examine the concepts of truth, meaning and knowledge as they have been handled through the centuries. In particular, how all of the philosophers examined in this chapter were
(i) misled, by a misapprehension of the meaning of truth, into a series of unforced errors, and how
(ii) this blocked them from the goal of a coherent philosophy, which,
(iii) caused recurrent, pointless debate between those who
(iv) could otherwise have preoccupied themselves with solving the real problems of inequality, poverty, hatred and division between peoples.

By demonstrating the terrible consequences of this history for us even today, I hope to gain sympathy for the view that a wholly new attitude is needed for philosophy in the twenty-first century.

I apologise here for the focus in this chapter on the works of Dead White Males. From my standpoint, it is necessary to compare my ideas to those who have shaped modern views on Truth and Knowledge, and, unfortunately, they are all Dead White Males. If it is any consolation, none of them emerge with their fundamental notions unscathed. There will be some women philosophers discussed in Part Two.

Having said that, little of importance would be missed by readers who wish to skip over the discussion of some of the philosophers. In which case, I would still read Plato, Aristotle and the section on Relativism before returning to the second half of the chapter, on Religion, the power of Entropy, and God.

Plato 428-348 BCE

Plato, of course, was a prolific writer of philosophical ideas and he recorded for posterity the unwritten dialogues of his teacher, Socrates. In this discussion, we are concerned with his theories concerning the objective and the subjective, and the relations between things, images, thoughts and knowledge, which he developed into a philosophical confabulation that is still philosophically iconic today. Much of this discussion, and that of his student, Aristotle, is based
on Karl Popper’s “An Open Society and its Enemies”. Principally, Plato considered that objective events cannot be adequately known because they exist in a flux of constant change. Instead, they are changeable, destructible counterparts of an ideal Absolute, which exist as real, tangible, eternal Forms of ordinary objects, that exist beyond time and space. This doctrine is a form of Idealism: that true ideas and not objects constitute the ultimate reality. The relationship between ordinary objects and the Forms of which they partake he called "mimesis". The world of Forms and True ideas does not exist within Popper’s Worlds 1, 2 and 3, but both precede them, and will succeed them. We could say that they belong to World Zero. Plato claimed that the empirical world imitates the (true) world of Forms and ideas exactly as the theories of the empirical world "imitate" the truth, and thus our ideas formed from observing the objective world (Popper’s World 1) are merely "like the truth". In so saying, Plato almost could be interpreted as giving a system whereby Truth is objective and not subjective, such that knowledge can only be "like the truth". But this is problematic, because the proximity of "like the" cannot be defined. If we know not the truth, then we know not how "like the" truth our knowledge is. Between the truth as perceived by an ant and our own perception, there must be a vast difference, so how much greater is the difference between our knowledge or experience and objective truth?

But Plato did not seem to consider that his ideal of Absolute Truth lay at the objective level. This can be surmised, in part, from his interest in mathematics, and his response to a contemporary intellectual crisis (1). As Popper noted, the discovery of irrational numbers, probably within The Pythagorean School, threatened the foundations of Pythagorean and Democritean "atomism", a world-view based on the counting of natural numbers - i.e., arithmetic. Plato's solution was to develop "geometry". He treated irrational numbers in such a way as to allow construction of elementary particles (Platonic bodies) out of triangles with irrational square roots of 2 and 3. (Plato believed that all other irrationals could be obtained by adding to rationals multiples of 2 and 3 - a belief subsequently disproved by Euclid). His triangles he believed to be copies of unchanging "Forms" or "Ideas", which were characterized by appropriate number sequences and numerical ratios between consecutive series. These series were represented as angular arrays of dots (gnomons) which assumed shapes, or forms, not dissimilar to constellations in the heavens. Hence a belief ensued that the heavenly shape of things was characterized by numerical Forms.

Plato explained that the changing world or cosmos was made by a Creator as a copy or likeness (eikon) whose original, or paradigm, is the eternally unchanging Being that is. He thought that any account of the paradigm itself would be "abiding, unshakable, irrefutable and invincible", while "accounts of that which is (merely) a copy's likeness of the paradigm will... possess (mere) likelihood." The copy, in being "like the truth" cannot be known certainly, but only by uncertain opinions.

In its unique position beyond space and time, the relation of the Form event to both the objective and subjective events in Plato's philosophy is a relationship between certainty and uncertainty; the same as the relation of the objective to the subjective event according to my Inversion theory. Just as the subjective nature of an event cannot be predicted from the objective structure of the object, so the nature of the Form cannot be predicted from our subjective perception of many objects. In his “Republic”, Plato does group together Forms, Mathematical things, Visible things and Images as being objective, as opposed to subjective, but from his analogy of the Cave, what the prisoners see as shadows on the wall are a poor and indeed, manipulated substitute for the real object, which in turn lacks the permanence and certainty of the Forms. These exist in the sunlight outside and could be appreciated only by leaving the cave, metaphorically, a transcendental experience. His epistemology is that through education we can
learn of the Forms, and that only this comprises True Knowledge, whereas, perception of subjective events and ideas constitutes only belief and opinion. The most convincing illustration of the way in which Forms could become known was provided by geometry, a subject which deals with lines, circles and squares, even though no object is perfectly straight, circular or square. Theorems, nonetheless, are proved about them with absolute certainty using logical arguments. Plato hoped that other Forms may come to be known in the same way. He was unaware, of course, that mathematical ideas are subject to their own uncertainty of incompleteness, and therefore belong in the same world of inconstancy and flux as the rest of the objective universe, Popper’s World 1.

Plato was essentially making the mistake of looking for an Absolute Knowledge instead of being content with subjective knowledge of the objective truth of events including all their fluxes, inconstancies and imperfections. Plato posited that we have an eternal Form being converted into a World 1 object or event through the admission of falsehood, and then we have that objective object or event being converted to a subjective object or event by the admission of further falsehood. We can see that for a Form event or idea to be unerringly and Absolutely Known, it would have to burrow its way into our brains through some transcendental revelation, rather than working its way through the process of active subjectivism. The discovery that the perfect and invariant Forms could cast different revelations into the minds of different people would suffice to throw into doubt Plato’s entire project. Plato's concern for the ideas behind events proves equally misleading. By using mathematics as a model for the Form of Ideas, he shows us that it really is the objective idea he is concerned with. As we have seen, our subjective ideas, including Euclidean geometry, are merely incomplete versions of objective ideas, and it is these direct objective ideas that Plato seeks knowledge of, and not any new category of ideas equivalent to the Forms. In both cases we are able to appraise Plato that the only Absolute Truth he can look for will be at the objective level, and that his subjectively conscious mind will never fully discover it.

The philosopher Antisthenes is recorded as having said "I can see a horse, Plato, but I cannot see its horseness". The idea of Form, however, has a natural counterpart deep within our subjective consciousness.

What really happens when we speculate on a Form is this: Consider some pieces of wood banged together with nails. Subjectively, we conclude that it is a chair, although many other objects can be made of the same materials. Plato would aver that we refer to our rudimentary conception of the Absolute Form for chair, compare it with the object at hand, and agree that all the elements in the wooden object are present in the form chair, in order to reach our conclusion. What, in fact, happens is that our subconscious mind analyzes all the features in the wooden object and compares it to features it has memorized under the concept "chair", and if the coincidence is significant, we sit down. Now we can see that the Form is a subconscious entity involved in the processing of objective to subjective events, whether we become conscious of it or not. It is part of the process of subjectivity, and, far from being absolute, it is different for each individual.

Nevertheless, the concept of an Ideal, revelatory Form beyond the capacity of our ordinary experience went forward to influence every subsequent Absolutist philosophy and religious concept about the realm of the Divine that followed. In particular, Plato had Socrates in the “Phaedo” insist that the soul, being related to the Forms, was immortal, not changeable like the body. Hence, he maintained, his soul would be released from his body as if from a prison. As Phillip Cary, Ph.D pointed out in Great Courses,(2): “Thus Plato stands at the beginning of the long western tradition of ‘otherworldliness’, and rejection of the body. For Plato, the philosopher who practices dying is purifying the soul of attachment to the body and material things. The
Another problem with Plato’s Forms was described by eminent biologist, Dr. Ernst Mayr in his 1999 lecture to the Royal Swedish Academy of Sciences: when Earth-bound objects in all their variety must be compared against a small number of perfect but isolated and completely separate forms, the resultant “Typological” thinking is wholly incompatible with the study of “probabilistic” sciences such as biology or sociology. Instead of being able to see that there is, for instance, a continuum of variation between people of different races, the Platonist sees each race as separate as is a triangle from a square. It would be absurd, of course, to consider that the form “Dog” and the form “Cat” could share a common “form-ancestor”. It was the rejection of typological thinking by Charles Darwin and his introduction of thinking in terms of the statistically variable population that prepared the way for modern ideas in science and in ethics.

**Aristotle of Stagira 384-322 BCE**

Aristotle was the first philosopher of science. He deduced the logical system of reasoning known as syllogism and was also responsible for the most enormous collection of scientific data, both correct and incorrect, compiled for many centuries, including the entire science of zoology as known to the ancient world. Metaphysics, Psychology, Ethics of Politics all followed his conception of a Golden Mean - a relatively moderate style of behavior coolly calculated to promote happiness, which was ambiguously both free and predetermined. Plato was an Idealist, believing that ideas, not objects, constitute the ultimate reality, and he believed in the reality of "universals" i.e. absolute Forms, in the mind of God. Aristotle was a Nominalist, saying that knowledge of universals results through the mental process of categorizing and naming them as mental classifications. The problem of “universals” was the problem of determining what constituted the hard reality to which our mental concepts corresponded, and for a long time, it was thought that it was only in the logical solution of this problem that truth could be found. Whereas today, philosophical Realism is a belief that objects exist in a real world independent of our experience of them, Platonic Realists believed in the reality of the “Form”, or idea, in the mind of the Divinity, upon which all worldly objects depend for their existence. This gave rise to concepts of both mathematical realism and ethical realism. Aristotelian realism was his view that the existence of universals depends on the particular attributes that exemplify them, or, in other words, nominalism. Nominalists believe that universal ideas exist only in our own minds, as a result of our assigning into categories and naming the real objects that exist in the world around us.

Aristotle criticized Plato’s idea of unchanging & eternal Forms, and instead, he proposed to study Nature, the world of things that grow, change, move & become. In effect, he located the Form within objects themselves, rather than in the heavens. He invented the word “Physics” (from the Greek Physis, meaning Nature), as a study of how things change “according to their nature”. He placed the concept of Form within the object, such that a house would be a composite of “Form” - its design or essence - and its material - the wood it was made of. The “soul” of a living thing was its life principle and its movement by which it grew & developed. He identified 4 types of “Cause” for this process, the “efficient” cause being the following of a plan, e.g. of a carpenter, or of parents begetting an infant, the point of which is to achieve a purposeful goal (Gk = telos), or “final cause”.

For instance, a child grows into a man (or woman) because, during its process of “Becoming” it contains the Form of a man (or woman) - the potentiality of becoming. To understand the process of change and growth, Aristotle needed methodological study, with “logic” in thinking, plus “classification”. As Norwood Hanson discusses in “Patterns of
Discovery” (Cambridge University, 1958), Aristotle set out the principles of inference: Deduction (the derivation of a conclusion based on a theory and an observation), Induction (the derivation of a Hypothesis based on a series of observations) and a 3rd, apagoge (translated by Charles Sanders Pierce) as abduction, or retroduction, and described thus:

A surprising observation, p, is made.

P would be explicable if hypothesis H is true.

Hence there is reason to think that H is true.

where H requires a creative leap of imagination.

Aristotle divided objects into different categories based on their likeness, and was able to classify whales as mammals, not fish (they are viviparous). He developed an experimental method and used it to study the embryology of chicken eggs, dissecting an egg each day to describe the pattern of development. Unfortunately, Aristotle's work contained much that was absurd. He knew nothing of muscles, not even their existence. He didn't distinguish between arteries and veins and thought the brain an instrument for cooling the blood. He believed not only that man had more skull sutures in his head than woman, but also more teeth. He believed that man had only eight ribs on each side and that the femur was perfectly straight. But much worse than the errors it contained was the fact that his philosophy contained no means of expurgating them: his syllogism did not generally appeal to experiment to check the validity of its propositions.

Aristotle had a conventional view of the meaning of truth. "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, or of what is not that it is not, is true". There is no difference between this and Tarski's definition, so it is subject to the same problems. Aristotle followed Plato in distinguishing between knowledge and opinion. Knowledge, or science, he believed either demonstrative or intuitive. The former comprised inferences via syllogistic middle terms to create demonstrable conclusions. The latter was a grasping of "indivisible form" or essence of "immediate" things and was the generative source of scientific basic premises. Basic premises, which served to end the infinite regress of cause and effect, were held by Aristotle to be necessary assumptions, without requirement for proof. Because one cannot prove all definitions without an infinite regress of definitions, these basic premises were equivalent to dictionary definitions.

Aristotle's definitions were "essentialist" in that they implied that any given object had pre-existing attributes necessary to their identity. Once an object's pre-existing "essence" was understood, it could be described by a definition that it fulfilled and given a name. Aristotle offered a two-part definition, comprising genus and differentia, related and united like matter and form.

Aristotle's idea of perfect and complete knowledge would be the compilation of an encyclopedia containing the intuitive definitions of all essences, and his conception of the advance of science was that of a gradual accretion of such knowledge. To determine whether the essences have been adequately grasped, Aristotle would rely on some unerring intellectual intuition, or mental eye, exclusive of the senses. In "De Anima", the theological part of his "Metaphysics", Aristotle wrote "Actual knowledge is identical with its object".

Because of his faith in intuition's identity with the objective state, Aristotle failed to concern himself with the prosaic matter of fallible opinions, and with any mechanism for determining the reliability of these opinions, including those dealing with intellectual intuition (contemporary cultural considerations also contributed to this short-coming). We have already seen that without falsification of ideas being attempted, science is divorced from reality. As luck would have it, events beyond Aristotle's control would lead to that divorce being perpetuated the better part of 2000 years. Aristotle's works were introduced to western Europe after millennial
delay through the works of Islamic Scholar Avicenna (980-1037) and Averroes (1126-1198). He arrived just in time to be incorporated into the philosophical systems of medieval Christian thinkers collectively known as Scholasticism, which was originally based substantially on the writings of St. Augustine. This movement served to bolster the teachings of the early Church fathers, for instance the hierarchical cosmos of Pseudo Dionysus, which had been disturbed by the controversial 11th century teachings of Peter Abelard. Using historical and intuitive techniques, theologians such as Duns Scotus, Albertus Magnus, Thomas of Aquinas and William of Ockham attempted to solve problems such as the conflict between faith and reason, will and intellect, Realism versus Nominalism, and the proof of God's existence, all within the confines of strict religious dogma. Reason was assumed important as a supplement to and not the antithesis of faith, and thus the scholastics sought to systematize theology as a field of science. The works of Aristotle came to be translated into Latin in 1225 and immediately astounded European thinkers with their vast range and their new perspectives. Aristotle also was in conflict with certain Church teachings. He wrote of an impersonal deity, an eternal existence of matter, and a mortal limit to each individual soul. Following the appointment of Papal commission by Pope Gregory IX in 1231 to render them properly Christian, they became for European philosophy what the Bible was for Theology - an almost infallible text, with solutions for every problem. To question any statement by him became taboo.

It was at this time, fortunately, that men were setting their eyes on adventurous new horizons. The Crusades had opened up the East. Paper came cheaply from Egypt replacing the costly parchments that made learning a monopoly of priests. The compass and astrolabe enabled mariners to set out on the voyages of discovery. Alchemists began to delve into the secrets of the mineral kingdom in an effort to turn base metals into gold. The awakening began with Roger Bacon (d 1294), grew with Leonardo de Vinci (1452-1519) and climaxd with the researches of Copernicus (1473-1543) and Galileo (1564-1642) in astronomy, William Gilbert (1544-1603) in magnetism, of Vesalius (1514-1564) in Anatomy, Willaim Harvey (1578-1657) in physiology, and Sir Isaac Newton (1643-1727) in mathematics, mechanics, optics and universal gravitation.

But even when Papal opposition to this progress finally ceased to be an insurmountable obstacle, there, nonetheless, remained the faulty philosophy of scientific method inherited from Aristotle, and formally expressed by Francis Bacon (1561-1626): that of Induction. In “Novum Organon” (1620), Bacon, overthrowing the ideas of the Scholastics, lists the impediments to proper science. He describes them as the Idols, i.e. of the Tribe, the Cave, the Market place & the Theatre. He explained the formation of knowledge by means of the following stages:

1) Observation and experiment. In the case of an entirely original piece of knowledge, the observation should be random, the experiment serendipitous.
2) Inductive generalization: the idea that the above observation must be possible under different circumstances.
3) Hypothesis: the formal description of why, how, when and where the above observation takes place.
4) Attempted verification of the hypothesis by experiment.
5) Proof or disproof accordingly, and
6) Addition of hypothesis to body of knowledge.

The lack of any Principle of Falsification in this scheme led to the destructive criticism of Hume and much fruitless speculation since then. It would not be until the 20th century and Karl Popper that a more satisfactory theory of the formation of knowledge would be achieved.
Descartes, Rene 1596-1650

Descartes was the first philosopher to reject the scholastic view, which developed from Aristotle's theory of definition, that knowledge could be divided into types distinguished according to the diversity of knowable objects. Descartes supposed that all knowledge is of one kind since its acquisition is entirely dependent on the use of Mind.\(^3\) He did not suspect that knowledge of events and knowledge of ideas are qualitatively different. Furthermore, Descartes made the serious error of supposing that the Mind, when well applied, can attain Truth and Certainty, and that only when misapplied would fall into error and doubt. Thus, it is clear that he failed to appreciate that Truth is purely Objective and can never become subjective knowledge. He did not discover that all subjective knowledge contains error and doubt.

In his “Discourse on Method”,\(^6\) he asserts that the Mind is fundamentally sound and the only means of attaining Truth. The method to be adopted begins by eliminating preconceived ideas and then starts with "self-evident data" known as True and makes doubly sure that each step is self-evident. One must reject everything not self-evident. Already, Descartes has made serious mistakes. What he takes for Truth that is to be sought after by the Mind is, in fact, Knowledge, which is quite different. There can be no "self-evident data known as True", and the steps that follow take no account of the difference between events and ideas. However, Descartes himself does not permit the luxury of taking much data for granted. Because even the existence of the body could be doubted as an illusion, he is left with "Cogito, ergo sum". This marks the inception of the Mind-Brain dualism in Western Philosophy, and Descartes sides with the subjective, conscious mind as representing the true essence of a person, as opposed to the material gray matter. From his position that the subjective thought or idea of ourselves is our Real self, he extrapolates that the idea of God must imply the real existence of God. This conjecture is falsified by the realization that the subjective idea of ourselves, though real, is also false or uncertain; therefore, the implied existence of God must also be false or uncertain. Descartes suggests that no finite imperfect being could have conceived of a perfect Being, and that it can therefore only be that God has revealed himself to man. I would contend that no finite imperfect being ever has conceived of a perfect Being, and the writings of the Mystics bear this out, for they all agree that even in their greatest Spiritual encounters they could no more conceive of the true majesty of God than they could embrace the Sun and Moon.

Because Descartes found little else in the world could be as certain as his own self-awareness, it was necessary to posit an undecieving God to guarantee the validity of our own experience, and he then “proved” the existence of that same God based on the postulated truth of his own experiences; a “blunder that is still referred to by philosophers as “Descartes’ (vicious) circle”. (Massimo Pigliucci - Free Inquiry, Dec 2005/Jan 2006)

Nevertheless, Descartes was on surer ground when describing the material world. His study of sciences concluded that the entire non-mental world is material. His work in optics (refraction), and in Geometry and Algebra, was epochal. All animals, bodies and natural phenomena he regarded as being like machines or automatons. In his “Principles of Philosophy”\(^7\) he gives an account of the world avoiding spiritual or theological explanations and, also, avoiding teleological explanations assuming cause with purpose. His explanations were, however, often incorrect.

In his “Treatise of the Passions”\(^8\) he dealt with the body and soul, together with ethics. He considered the soul to reside in the pineal gland of the midbrain. He considered Correct Thinking to depend on "good sense" which would depend ultimately on knowledge of God the Supreme Good, and that, therefore, Moral activity should be based on True knowledge of the relative value of things. In all of this he has Truth and Knowledge so hopelessly confused that it is impossible for him to realize that the relative value of things cannot be known as an Absolute.
The self-evident step that follows - that there can be no absolute morality - is one never taken by Descartes, nor, indeed, was the subsequent self-evident step, that there can be no Absolute God. And the solution to the Mind-Brain dualism, first raised by Descartes with the eloquent "Cogito, ergo sum" has remained far from self-evident up until this present work of philosophy, which addresses it from a physiological point of view in a later chapter and concludes that the conscious mind can definitely be tied down as a part of a material automation.

Spinoza 1632-1677

Baruch (latinized to Benedict) Spinoza was raised in the Portuguese Jewish community of Amsterdam, a city remarkable in its time for its intellectual freedom, although the Jewish community banished him in 1656 for the extremity of his ideas. Spinoza had a conventional understanding of the meaning of truth. His Absolutism was based on his conception of the objective state as a Substance, defined in “Ethics I” as a unity of all reality as absolute, the Ultimate reality, perfect, infinite and eternal, and therefore unique and equivalent to God. He said that it needed nothing else for its cause or for its existence, while being the necessary cause and ground for all that is. It behaves in Nature like an objective idea (designated Natura naturans-the self-cause). "God acts from the laws (or the necessity) of his own nature only". Things could have been produced by God in no other manner and in no other order than that in which they have been produced. Spinoza asserts that God's Will cannot be called a free cause, but can only be called necessary. So far, so good.

However, Spinoza allows his Substance, or God, also to contain subjective elements, a forbidden conjunction which gives rise to inescapable self-contradictions. It is the "ultimate in being or existence and in thought and knowledge". However, a "Being" is generally construed as an independent existence with an independent Will. If God is, as Spinoza claimed, the objective laws of physics, then God has a Will, but God is not a thing with a Will of its own (God’s Will is determined by the laws of physics) and thus God is not a "Being".

Similarly, because Spinoza attributed Thought to his Substance, he mistakenly claimed that what is found necessary for thought can be taken as true of existence. This enabled him to assume that just because we have a mind that conceives of matter, then the conception and the matter must "agree". This led to his definition of Truth: "A true idea must agree with that of which it is the idea"; and the matter must "agree". "All ideas which are in God always agree with those things of which they are ideas and therefore they are all true". Also, a true idea must agree with its "ideatum", that of which the idea is the idea. An ideatum is something produced by God as a copy of the idea which God had. It is an artificial link between the subjective idea of thought and the objective idea of Nature. It fails to be convincing because it presupposes of objective Nature a subjective function that is capable of thinking of itself.

Spinoza considered there to be two self-evident, unquestionable truths. Firstly, certain concepts apply to reality and can be defined with complete clearness. Secondly, self-evident truths can be stated, and certain unquestionable matters of fact (i.e., "homo cogitat", or "man thinks") can be stated also. Spinoza's position is therefore typical of the philosophy of Subjective Truth.

Spinoza also defines Falsehood (TEI pp 27-28 pars 72 -73). Falsity "consists in this alone: that something is affirmed of some object which is not contained in the concept which we have formed of the object". This sentence describes the subjective falsehood which may or may not be consequent to the affirmation of deliberate lie. Had he omitted the words "in the concept which we have formed", he would then have described the philosophically more significant "essential falsehood" that constitutes the difference between objective and subjective levels.
Elsewhere, Spinoza said that Falsehood doesn't exist in God. This was equivalent to his saying, correctly, that falsehood doesn't exist objectively. But whereas a philosophy of objective truth defines falsehood as that perceived which has no real existence, Spinoza said it is the incomplete part of a True idea, which is to say, the part of the objective state which isn't perceived.

From Spinoza's concept of a false idea as an incomplete idea, it would follow that God alone could have a true idea. For there is only one idea, of the whole, which is equivalent to God. Human "so-called ideas" are incomplete with a degree of falsehood because it is only a part of the infinite intellect of God. A major flaw in Spinoza's theory of knowledge is the facility with which this limitation is forgotten.

Spinoza's treatment of Knowledge was one of philosophy's most sophisticated, although it was marred by an ambiguity of language that has left experts puzzled and divided. He distinguished between at least three types of knowledge.

On the most inferior level, Spinoza identified imagination or opinion, based on inadequate ideas. Inadequate ideas he defined as those based on apprehension via external perception or imagination. They are false to the extent that they correspond to nothing in the eternal unified Substance. Knowledge through the senses was to Spinoza equivalent to knowledge "from the common order of Nature" and is less than the understanding of external objects that is accorded to God. It was of two kinds. The first, "Signs", or "hearsay", as "when we hear or read certain words" (Ethics II,x1 S.2)\(^{11}\) would include, for instance, the means by which he knew of his birth. Such knowledge he thought to be uncertain and corruptible, and, indeed, even the words used to express it he considered mere bodily motions, applicable to an infinite multitude. Hearsay knowledge originates with objective events that become subjective events to some third party, who then leaves, in words, a record of his or her subjective knowledge of those events. The recorded words constitute an objective event, but the meaning of those words is knowledge. It would not be until the twentieth century that Sir Karl Popper would clarify the significance of this "objective knowledge".

Meanwhile, Spinoza, at least by the time he wrote his Ethics, considered there to be a second kind of imagination or opinion, which he called "vague experience", or empirical knowledge, which might be represented as a guess to the outcome of a situation based loosely on past experience. This is equivalent to a straight-forward subjective idea, of the type which can be falsified. Obviously, most "hearsay knowledge" would also be of this kind, but at one remove, and so it would be fair to Spinoza to equate his first level of knowledge with subjective knowledge of the falsifiable kind.

On a level superior to imagination or opinion was Spinoza's Deductive Knowledge. According to Spinoza, people have deductive knowledge when God, not in so far as He is infinite, but in so far as He constitutes the essence of the human mind, has this or that idea. In so far as a man knows something, said Spinoza, he is God. This knowledge would apply to those things equally present in all men and present to an equal degree in the infinite intellect. These are called "common notions", the first principles of his deductive system. They are derived from the fact that, in Spinoza's system, Nature, i.e., Natura naturans, the self-cause, had various "modes", designated Natura naturata, the self-caused. According to Spinoza, these were not only objective events, but also included subjective events: all the thoughts and ideas making up an infinite intellect. The "modes" of thought possessed that attribute in common as a common nature. Modes were supposed to be the only avenue between finite minds and the world at large. The common properties of modes were held to be the point of origin of initial adequate ideas. An adequate idea was defined as an apprehension via the attribute of thought, which carried certainty, and distinctness, and to which the correspondence of an "ideatum", the criterion for True ideas, was merely an extrinsic property. Adequate ideas constitute the intellect and as far as
people have adequate ideas their minds were judged by Spinoza to be all the same. Adequate ideas he claimed to be the basis for public, not private, knowledge, and the grounds for scientific knowledge, since, kornowing properties in ourselves, we can know them everywhere, and thus gain power to discern General Laws of Nature. Spinoza claimed that an intrinsic denomination characterized an adequate idea, as opposed to a true one, even if the correspondence with an "ideatum" isn't demonstrated. For instance, Spinoza would have said that if a workman conceived of but didn't build a machine according to correct mathematical principles, then his "proper conception", the thought of which is true, is an adequate idea. For Spinoza, then, theories could be true without bothering about the niceties of testing for falsifiability.

Nonetheless, in the Scholium, or marginal notes, Spinoza said, "experientia docet". The body of "true" postulates contains hardly anything that "doesn't agree with experience". It appears that Deductive Knowledge, within its framework of adequate ideas, should be provable by the inadequate ideas of experience. It seems that imagination, although false and inadequate, can be united to true thoughts in the adequate use of certain faculties of mind. This happens when it agrees "with the laws of human reason" in the case of "common notions of things, which we always regard as present and which we always imagine in the same manner". This peculiar attempt to justify non-falsifiable ideas leaves Spinoza in the curious position of having to accept "he hates this" as expressing an adequate idea whereas the sentence "I hate this", describing pure emotion, is inadequate. To believe in a form of knowledge the authenticity of which is enhanced by distance from its subject is an invitation to folly.

Spinoza's third level of knowledge he calls Intuitive Knowledge - an apprehension that is accompanied by the idea of God as its cause. It advances from an adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the essence of things. Essence is a force, whereas the attributes of God, particularly those of thought and extension (or bodily motion) are powers. Essence is the endeavor to preserve one's own being. Desire is the essence of man. The essence of the finite is the quest for the infinite, at the same time as the infinite is present within it. This impulse for perfection is the self-affirmation of God within us. Rightly apprehended, said Spinoza, it reveals a Being supremely powerful, wise and good, meeting all the needs of the human spirit. Divine activity is not an extended power and compulsion but an inspiring and persuasive power of infinite love, driving an intellectual love of God, part of God's infinite love for himself and for men as a unity. However, it has no choice but to be so; which contradicts the notion that love cannot be compelled but only freely given. The unity Spinoza attempts to force between individuals and the infinite should be seen as the logical self-contradiction that it is: merely a predisposition to believe that God has a logic outside of thought that resolves conflicting propositions which we are unable to do ourselves.

Essences are the object of knowledge and involve logical universality. Rationalism presupposes that logical laws are inherent in reality and are universals. It is with this type of knowledge that Spinoza would perceive the answer to a mathematical problem. This makes it clear that although Spinoza was dealing with knowledge, a subjective idea, he was trying to imbue it with the properties of the objective idea, or truth, not knowledge. Hence, his quest to rely as much as possible on knowledge of this most superior sort was futile. It has been noted\(^2\) that many of the axioms concerning Deductive Knowledge in Ethics II, i.e., phrased "being the cause of itself" are derived from Intuitive Knowledge. It is Intuitive Knowledge which must underlie the premise that just because we have a mind that conceives of matter, that conception and the matter itself must "agree". Therefore, reason is derived from intuition. Also, it seems that ideas of reason can give rise to ideas of intuition. The "common notions" of reason might give rise to the "formal essence" of intuition. This would leave Spinoza guilty of circular reasoning.

Be that as it may, Spinoza can be seen to have recognized in knowledge categories
equivalent to subjective events, subjective ideas (falsifiable), subjective ideas (non-falsifiable), and objective ideas. But he failed to appreciate their relationship with each other and with the objective event. He distinguished inadequately between an event and an idea and seemed confused by the difference between truth and knowledge.

Whereas Descartes wished to explain the world by mechanics, except for God Who was outside the world and for the soul which was inside the body, Spinoza tried to unite all these. In identifying God, the Laws of Physics, and the forces of Nature with the essence or substance of objects, Spinoza is saying that the objective idea has a causal relationship with the objective event.

But here the objective event is divided into essence and incident, corresponding to the difference between its perceived design and its material composition. If such a distinction is to be made, then the design is an idea subjectively known, while the composition and material is that part that exists objectively. Spinoza suggests that the design of the object is the same thing as the forces of Nature that caused the object. He is incorrect to equate the objective idea (Laws of Physics governing behavior) with the subjective idea (design experienced by an observer not party to the behavior). Even if he had done no more than to postulate a causal relationship between the Laws of Physics and the Subjective Design, he could only partially succeed. The Laws of Physics are understood to remain the same whether or not anyone is extant, and they determine behavior. The behavior resultant determines subjective design only if a subject is present for purposes of perception. Therefore, depending on the existence of a subject, and who that subject is, there is room for variability in the perception of the design that is generated by the action of the Laws of Physics. On the question of determination, he holds that "the decision of the mind and desire and determination of the body are one and the same thing". Since the desire and the determination of the body are mechanical (i.e., to fulfill biological needs), then our decisions are predetermined and we must act out a life dictated by Fate. Intellect and Will are also identical with every idea becoming an action unless interrupted by another idea. He thinks that each individual will therefore endeavor to persist in its own being, and this behavior = design = essence, or substance, with its causation in the objective idea. Hence, his determination is based on the fallacy of believing objective idea to cause subjective idea. Objective ideas may well cause the mechanical requirements of the body which are objective events, but behavior is directed towards the objective idea only when the individual becomes subjectively aware of the mechanical event, and his response is dependent on forming a subjective idea. Since in both these latter processes there is room for falsehood and uncertainty, the resulting action is not absolutely predetermined from the objective ideas of Physical Law/Force of Nature.

Nonetheless, Spinoza’s ideas were influential and positive. As noted by Ibn Warraq in Free Inquiry, Oct/Nov 2010, his Tractatus, denouncing clerical authority for exploiting ignorance and superstition, his identification of God with the Universe, his rejection of Heaven and Hell, revelation, miracles and prophecy, made a profound impression across Europe, despite his excommunication and the banning of his works. He rejected reality beyond the laws of Nature, and proposed a morality of individual happiness in the here and now. As Rebecca Newberger Goldstein pointed out in the op-ed piece “Reasonable Doubt” (NYT, 29 July, 2006), he strongly influenced both John Locke and Thomas Jefferson, who introduced Spinoza’s egalitarian claim that the legitimacy of the State’s power derives from the consent of the governed into the Declaration of Independence.

**Locke, Berkeley, and Hume**

John Locke (1632-1704) argued that the mind is a blank until written on by experience...
and that material causes this experience and the mechanism by which it is written. Our knowledge is only of our experience of the world, and our ideas arise from our sensations, or our thoughts or awareness of our own behaviours. (Great Courses: Great Minds of the Western Intellectual Tradition, 3rd ed. Lecture 39) He showed how simple sensations and reflections could combine to form complex ideas, but he realized that we remained ignorant of the true nature of things. Nevertheless, we could test our ideas against the behaviour of the world. This was more relevant to philosophical inquiry than the Cartesian question of what truth could be self-evident, which Locke considered to be unprovable. Therefore the spiritual nature of man is purely a product of the mechanical world. Locke, during his time in Amsterdam, was influenced by Spinoza’s ideas, and they both strongly influenced Thomas Jefferson. Unlike Spinoza and his Universalism, Locke was firm in defense, in his “The Reasonableness of Christianity”, based on the evidence of the Gospels, of Christianity as the one True religion.

Bishop George Berkeley (1685-1753) argued against this that we have no knowledge of the material world apart from the fact that the mind perceived it. Hence, the material world is a product of the mind's spiritual nature.

Locke argued that the objective events produced in the mind subjective events, but he failed to produce a subjective idea explaining how or why they do so. Berkeley was able to take advantage of this and postulated the primacy of the subjective idea, which, he supposed, once expressed by the mind, could precipitate the experience of subjective events without the intermediary necessity of objective events, or the real existence of matter. He considered the consistency with which our experience was matched by our ideas to count as a "proof" of God. One might suggest, in more modern times, that with the reduction of matter to mathematics effected by Heisenberg and the quantum nature of physics, that Berkeley would be justified to suggest that the real world consisted, not of abstract properties of space-time, but of the thoughts of God. However, any subjectivist theory which seeks to eliminate from reality all objective events must eliminate from reality the biology of the human mind, which is also an objective event. Therefore, Berkeley's proof of God breaks down to the state of Solipsism, whereby one's thoughts constitute an unique, solitary existence.

David Hume (1711-1776) demonstrated the fallacies of Locke & Berkeley by explaining that if the material world doesn't exist, the mind need not exist either: all we experience is a series of perceptions and ideas which we attribute to the mind. Without a mind behind this procession of mental activity there can be no spiritual nature. Whereas Rationalist thinkers claimed that reason and not experience was the foundation of certainty in knowledge, Hume held that everything we believe, i.e., about the causes and effects of things, is ultimately discovered by our experience, as gathered by our perceptions, and thus he was known for his Empiricism.

Hume demonstrated, also, that no laws could be proved causative to the behavior of material objects; that no ideas were conventionally true (he excepted mathematics); and that, therefore, events in the future need not occur as they have done in the past. Hume realized that Baconian induction could not be logically justified: that "even after the observation of the frequent or constant conjunction of objects, we have no reason to draw any inference concerning any object beyond those of which we have had experience". Hume was skeptical both of the notion of Cause and Effect, and the principle of Induction. Cause and Effect allows us to say that if billiard ball A hits ball B, and ball B immediately moves, then ball A caused ball B to move. Admittedly, without the benefit of high-speed photography, Hume argued that we could not actually observe any causal interaction during the instant of their collision, so that all we know is that ball A hit ball B, and then ball B moved. The principle of Induction allows us to say, having observed the sun rise each morning, that it is true that the sun always rises in the morning. However, Induction also informs us of a second category of sequence of observation, that of the
chicken, or now popular turkey, who is fed each morning, until the morning that it isn’t. Clearly, it is not true to say that the turkey is always fed in the morning. There is no way to know, when observing an on-going sequence of events, as to in which category, that of the sun, or that of the turkey, that it should fall; indeed, it should not surprise us if all sequences eventually come to an end. These arguments created a direct conflict with the principles of empiricism, whereby acceptance or rejection of scientific theories may follow repeated observations of the results of experiments. Hume was not able to resolve this conflict, and concluded that we believe in laws due to custom and the product of frequent repetition. It did not occur to Hume, as it did to Popper, that science proceeds not by explaining observed repetition, but by predicting anticipated repetition. Nonetheless, even inborn expectations have no "a priori" validity and we must assume as a matter of faith that the Universe into which we are born is governed by laws which do not arbitrarily change.

Kant 1724-1804

Immanuel Kant set out with the objective of criticizing reason, particularly that of Hume, whose skepticism & empiricism had in one blow demolished the stature of both science and religion, and which awoke Kant, he said, from a “dogmatic slumber”. He began with the standpoint that knowledge, rather than the Objective State, could be an absolute certainty. This is called "a priori" knowledge, equivalent to the term epistem as used by Plato and Aristotle, and through it, objective experience was processed and categorized into forms of intuition which included relations in space and time, understanding, substance and causality, plurality, unity, existence, etc. Kant was driven to this by an overwhelming urge to explain, in the face of Hume's doubt, the attainment of what by then was regarded as the "True Knowledge" obtained by Sir Isaac Newton in his theories of mechanics and of gravity. If science could explain objective knowledge, why couldn’t we explain God, the Soul, Free-Will and ethics? He concluded that True Knowledge was possible because we are not passive assimilators of observation. Instead, we form data into a cosmos during which process we impose on perceptions the mathematical laws inherent in our mental mechanism. Science and maths discover the way things appear to us, they don’t discover objective reality. Thus our intellect doesn't discover universal laws in Nature, but prescribes its own laws. This inversion of Locke’s “blank slate” he called his “Copernican Revolution”. Kant could in fairness say: "Our intellect doesn't draw its laws from Nature but imposes its laws on nature", but in further supposing that the laws thus imposed are necessarily true, he overreached. Popper noted that Kant made "pure natural science" a "necessary result of our mental outfit", which poses a new problem, vis: "How did anyone else fail to discover gravity?"

Kant's Transcendental Aesthetic describes how sensations are organized into conceptions through the absolute mediation of space and time. What he described is a process that converts objective events into subjective events: individual sensations converging to provide complete perceptions. Kant argues that this cannot be a random happening and that it must follow a design. But he fails to realize that the design is biological and fallible and that the resulting perception includes falsehood; instead, he says that design, based on space and time, is mathematical and, therefore, absolute, so that the perceptions are always true. This is, as we have demonstrated, a false conclusion. According to his Transcendental Analytic, sensation is organized stimulus; perception is organized sensation; conception is organized life. Here Kant magnifies his original mistake, assuming that absolutely true conceptions (ideas) follow from absolutely true perceptions because intellect, too, is based on infallible mathematics (or is perhaps the mirror of God's Will). He fails to appreciate that ideas are constructed from fallible
perceptions only to predict other fallible perceptions and that knowledge is uncertain.

He argues that the world must have an absolute order because the thought that knows the world has an absolute order. The laws of thought are also the laws of things. The laws of science are necessary and absolute because they are ultimately the laws of thought that are involved and presupposed in every experience, past, present and to come.

In short, he is prepared to argue that laws of ideas, thought and science are absolute simply on basis of identity with the "laws of experience", i.e., the formation of the subjective event, which we have already demonstrated to contain falsehood in a biologically systematic manner as well as being prone to random functional error.

Yet Kant realized that objective events differ from subjective ones and that their real nature can never be experienced. "We know nothing but our manner of perceiving them; that manner being peculiar to us, and not necessarily shared by every being, though, no doubt by every human being". This last phrase within the sentence is necessary to save his argument; yet it contradicts the preceding phrase and is inadmissible. Without identical perception shared by every human being, the blind and deaf included, his argument for the necessity of knowledge would have fallen. The fall of his argument must surely now be acknowledged.

The final stage of Kant's philosophy is his Transcendental Dialectic. Because the objective event can never be known as it is in itself, the realm of science is limited (but justifiable therein) to the consideration of appearances, and any attempt to reason the strict truth, and also any attempt to investigate metaphysical questions beyond the scope of science, is merely dealing with insoluble puzzles or "antinomies of reason." Therefore, in religion, the "substance" and "cause" that would be applied to questions of the incorruptibility of the soul, free will and the Absolute Being are, in fact, applicable only to the way in which the world organizes experience, so it is a "paralogism" to argue from this their existence externally. As Prof. Robert H. Kane has noted, science seems to say that everything is governed by laws of cause and effect, yet our Will seems free and not determined by the laws of nature. Kant concluded that this contradiction could not be resolved by theoretical reason, and likewise, attempts to prove the existence of God fail because they try to extend the categories of understanding to matters that go beyond the bounds of possible experience, and which can only be taken on faith.

Kant had discovered that because ideas are subjective, there is inherent uncertainty in their correspondence to the real world.

In his critique of Practical Reason, Kant goes on to say that although religion can't be proved by logical reasoning, it can be proved by absolute, mathematics-like morals, based on an innate moral sense that is not derived from experience. This moral law is supreme and universal, it being our duty to follow it, out of our own free will. Thus his Categorical (because it applies Absolutely, no exceptions) Imperative (because we must adhere to it): Act only by that maxim which you can at the same time will that it become a universal law. For instance, a law permitting murder would be impossible for everyone to follow without exterminating everyone; hence, it can't be allowed. He also derived alternative formulas such as his "principle of humanity", which is to treat everyone as an "End unto themselves" rather than as a "means to an end", much more like the "Golden Mean", in practice. His argument is that if a practical reasoning on how to live and act presupposes a moral law, we would believe in it. This is even though it lies beyond the understanding of scientific theory, based on our feeling of conscience, or the moral law within us. The assumption that conscience is a Divine instrument or a manifestation of His Will seems manifest in his work - so much so that he never mentions it. So long as it can be argued that the conscience has mechanical origins, (i.e., is the product of the evolution of the human gene-pool, due to enhanced selection for a population which co-exists in
an orderly society), then, the Categorical Imperative nature of morality is disproved. It can no longer be Absolute and is just another idea.

Nonetheless, from this initial error, Kant compounds his mistake by insisting that the Categorical Imperative necessitates that the only virtue of an action is not that it might create good or happiness, which are impermanent phenomena, but that it be a manifestation of the Absolute morality. Action is judged on the basis of intent, not outcome. The only good is Good Will - the will to follow moral law. The moral law exists not to make us happy but to make us worthy of happiness. Only the feeling of a command to duty proves that Will is Free; reason alone cannot. Similarly, the sensation of duty justifies belief in Life after Death, as it wouldn't exist otherwise. This in turn postulates the existence of God. Our moral sense commands us to believe it.

Therefore, according to Kant, the objective fact that morality is understood by rational people poses an absolute constraint on moral behavior. Justice, based on this morality, should be equally and absolutely applicable to all rational people. It should protect them from being victimized as a means to an end in the creation of greater good or happiness. However, we know instead that the only objective fact posing a constraint on our behavior is Darwinism. Our behavior can be fully consistent with survival of the fittest without any restraint on our behalf towards those weaker than us, and, accordingly, oppression of the poor by their rulers as a means to a rather selfish end is still a common form of government to this day. But it is not necessary for our behavior to be governed by objective demands alone. We have the intelligence to devise a subjective code which could be the morality of Kant, but it need not be. It can be anything, such as the pursuit of happiness, or even the subjugation of the individual, that man collectively chooses.

It is my belief that the Categorical Imperative provides a useful, if not absolute, basis for moral behavior. Doubtless, if it was moral for me to kill someone, and that was generalized throughout society, society would collapse. If it was moral for someone in authority to tell 20,000 lies in 3 ½ years on matters of vital public importance, and this was generalized, then society would collapse. Lies from a political leader destroy the openness a society needs to remain a democracy. Likewise, lies spewing out from greedy entrepreneurs can damage the marketplace of free capitalism. On the other hand, the consequences of telling the truth can, under special circumstances, be monstrous. The classic consequentialist example is the question of how to respond to the SS officer at your door, demanding to know about the Jew hiding in your attic.

I reject the Absolutist assumption that an act is either moral or it is amoral, and instead include the middle consideration of loyalty, which can be either to self, family, nation, or some other cause that one would be prepared to die for. The desire not to lie is located within our self-loyalty, which would be cheapened and demeaned by lying. Loyalty to the self can be amoral, as in a desire to get rich at any cost to others, but in a moral sense, it is a desire to preserve our integrity, or reputation for honesty. It is ethical to lie only in order to protect that to which our loyalty is greater than our self-loyalty. If your loyalty to the hidden Jewish person, or, indeed, the cause of fighting the fascist foe is greater than your self-loyalty, then the lie becomes morally imperative.

**German Idealism**

Because Kant had believed Newton's laws to be absolutely true he had been forced against his personal belief in spiritual indeterminism to become a determinist, concluding that space and time must be part of our mental framework and hence Ideal not Real. Kant did not mean to claim that ordinary objects were ideal, not real, and had no wish to be mistaken for the
Father of German Idealism. In fact, the conflict between realism and idealism was one he despaired of resolving. Kant had tried to reject the so-called "rationalism" of Descartes: that every reasonable proposition must be a true description of the facts. He showed that when trying to construct a system of pure reason, one could always argue, with analogous arguments, to the opposite effect at the same time. Therefore, experience would always be necessary to decide between arguments, and speculative reasoning into metaphysical systems of pure reason was unjustifiable.

In the years soon following, German philosophy reverted to the construction of fanciful metaphysical systems of pure reason, based on the "intellectual intuition", described by Descartes. Georg Hegel claimed "That which is reasonable must be real". Hegel claimed in his Philosophy of Identity that because reason and reality are identical, mind is matter. He cared little for the contradictions that concerned Kant, and claimed that it lies within the nature of reason that it must contradict itself. Kant had shown that in any field that couldn't be "verified" by experience, a thesis couldn't by reason alone be distinguished from its antithesis. Therefore, Hegel maintained that all rationality must work with contradictions and antinomies. It followed from the Philosophy of Identity that if reason must develop through the dialectic of thesis and antithesis, then so must reality. Hegel's position, whereby the world imitates the dialectical nature of thought, is one of dialectical Idealism. It stands in contradistinction to the subsequent dialectical Materialism of Karl Marx, which considered thought to imitate an assumed (though unexplained) dialectical nature of the world.

Hegel 1770-1831

Of Georg W. F. Hegel it has been written: "But the height of audacity in serving up pure nonsense, in stringing together senseless and extravagant mazes of words, such as had previously been known only in madhouses, was finally reached in Hegel, and became the instrument of the most bare-faced general mystification that has ever taken place, with a result which will appear fabulous to posterity and will remain a monument to German stupidity". In fairness, it has been pointed out that Hegel, mindful of the excommunication of Spinoza in Amsterdam for espousing an impersonal world spirit, might have felt a need to disguise his ideas within convoluted language to avoid being banned in turn.

Hegel was graduated from Tubingen in 1793 with a certificate stating that he was a man of "good parts and character", well up in theology and philology, but with no ability in philosophy. As if to prove his teachers right, he instituted the "dialectical movement" in Western thought.

According to these ideas, every condition of thought or of things, every idea or situation, leads irresistibly to its opposite and then unites with it to form a higher or more complex whole. A thesis proffered is contradicted by an antithesis. Synthesis of the conflicting views absorbs and supersedes them, elevating them and preserving them in reconciliation. Therefore, to Hegel, the task of philosophy is to understand the potential unity behind diversity (and the task of religion is to reach that Absolute in which all opposites are resolved into unity).

For instance, Hegel might oppose the thesis "men have a right to Freedom" with the antithesis that "men have a duty to the State". As a synthesis, he would offer that since it was the responsibility of the state to ensure men's freedom, men's duty to the state was the source of their freedom and hence Freedom had no right to conflict with duty. Reasonable as that might sound, it could equally well read that since men's freedom was the source of their duty to the state, the State could impose no duty on men that would impinge on their freedom. Hence the dialectician's message will depend on any previous political affiliation. Because contradictions
are merely absorbed and not eliminated, no actual progress is made. But because any criticism can be absorbed the same way, it is futile to contradict the dialectician's position; a situation Popper refers to as "reinforced dogmatism".  

Dialectic is not logic. Logic is deduction, dialectic is a form of description. Certain developments are asserted to occur in a typical fashion. To be fertile a dialectic must speak only of thesis, its negation, and the negation of its negation; ensuring that contradiction is eliminated. But even under these circumstances, it assumes an underlying Absolutism to assert about this synthesis anything remotely resembling the Philosophy of Identity, or that it constitutes "knowledge of the truth".

Hegel, whatever his sincerity, used his dialectical arguments in the service of Frederick William III of Prussia. He declared that the flux of events through history occurred not as a degeneration from some form of Platonic a priori essence, but instead that events are self-moving towards a Final Cause. This he identified as the absolute Ideal, and the progress towards it, dialectical. Therefore, Hegel can be credited with the notion that History is a dialectical movement, in which people become the instrument of Absolute, acting, according to the Spirit of their Age, to perform, without being conscious of it, the Truth for their Time. In every stage is a conflict which is only resolved through the strife of opposites. On the one hand, each stage of history is inevitable and exists as of Right through the agency of the "Zeitgeist", while, on the other hand, each stage of history is impermanent and subject to inevitable change.

Hegel's Philosophy of Identity was used to generate ethical doctrines of the jurisdiction of the State that would today be described as positivist. Since the Ideal was Real, and since Ideas sprung from Pure Reason, Reason existed as a Reality. Therefore, all that existed as Real did so by necessity, and must be reasonable as well as good. Because there can be no standards but existing standards, the claim of Might to be Right followed from purely historical (and thus factual) standards. Following the return of a reactionary government to Prussia in 1815, Hegel was able to bolster medieval feudalism (threatened in 1789 by the French revolution) by claiming that the "Collective Will", or Spirit, of the nation determined its hidden historical destiny. Each nation must "emerge into existence" by asserting individuality of spirit through a process of fighting for world domination on the "Stage of History". Therefore, such maxims as "The Universe is to be found in the State", "The State is the Divine Idea as it exists on Earth", and "The State is the march of God through the world" became applicable. Furthermore, "The History of the World is the World's Court of Justice". Popper cites this philosophy as leading to the destruction of Kantian German liberalism. Popper blames it for encouraging totalitarianism, intellectual dishonesty and poor standards of philosophical judgment.

In the generations that followed, German philosophers divided into two camps. The Hegelian Right declared that the status quo was legitimized by its very existence and may justly be preserved by any means. The Hegelian Left saw in history the justification for overthrowing the present regime to usher in the inevitable new age. The fundamental flaw of Hegel's dialectic method is to assume that every subjective idea can combine with its opposite to form a complete Unity, or whole. Since the subjective idea is incomplete or uncertain, and its opposite is also incomplete or uncertain, there will always be a substantial margin of uncertainty or incompleteness in their combination. Thus they can never combine to form a whole. From the standpoint of History, this means there can be no Absolute Zeitgeist, and that an element of randomness exists, not only in our present condition, but also in the path we have yet to take into the future. Therefore, the Hegelian Right was incorrect to claim that it had an Absolute authority to rule, just as the Hegelian Left was wrong to claim that any particular type of change would be inevitable. This acceptance of an Absolute historical force was the fore-runner of those errors in Marxism that Popper was able to demonstrate in "The Open Society and Its Enemies".  

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Arthur Schopenhauer wrote to those whose eyes had been opened through the reading of Kant, by his own analogy, as if to fit them with spectacles(18) “The world is my idea", began “The World as Will and Idea.” "No truth is more certain ...than this, that all that exists for knowledge, and, therefore, this whole world, is only object and relation to subject, perception of a perceiver, in a word, idea". Clearly, this formula is indistinguishable from solipsism, since beyond the subject who holds the idea, no other existence is demonstrable. In an attempt to establish correspondence between the a priori subjective idea and the objective state, Schopenhauer discovered a linkage via the medium of the subject's body, which roots the self to the world. "His body is...an idea like every other idea, an object among objects." Because the Will controls the actions of the body, the actions are understood. Because the body is an object like any other object, the meaning of the "transition from the world as mere idea of the knowing subject to whatever it is besides this" is explained by the Will. In so saying, Schopenhauer leaves unestablished, or taken for granted, that the body has a material existence, and leaves the Mind as empty of a material basis as did Bishop Berkeley. Schopenhauer asserted that the Will and the action of the body are identical, and then went on to justify their difference: "but that they are given in entirely different ways - immediately, and again in perception for the understanding". It is precisely within this difference that the subconscious physiology of mental processing takes place. Far from bridging the gulf between subjective and objective, it creates and constitutes it. From its passage through action into perception, Will to Schopenhauer becomes "knowledge a priori of the body", and at the same time, an Absolute driving force behind Universal Laws of Nature. Thus, it becomes identical to the Zeitgeist of Hegel as an Absolute driving force of history, except that it is less susceptible to political machinations. (Schopenhauer acknowledged this in the Preface to the 2nd edition). Instead of saying that Will is a form of force, he said that force is a form of Will. Causality is Will, driving the physical laws. As a power within, Will molds every form, in plants and planets, animals and men. Thus, the Will of Schopenhauer is not different to the "essence or design" of Spinoza, and, as such, we have already seen that as a subjective idea it cannot be equivalent to the objective rules of Nature, in as much as the Laws of Nature cannot be certainly known.

His belief in Will led to a new and grimmer sense of determinism than even that espoused by Spinoza. Schopenhauer claimed Will, as a whole, to be free, because no other Will in the Universe could oppose it; but each individual in that Universe, be it animal, mineral or vegetable, is inescapably determined by the Whole.

This, too, is mistaken because the whole can never be fully decided, and so the future must hold uncertainty. Schopenhauer is famed for his pessimism. His falsely derived doctrine of the absolute nature of subjective Will was linked to an arbitrary decree that Will equals want, and thus, he determined that man could never be satisfied. Nevertheless, he concluded that intellect can overcome Will by making us unselfish, and that Genius is a knowledge made up entirely without Will or personal ambition. He saw Art as a method of elevating us above the strife of Will. Music, said Schopenhauer, isn't a copy of the essence of things but of the Will itself; Symmetry is rhythm standing still.

Religion, he said, is the doctrine of original sin (assertion of the Will) and salvation (denial of the Will). Its power lies in its pessimism: a deterrent from the useless quest of earthly happiness. As Buddhism would have it, the world Will is infinitely stronger than our own, so we should succumb to it at once. The less the Will is excited, the less we suffer. He goes on to denigrate women for the temporary lure of their beauty and men for their youthful exuberance in
falling for it in a manner such that the whole miserable human race is perpetuated.

More correctly, Schopenhauer could have correlated Will with that struggle for survival which produces survival of the fittest. The Will then becomes optimistic, that each one of us will survive. Intelect is the knowledge that one's own survival is not as important as the survival of the species. Genius is the process whereby some of the energy no longer needed to guarantee personal survival will be used for the benefit of the species in general. And, instead of identifying the world Will with Buddhism, he would have had to identify with Darwin in the objective state, such that our chief goal should be the survival of our species and our children. This Darwinian Will is stronger than our self Will, for the survival of our own skin. Our succumbing to this Darwinian Will is the very cause of all this procreation that was the despair of Schopenhauer.

**Nietzsche 1844-1900**

While Friedrich Nietzsche was arguably effective as a poet, philosopher or prophet with his catchy aphorisms, he was at any rate an advocate for just that policy by which Germany was transformed from the Prussia of Bismarck to the Nazi Third Reich. He was famous for his appreciation of music and Wagner’s opera, which he regarded as a unifying foundation for German art and culture. To scale this up to society as a whole, he would require there to be a dictatorial power, as Francis Fukuyama pointed out in “A Philosophy of Context”, his review of Julian Young’s “Friedrich Nietzsche”, (NYT, May 9, 2010). He feared that philosophy and science had created a crisis for Western culture by destroying the order and intelligibility of the cosmos, and, in “Beyond Good and Evil” (1886), he blamed Christianity for creating an escapist alternate reality that anihilated our existence. He is famous for the phrase “God is dead”, though Hegel and even Martin Luther had already said so, this having been discussed by Professor Robert Soloman in “No Excuses: Existentialism and the Meaning of Life”, (Great Courses #437(2000)). In this phrase he refers to the moral state of the world, the habit of “good Christians”, with herd-like mentality, to worship without any passion or commitment. It was a “stale hypocrisy” in which routine sins are forgiven by an hour in church on Sunday. The philosophical process that led Nietzsche to champion the cause of rule by the strongest began with a denial, not that Truth can be Known, but that Truth necessarily has any greater utility than Falsehood.²⁰ He claimed, in “Beyond Good and Evil”, that humans live by untruths and fictions, that false judgements can be life preserving, that challenging these would make life worse, and that renouncing false judgements is equivalent to renouncing life. His “epistemological nihilism” is expressed in phrases such as “There is no truth”, “Truths are only errors that we cannot give up”, and, in “The Will to Power”, (ed Walter Kaufmann, Weidenfeld & Nicolson, London, 1967 S 481), “There are no facts, just interpretation”. He insists that the world of appearances is the only world (or worlds), and there is no “God’s eye view”, or privileged perspective of it, even science being just one perspective. This also rejects absolutist Judeo-Christian morality and gives rise to a pragmatic, even Darwinian, understanding of knowledge as a tool for survival, as pointed out by Prof. Robert Solomon (Great Courses, Great Minds of the Western Intellectual Tradition, 3rd ed., 2000, Lecture 59: Nietzsche - Perspectivism and the Will to Power.) Nietzsche’s perspectivist comparison of Truth to Falsehood makes clear that he embraced both these concepts within the subjective sphere. The justification he gave for such an assertion was grounded in nothing more formal than personal opinion. Nietzsche used the same prejudice to invert the moral opinions of the Utilitarians, by denying that the concept Good was in any way related to the welfare of humanity at large. Instead, he claimed the concept Good to be defined by the actions of that small number of aristocratic people who, supported by the labors of the multitudes with their “slave-like” morality, were to partake in the genesis of a "higher man". The
slaves, living in fear, protected themselves from suffering by inverting the life-affirming value judgments of their masters, celebrating weakness, and the humility of the Beatitudes. The masters, on the other hand, valued suffering as a path to growth. Without suffering and fear of death, said Nietzsche, we degenerate to the “last man”, concerned only with basic, animal needs. Fascinated by eugenics, he hated all forms of democracy, and he hinted that the aristocratic “higher men” will be German, that they will aspire to assimilate all of Europe, and at one point even prophesied that a Europe united under a cruel, harsh government will attempt the military conquest of Asia. But, he did nothing to indicate or distinguish exactly what criteria must be met by the individual in order to enjoy the privileged morality of the aristocrats, as opposed to the restrictive moral code of the common herd. He claimed that the "higher men" would be those driven by a "Will to Power", without being able to conclude whether the Will is Free or determined. He suggested in his most profound insight that the "Superman" will be defined by his ability to identify and Know the source of his Will. That such Knowledge is impossible did not occur to Nietzsche; (it is proven by logic in Chapter 3 of this book). In the absence of such knowledge, the discrimination between the "higher man" and the herd can conduct itself on no other basis that the objective governance of all life - the progression proposed by Darwin. Therefore, despite Nietzsche's emphatic claims to the contrary, his entire system was nothing more or less than Social Darwinism. It is reducible to the simple minded conclusion that the only criterion that must govern our behavior is the survival of the fittest. Indeed, Darwinism is the only objective constraint applied to our behavior; but, subjectively, we are collectively free to impose any other constraints which we reason can be expected to produce better results. In the long run, aggression and bullying cannot be expected to succeed, since the strength to win combat on all sides simultaneously cannot be expected to last forever, and the defenders will always have an advantage of morale over the attackers.

Nietzsche, penned some early anti-semitic writings, such as “All Jews become saccharine when they moralize” and Jews were “the true rulers of the European press.” He was harder on the Chinese, who, resembling “diligent ants”, should be kept enslaved. A misogynist, he wrote that women should be “property” and were “incapable of deep thought”. “If you go to women, don’t forget the whip!” Of war, he wrote “Perhaps mankind will be eliminated. Let it be”. It is claimed, in fairness, that he finished his career strongly anti- anti-semitic, i.e., by Robert Solomon in Nietzsche and the Will to Power (ibid) who says that he would have despised what the Nazis stood for. Indeed, his sister, Elizabeth Förster -Nietzsche, who, with her husband had founded Nuevo Germania in Paraguay and returned to Germany in 1883, went on to reinvent his legacy after his death. She transformed him into a prophet for the Nazi war machine, counseling and supporting the Nazis until her death at 89 in 1935. (Hitler gave her a state memorial service) (“Nuevo Germania Journal”, Simon Romero, NYT, May 6, 2013) As Wolfgang Harich noted in 1987, Hitler incorporated whole passages of Nietzsche into his “Mein Kampf” and was a frequent visitor to the Nietzsche archive in Weimar before and after gaining power in 1933. The aphorism “What fails to kill me only makes me stronger”, from “Thus Spake Zarathustra”, became a Hitler Youth motto, no doubt learnt as such by one Joseph Ratzinger, later to become Pope Benedict XVI. And Steven R. Smith, in his New York Times review of “I am Dynamite - A Life of Nietzsche” by Sue Prideaux (Tim Duggan Books, 2018) asks of Nietzsche and his apologists: “Why did he write in such a way that permitted such misuse? Dangerous thinkers should expect to attract dangerous followers. What else to expect from a philosopher who describes himself as “dynamite”... and promises “one day there will be associated with my name the recollection of something frightful”. No surprise, then, when something frightful comes along.”
Wittgenstein and Logical Positivism

The term positivism refers to any system that confines itself to the data of experience and excludes a priori or metaphysical speculations. The various schools of positivism have applied and extended scientific method to philosophy, working from the assumption that science is the only valid form of knowledge, and facts are the only possible objects of knowledge. Such a knowledge does not correspond to an ideal principle present in a Realist universe, but is nominal: it merely ascribes to objects in the universe names within our thoughts. Furthermore, the so-called world of universals was considered to be an endless aggregate of random, temporarily conjoined particulars not unified by objective ideas. To the positivists, science was a set of verbal formulae by which sense-data could be described and partially predicted. Symbols were to be combined to give "verifiable propositions", which if confirmed empirically, became knowledge. This knowledge also had the character of being "Instrumentalist": it was a mental "instrument" by which random events could be "understood", even though it didn't necessarily correspond to any governing principle present in Nature. It was the concern of the positivists to ensure that philosophy followed the same method as science, with a view to finding principles common to all science which might act as a guide to personal conduct or social organization. In other words, they hoped to achieve a "positive" religion to take the place of conventional godly ones. Logical positivism grew out of the ideas of the critical positivists; which was that science works towards economy on the principle of "least action" as we progressively adapt to our environment. Therefore, the task of philosophy was to seek only the most pertinent of facts and to plan an appropriately minimalist reaction. One of those foremost in presenting these ideas was the physicist Ernst Mach.

The Society for Empirical Philosophy was a group of Logical Positivists founded by Professor Moritz Schlick, who followed Mach to the chair of Philosophy of the Inductive Sciences in Vienna. It included Gustav Bergmann, Rudolf Carnap, Herbert Feigl, Hans Hahn, Victor Kraft, Richard von Mises, Kurt Reidemeister, Philipp Frank, Kurt Godel, Otto Neurath and Friedrich Waismann. It was characterized by its 1929 manifesto: "Scientific Conception of the World: The Vienna Circle". They differed from earlier positivists and empiricists in holding that the ultimate basis of knowledge rests on public experimental verification rather than personal experience.

They made 2 claims about knowledge: (1) that all knowledge regarding fact was to be based on "positive" data of experience, and (2) that beyond the realm of fact is pure Mathematics or logic, the "relation of ideas" of Hume, which they classed as a purely formal science. This was in response to the perception that earlier positivists had failed to explain mathematical or logical truths or to account satisfactorily for the apparently a priori element of natural science. They were distinguished by a "doctrine of unified science", by which there were no fundamental differences between the physical and biological sciences, nor between natural and social sciences. They held that the logical structure of any particular scientific theory could be specified quite apart from its content, and they formulated a verifiability principle for the criterion of meaning. By this, they claimed that the meaningfulness of a proposition is grounded in experience and observation. Expressions of language could be separated by content into those cognitive/factual (centered on verbs such as "is") and those purely emotional (centered on verbs such as "ought"). Their new general theory of meaning was directly derived from the recently published "Tractatus Logico-Philosophicus" of Ludwig Wittgenstein.

In this work Wittgenstein claimed it to be a function of philosophy to indicate what cannot be said (or thought) by presenting clearly what could be said. He included within the realm of the unthinkable the manner in which we grasp the meanings of thought. This process he believed inexplicable or impossible to conceptualize, and he was therefore puzzled by our ability
to understand sentences. It was Wittgenstein's conclusion that sentences could only be understood in the same way as pictures are, although this does nothing to explain the nature of our understanding of pictures. Names by Wittgenstein are presented as substitutes for objects, and when grouped into a sentence they represent a configuration of objects, or a state of affairs, which may be pictured. Accordingly, genuine propositions say only how things are and not how they must be, and the only necessities are tautologies and mathematical equations. Therefore, all genuine statements and hence true statements were to be either:

1. Definitions, or formal logical relations, which if true were tautological and if false were self-contradictions or
descriptions of something, "verifiable" by direct experience.

All genuine (meaningful) propositions were truth functions of elementary or "atomic facts" which can in principle be ascertained or deduced from observation. The statements which fall into this province (science) coincide with the class of all genuine or meaningful statements. Statements in neither class (1) or (2), such as religions or Marxismian historical progress, indeed, any metaphysics which must be taken on faith, were then dismissed as meaningless within the confines of language. Therefore, Wittgenstein held that all so-called philosophical or metaphysical propositions were really non-propositions or pseudo-propositions which were actually senseless and meaningless. He assailed the metaphysician, who "has given no meaning to certain signs in his proposition", for leaving undefined, meaningless terms, although spurious definitions could be given indefinitely. But Wittgenstein failed to realize that the terms of science lack any form of a priori definition whatsoever. Science does not regard the definition of a word as constituting a priori the essence of a concept, but merely as a posteriori abbreviating the essence of the concept. As a well known example given by Karl Popper explains, "A puppy is a young dog" is not the answer to the question "What is a puppy?", but instead answers "What do we call a young dog?". It is merely a shorthand term for "young dog", and no additional information could be gained from analysing it. The biological world of dogs would be unaltered if we had no word for "puppy", only communication would be rendered slightly more cumbersome.(28)

The nominalist view that only empirically definable words have meaning leads to thinking in a purely enumerative language in which all words are labels for objects. In this language, no sentence could be formulated whose truth or falsity could not be decided by merely comparing the defining lists of things mentioned in the sentence. Any statement could be determined to be true or false immediately once its words have been given meaning. That such a system would be unworkable was shown by Karl Popper, who pointed out that every scientific language uses genuine universals: words which are undefined or defined with an indeterminate extension of meaning. These universals cannot be verified not because they are meaningless but because they assert more about the Universe than it would ever be possible to confirm. Popper was also able to show that all nominalist definitions contain inherent universals and are dispositional.\(^1\) That is, any definition depends on principles which must be assumed to exist with a real constancy in the universe, and refers not merely to a thing or event, but its relation (or disposition) towards other things or events. He showed that the sentence "Here is a glass of water" could never be "verified" by experience. The word "glass" refers to a physical body whose definition is dependent on it following a "law-like behavior" both abstract and contingent upon an objective idea, not event. Its dispositional character is observed by dropping it. While it no longer fills the definition of a "vessel capable of holding water", its new description, that of "a broken glass" still belies an original function relative to an idea.

In addition to being excessively "Nominalist", the Logical Positivists also displayed a variable but unhealthy degree of "Phenomenalism". Phenomenalism is the doctrine that

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1. The author seems to have made a typographical error here. The correct citation should be 
\(^1\) rather than \(^1\).
propositions about material objects are reducible to propositions about actual or possible sensations, sense-data or appearances. The effect of such a doctrine on the propositions of common sense are fairly astringent. Historical statements become meaningless unless they also make verifiable predictions about the future. Scientific statements concerning the physics of atoms and subatomic particles, which proved impossible to describe in terms of expected sense-data, were also rejected by these philosophers. Wittgenstein, in rejecting any "necessarily true statements" other than tautologies and formal logic, believed it impossible to have any knowledge of the future. "Outside of logic, everything is accidental", he wrote. Similarly, because no connection could be made between an act of Will on one hand and the consequence of action on the other, Wittgenstein held that "the world is independent of my will". Phenomenalism, taken to its logical extreme by Hans Vaihinger, to whom even mathematical terms such as "infinite, infinitesimal" were illegitimate, resulted in the creation of a solipsism: the denial of the existence of other minds.

Wittgenstein did nothing to resolve these contradictions about the nature of science, in spite of the fact that they would, if taken at face value, invalidate the entire corpus of scientific research. Instead, he delighted in issuing contradictory dictums. He claimed that while science investigates matters of fact, it is the business of philosophy to clarify the meanings of terms and to purge language of linguistic puzzles. "Philosophy is not a theory but an activity", he claimed. Popper pointed out that this sentence does not itself belong to the totality of the natural sciences, and that according to Wittgenstein it cannot therefore belong to the totality of "true propositions". But neither is it false, since its negation, not belonging to natural science, is also not "true". Therefore, by Wittgenstein's own theories, his statement is nonsensical and meaningless. Popper thinks that this is why Wittgenstein wrote "My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless". Nevertheless, in his preface to the Tractatus Logico-Philosophicus, he wrote, "the truth of the thoughts communicated here seems to me unassailable and definite. I am therefore of the opinion that the problems have in essentials finally been solved". Popper assailed this remark as the communication of unassailably true thoughts by admitted nonsense. Indeed, Wittgenstein's opinions are unassailable only by virtue of the fact that he can claim any other philosophical statement to be equally nonsensical. It would seem that to fully understand Wittgenstein, one must purge oneself of the ability to understand anything at all.

The Vienna Circle of Logical Positivists agreed with Wittgenstein's Tractatus in holding logical truths to be tautologies, and in claiming philosophy to have no doctrine but to be an activity of clarifying linguistic puzzles. However, they did not adopt his "picture theory of propositions", considering it insufficiently phenomenalist. In fairness to Wittgenstein, he did in later life reject the key ideas of his Tractatus in his posthumously published "Philosophical Investigations", although not in a fashion that acknowledged any of the criticisms discussed here.

It was the Vienna Circle that compounded Wittgenstein's elementary truth functions theory of propositions with the Verifiability Criterion of Meaning. Wittgenstein had said that to understand a sentence, one must know the references of the names that comprise it, but he did not demand that they be verifiable. In the writings of Moritz Schlick, this became "The meaning of a statement is its method of verification". This bore an affinity to the pragmatic criterion of C.S. Pierce and William James: that only if there is a difference in principle, open to verifiable test, between the affirmation and the denial of an assertion does the assertion have a factual meaning. To the Logical Positivists, verifiability was the criterion of demarcation between sense and non-sense, whereby metaphysics and similar theories without testable means were considered outside the realm of meaningful discussion.
Karl Popper, then a Vienna secondary school teacher of maths and physics, published Logik der Forschung in 1934-35, a work to be much maligned and misunderstood. In it, Popper showed the positivist criterion to be misplaced. He was able to point out that by the positivist criterion, all science, from being knowledge, was meaningless, because universal scientific laws were not verifiable. No matter how often they may be tested and affirmed, they always remain open, as did Newton's Gravitation Theory, to new tests under which they are out-performed. Secondly, scientific principles and theories considered current knowledge have always had their origin in metaphysical speculation from days long before the technological means existed to test them. Examples cited by Popper included the theory of atoms, the corpuscular theory of light, the fluid theory of electricity, and the theory of terrestrial motion. These metaphysical theories at the time could be meaningfully discussed, and, indeed, this led eventually to the development of technological means to test them. Finally, Popper showed that any debate to define "meaning" must include statements dismissable by the positivists as meaningless, since the nature of the demarcation drawn is metaphysical and cannot be tested or measured within any of the fields of experimental science. It was Popper's contention that it was not important to find a criterion for the demarcation between meaningful and nonsense. After all, in practice, we can all tell whether given ideas are meaningful, and with exception of the specialized area of logical paradox, surprisingly little confusion arises during either scientific or everyday life.

Instead, Popper recognized the importance of proposing a criterion of demarcation between science and metaphysics, with the proviso that both qualified as meaningful. And far from making "verification" the mode of the criterion, Popper was the first to solve the riddle of scientific induction by recognizing that "refutability" was the key characteristic of a scientific theory. Hence Popper was able to explain that the demarcation of science was the ability to make predictions which might prove erroneous. Religion and other ideas for which no tests are available fall into the camp of metaphysics, although they remain far from meaningless.

It is ironic that a message this simple was lost on the logical positivists, who for years considered Popper's Criterion of Refutability to be, like their own criterion, one between sense and nonsense, under which interpretation, it was much the same sort of nonsense as their own nonsense. The most basic flaw of Wittgenstein and the positivists was failure to recognize that statements, being subjective ideas, are not things which can be true, together with the failure to recognize that direct experience of events is subjective and necessarily contains falsehood. Had they been more aware of life's necessary uncertainty, they would have been less ready to impose the idea of certain knowledge on their criterion of meaning and the language to which it applied.

Relativism

So far in this chapter I have investigated many historical philosophies concerning the nature of truth, meaning and knowledge from the perspective of their inherent absolutist assumptions. Some of these theories have been, in modern parlance, "rationalist", suggesting that man may solve problems using reason (thought and experience) rather than emotion. Rationalism may be comprehensive (or uncritical), in which no statement is accepted unless it is defensible by logical argument or experience. Popper had already shown this outlook to be logically self-contradictory, since the descriptive statement of demarcation is itself indefensible in its own terms. In particular, neither logic nor experience can prove that tomorrow will obey the same laws as today. Popper pointed to the necessity of a critical rationalism, which acknowledges a faith in reason, itself irrational, in order to serve as a basis for the rational solutions to other problems. This concession to irrationalism is the minimum made necessary by Godel's Theorem and its application to logic. On the other hand there exist philosophies (and, of course, religions),
which are unbound by any attempts to impose consistency whatsoever. Most of these are
Absolutist, and pin their element of faith onto a given figure of authority who is neither governed
by nor predictable on the basis of human reason. However, there is one group of irrational
theories which on surface appearance are anti-Absolutist, in that they reject that any given
knowledge or perceived "truth" can be Absolute. Known collectively as types of Relativism,
these theories have been vigorously championed during the 1980's by Popper in the 1940's and by his students since then which have entirely discredited relativism as a whole.

It is the defining contention of Relativism that the choice between competing ideas or
theories is arbitrary because there is no way to have knowledge of the Objective State. Each
individual will interpret the objective state differently, and to the relativist, the knowledge thus
acquired by one individual is just as valid as the different knowledge gained by someone else.
Because none of this knowledge can be verified, the relativist philosophers maintain there to be
no method at all by which one body of knowledge may be proved superior to another.
Furthermore, it is common for relativists to speak of this knowledge as being of the truth,
meaning that, at least on a subjective level, there are multiple, co-equally valid "truths".

It is a consequence of this fashion of thinking that mental activity should be regarded as
determining the form in which "the world" occurs. Professor Chris Swoyer of the University of
Oklahoma has recognized that facts satisfy the "truth" instead of the "truth" corresponding to the
facts. Not that anyone would claim that merely thinking something within one's mental
framework would make it true. Instead it is posited that the objective world, or
"framework-independent world" cannot determine the ways about which it may be thought within
the mental "framework". Instead, it places constraints on such thought. It has to be assumed that
mental processing (according to a framework) is in some way (although not fully)
complementary to objective systems. There is nothing in the objective "framework-independent
world" that can explain why there are constraints on "truth within the framework" which fall
short of the limiting case of full complementary identification. Full complimentary identification
would yield absolute knowledge, not relativism. Therefore, relativism requires the ad hoc
introduction of a "collateral commitment" which links "basic concepts" of the framework to
additional truths by using logical or evidence-based relations. These are considered "true in the
framework" even if no-one actually believes in them. I apologize for the jargon, but the
example Professor Swoyer cited should help make things less opaque. Consider the
pre-Columbian belief in the earth as flat. The fact that it was really spherical was an idea that
was "true" only "in the framework" until the "collateral commitment" that made it so was
rendered superfluous in 1492. The "collateral commitment" had linked the "basic belief" that the
Earth was flat to the additional truth, eventually obtained by evidence-based relations, that the
Earth was round. Although few "basic beliefs" are essential to a framework, a large proportion of
them must be maintained if it is to retain its identity. Falsification of the "basic beliefs" cannot be
achieved empirically, as this could only create a sense of relativist insecurity. Instead, theories
are falsified if they disagree with that which would be deduced from those first principles that are
"basic to" or "true within" the framework. I'm not sure how this makes any sense. It has been
noted that according to such a scheme, there can be no justification for the "basic principles" and
hence none for distinguishing between "True" and "False." Nonetheless, Professor Swoyer
proposed that "truth" may be relative in a "weak" sense, that is, that things "true" in one
framework may be inexpressible in another. This seems to be an extraordinarily convoluted
process for attempting to preserve the notion of "truth" within Relativism.

Relativism can be seen to fail on different levels. First, there is the level of gross
self-contradiction. If different truths are co-equal, then so is absolutism which denies relativism;
or if absolutism is to be denied, it can only be done with absolute knowledge. It may be argued
that one could, before "converting" to relativism, be free to treat views absolutely and may then absolutely deny absolutism to become a relativist. But, of course, the same process will work in reverse to re-convert relativists back to absolutism.

Next we have the internal level of criticism, directed at the proposition that because knowledge is impossible to verify, it is impossible to distinguish between differing ideas as being other than co-equal truths. As has been amply demonstrated, it is possible to select best knowledge from a range of competing theories on an absolute and empirical basis by discarding those theories which are contradicted by test. For such purposes it is important to discard non-testable theories as outside the bounds of knowledge. Although meaningful, such metaphysics is of less utility than is well-corroborated scientific knowledge, and therefore cannot be ranked with such knowledge as a "co-equal truth".

This argument can be driven once or twice more round the block before finally coming to rest. It would be natural for the relativist to inquire by whose standards the utility of an idea will be judged. For instance, scientific theories may be more useful than religious ones if it is our purpose to construct a hydrogen bomb, but be less than helpful if it is our priority to go to Heaven afterwards. If there were different standards of utility for theories, then "meta-standards" would be necessary to allow choice between standards, and again we face the choice between relativism and the infinite regress.

As disturbing as it might be to the ivory tower-bound relativist, the facts of life as shared by teeming oceanic microbes and the most underprivileged slum dwellers of the third-world megametropoli serve to terminate this discussion with the "coup de grace". The standards we choose subserve our goals and our aims in life. But the most basic aims choose us, in that we did not ask to be born. We inherit certain aims which our evolution will pursue either with us or without us. It would be crude to suggest that the tribe of men who pursue the goal of Heaven while their neighbors prepare a hydrogen bomb will lose the evolutionary argument. But mankind, and indeed all of biology, has survived evolutionary pressures and prospered to this day through its relentless quest to solve problems. It is the practical talents of our ancestors towards problem solving that have resulted in our being here today, just as it is our own ability to solve the daily problems of life in a modern world that allows us the leisure time to discuss the merits of relativism. It is utility, in the sense by which we judge scientific knowledge, that alone is able to satisfy our most important, that is, biological aims. Biology was here before us, and no matter what we do, it will be here after us. It would be foolish for anyone to deny the supremacy of its importance.

However, there is still a deeper level on which relativism may be criticized, and that bears on the sloppy way in which the terms "truth" and "knowledge" are abused by professors of the discipline. Ironically, relativism at this level is just another form of absolutism, for it treats of "knowledge of the truth" in an absolutist sense. Relativists accept that truth is some kind of "exact correspondence" between the subjective state and the objective, and that knowledge is something which attains truth only after it is verified. By ceding to the absolutists that the negation of "true" is necessarily false, the category of "not yet disproven" and hence so far the best knowledge is overlooked. This forces the relativist into an irrational position. The fact is that we can have two pieces of knowledge, for instance old knowledge versus new, or Culture A knowledge versus that of Culture B. To the extent that the two pieces of knowledge are falsifiable, they can be tested to determine which is the Best Knowledge. Knowledge that cannot be verified, and therefore cannot be Absolute, can also be non-relative, i.e., not relatively equivalent to other knowledge but either superior or inferior. To deny this, and insist that knowledge must be either Absolute or Relative, is an absolutist error in the form of a disjunctive syllogism. In the error of a disjunctive syllogism, given theories which include A & B, B is
claimed to be proven merely by disproving A. It is acceptance of the absolutist "either ... or" that leads to the self-contradictory situation at the gross level whereby absolutism and relativism are logically interchangeable. It creates a single certainty shared between the relativists and the absolutists, being that Mankind, left by itself, is insufficiently powerful to solve the riddle of its own existence. As a discipline, "Relativism" is misnamed. "Relative Absolutism" would be more appropriate.

In Tarski's "Logic, Semantics, Metamathematics", 32 regarded as the foundation of the modern theory of truth, there is an important failure to resolve between the absolute truth of logical Positivism (a comprehensive rationalism, compared to Popper's critical rationalism) and the absolute truth of relativism. At the outset of Chapter VIII (The Concept of Truth in Formalized Languages) he set forth his concern throughout with the "classical conception of truth" (true meaning corresponding with reality) as opposed to the "utilitarian conception" (true meaning in a certain respect useful). He suggested that his concept of truth could be verified by two methods: 1) by the establishment of an infinite number of consequences, to create a meta-metatheory, or 2) by empirical methods. Next, he ventured that there exist true sentences which are not provable, and that the class of provable elements is a consistent but not complete deductive system. That was all Tarski had to say about empirical methods, and his notions about "provability" may have reinforced his inclination towards this negligence. He then proceeded to favorably discuss David Hilbert's suggestion of a relative, not absolute, conception of truth: that of a sentence correct or true in an individual domain "a". This illustrates how a failure to understand the nature of empirical evidence can lead to an irresolute oscillation between comprehensive rationalism and the relativist irrational.

Likewise, Tarski noted that all sentences constructed according to Godel's method possess the property that it can be established whether they are "true" or false on the basis of a metatheory of a higher order having a correct definition of truth. Yet an infinite regress of more powerful metatheories is required by such a proposal. Even though this structure is based on a comprehensively rationalist absolute truth, it ends like relativism, being unable to cap its hierarchy of standards. It is thus unable to achieve a final evaluation of merit. Tarski concludes Chapter XVI, on the Concept of Logical Consequence33 with this verdict on the concerns of Wittgenstein and the Vienna Circle: "But I also consider it to be quite possible that investigations will bring no positive results in this direction, so that we shall be compelled to regard such concepts as "logical consequence", "analytical statement", and "tautology" as relative concepts which must, on each occasion, be related to definite, although in greater or less degree arbitrary, division of terms into logical and extra-logical."

Relativism continues to have philosophical and political consequences to this day, as considered by Barry F. Seidman in “Post-Modernism, Humanism, and the Left” (Free Inquiry, Apr/May 2005) He considers how Relativism, according to which everyone’s perception of reality - or truth - has an equal opportunity of being legitimate, morphed in France to become the academic industry of Post-Modernism, which is now widely acclaimed in America. He notes how the political Left, since the 1960's, out of a consideration for the well-being of non-Western cultures, often of color and historically the victims of Western colonization and hegemony, has become marred by post-modernism and with it, the acceptance of double standards. Academically, post-modernism was given a devastating send-up by Professor of Physics Alan Sokol, who, in 1996, famously published a spoof of the genre in “Social Text”, a leading U.S. post-modern journal. Titled “Transgressing the Boundaries: towards a transformative hermeneutics of quantum gravity ([www.physics.nyu.edu/sokal/transgress_v2_noafterworld.pdf](http://www.physics.nyu.edu/sokal/transgress_v2_noafterworld.pdf)), it was laden with appropriate mumbo-jumbo based on sentiments like “the teaching of science and mathematics must be purged of its authoritarian and elitist characteristics, and the content of
these subjects enriched by incorporating the insights of the feminist, queer, multicultural and ecological critiques.” No wonder, as Siedman (op cit) complains, the reactionary right has been able to exploit the resulting confusions by imposing their fundamentalist doctrines, and escaping legitimate criticism. For instance, when the George W. Bush Administration used lies to win support for invading Iraq in 2003, the post-modern focus of the media was to “report both sides” of the argument. In an even worse example, throughout the election year 2000, the news media conformed its reporting to what it thought popular opinion wanted, rather than emphasizing the facts. The lies became buried by the refrains of entertainment, or ideology, which generally win the day through constant repetition. This significantly influenced the outcome of the election. This was one of the most significant events to shape the future of the planet, and throughout the summer, George Bush was portrayed as the “guy next door you could share a beer with”. Vice President Al Gore, on the other hand, was a “stiff eco-nerd” with a wooden sense of humor, so much so that he couldn’t shake the image even when he performed the “Macarena” on national television.(Personally witnessed.) Reporting which does not distinguish between carefully researched “best knowledge” and politically self-serving and obvious falsehood does not well serve democracy, peace or justice. Instead of Postmodernism, Enlightenment principles of progressive Humanism can employ science and rationalism to weed out the lies and pursue just, fair and culturally ethical outcomes.

In conclusion, I would argue not only that relativism is a philosophy inadequate to maintain minimal standards of human dignity, but also that the traditional, absolutist concepts of truth and knowledge are inadequate to protect against philosophical relativism. In contrast, a theory of uncertain truth and of fallibilist knowledge, in the service of a critical rationalism, acknowledging a faith in reason, provides a sturdy foundation for a humanist understanding of our achievements.

**Historicism (also called Historicism)**

Another approach to relativism is to study the historical development of epistemology. This discipline assumes that all knowledge is relative to a historical framework whose own change and replacement cannot be rationally explained. By this view, our history is not to be understood as one of struggling to solve problems dictated by survival in the face of adversity, but instead it is seen as cataloguing a series of adventures with different values systems which have changed in an arbitrary fashion. With the assumption that all theories and all standards of judging them are uncertain, an infinite hierarchy of uncertain evaluations of the previous level is asserted to be necessary. But as we have seen, at the very next level, that of goals or aims, the intrusion of biological facts of life affirms our history to have been purposeful and decisive.

**Historicism (also called Dialectical Historicism)**

By a process of dialectic as first put into widespread abuse by Hegel, the aim of the social sciences is made over into historical prediction. In this procedure, absolutism and relativism are combined through the perverse anti-logic of the dialectic to yield fantastical scenarios which are mutually contradictory and impossible to put under experimental scrutiny. An absolutist theme is chosen a priori: such that history is a pageant of warfare by which states exert their superior "spirit" over each other, or that history is governed by a trend towards increased productivity. This is coupled strategically with an appropriate relativism: since there is no inherent reason to justify one situation over another, either the present should be accepted for no better reason than that it exists, or the future could be accepted for no better reason than that it will come to be.
Popper devoted much of "The Open Society and its Enemies" to showing why neither premise nor conclusion can be taken seriously. In Chapter 25, "Has History any Meaning?", he used as an example the Catholic claim that the success of the church is proof of God's historical will. This type of argument is at best a surrogate for Faith, since the very early Christians could have had no such faith. Indeed, they believed not that Authority should be the judge of conscience, but that conscience should judge the power of Authority. Clearly, if an argument has no better justification than that of dialectical historicism, it must be a very weak argument indeed.

Pragmatism: William James 1842-1910

Following the foundational writings of Charles S. Pierce, the Pragmatists were a school of philosophers who regarded any theory to be "true" so long as it worked in a practical sense. Thus not only must a statement "correspond" to the facts in order to be true, but the correspondence must be verified by having a practical effect. Furthermore, said Pierce, if there is no practical difference in terms of observable result in the world assuming the truth of a statement and how the world would be absent that statement, then the statement is meaningless. Correspondingly, many philosophers agreed that to be the fate of theology. But William James added to Pierce's pragmatism the idea that if a belief should be emotionally satisfying, then it is true. James said in his essay "The Will to Believe",34 that in those cases in which there is no valid intellectual reason for choosing between conflicting propositions, we have a right to believe in the alternative which will, in the long run, and in so far as we can foresee the consequences, give us the most satisfaction. In this way, James denied the existence of Absolute Truth, as in copies of God's thoughts, but claimed instead that Pragmatism could be used as a tool, or theory of Truth, with which to invent new Truths. In this way, rebelling against Authority, we constantly remake the world in our own image. However, in replacing Absolute Truth with pragmatically True Beliefs, he failed to bring us to an understanding of Best Knowledge.

James himself gave us the example of a European seafarer prior to the discovery of America. Asked whether the world was round or flat, he would do best, to avoid ridicule, by answering that it was flat. This, to James, would therefore be the true answer. James had no problem in reconciling to himself the apparent conflict that resulted in 1492 when the truth changed from flat to round, in as much as the "pragmatic" definition of truth referred not to the objective state, but either to what had been "verified", or that which was preferred.

Against this very convenient pragmatic method, I would argue 1) that the objective world cannot be "verified" by our experience, nor does it pay any attention to our preference: therefore the objective state bears limited relation to James' truth. Instead of allowing that truth can be known in various ways, James should have contented himself saying that truth cannot be known, and knowledge cannot be verified. 2) it is always more appropriate to find an intellectually well-corroborated reason for a belief before adopting it than it is to do without one. Indeed, to posit the existence of conflicting propositions, between which there are no valid intellectual reasons for choices, is to place on one's theory a very early and undue reliance on relativism, as no rational scheme would permit such a situation. 3) It is impossible to "judge" the results of any belief in the long run, since it is impossible to foresee the consequences of any action in full. Note that by trying to place a value on such consequences, one is imposing absolutist judgments on a relativist framework, which is not a means of inspiring a great deal of confidence. 4) Pragmatism doesn't distinguish between that which works only in the short term and that which works in both the short and long term. That which works only in the long term (longer than the consequences of which are foreseeable) is thrown out; 5) what is satisfactory to one party is disadvantageous to another. James says the "greatest
happiness" principle of the Utilitarians can be restated as the course which will satisfy the greatest number of demands of the greatest number of people (the expedient way of behaving). But happiness is what people feel inside themselves, and demands are what they impose on other people. Pragmatism says, "In what respects would the world be different if this alternative or that were true? If I can find nothing that would become different, then the alternative has no sense." For example, James cited Nobelist chemist and philosopher Wilhelm Ostwald thus: if theorizing in primitive times about the rising of dough by yeast, one party should have invoked a "brownie", while another insisted on an "elf" as the true cause of the phenomenon ... the quarrel would be unreal since no difference in fact could ensue. The pragmatist would therefore not go on to discover both theories false, would not discover the properties of fungi and would never have utilized penicillin. Indeed, Ostwald was one of those positivist-phenomenalists who refused to believe in the existence of atoms. Such a refusal of belief would have ill-served him in this nuclear age.

Pragmatism is able to embrace both religion and science to give them equal utility only because it is based on a logic that did not seek out and distinguish between theories that can be falsified and those which cannot. Instead, he gave us the assurance that belief in God assures us that everything will be resolved in the end, and therefore we are entitled to the occasional "moral holiday", where one person’s "holiday" is another’s desperation Through the error of false equivalence, the pragmatist blinds himself to any greater utility that one statement may have over the other. For instance, science is falsifiable and, therefore, progressive, while religion is not falsifiable and is, thus, stagnant. Progress has a very different utility than has Stagnation. Ironically, pragmatism has no pragmatic value when it comes to problem solving. Like historicism, it is only an attempt, using relativism, to justify an already made-up mind.

But as Prof Simon Blackburn, in "Truth, a Guide"(Oxford University Press, 2005, Chap 1) points out, James’s attitude towards discovery of the truth goes beyond merely denying differences in utility to statements that seem, in a relative sense, to be equivalent. As a Pragmatist, he justifies the acceptance of one or the other belief as a "leap of faith", saying “We may regard the chase for truth as paramount, and the avoidance of error as secondary, or we may, on the other hand, treat the avoidance of error as more imperative, and let the truth take its chance.” James declares himself for the former choice. Blackburn compares the “blessings of real knowledge” that he thus gained to the folly of believing that an oak tree in one’s garden contains the spirit of Napoleon. Even if it made metaphysical sense to suppose the belief to be right, the odds are overwhelmingly against it. (Why that oak tree? Why Napoleon?) And if, against all odds, you were right, having made such a lucky guess is not actually equivalent to knowing anything. And what if, instead of Napoleon in your oak tree, you believed that Satan inhabited your child, and needed to be dealt with accordingly? Blackburn quotes Voltaire: “Those who can make you believe in absurdities can make you commit atrocities.” There is more of James’s Pragmatism to consider under the topic of logical arguments for God, but, spoiler alert, the consequence of belief in such an arbitrarily incorrect system as Pragmatism is potentially all the more disastrous due to the nominally practical manner in which the theory is employed.

"Warrantability" John Dewey 1859-1952

In an ambivalent quest for certainty, Dewey offered an instrumentalist justification for the "warrantability" of knowledge. He offered a circular definition whereby knowledge is that warranted by instrumental logic through the study of those uses of norms, rules and methods of inquiry by which we successfully gain and warrant knowledge. Instrumentalism is a doctrine that
regards science as an instrument of the mind which is able to achieve practical results without necessarily corresponding to reality. Instruments operate to define ideas; for instance, the act of measuring defines length. The observed consequence is a quality with cognitive status because of the operation's intent, and "length" is in real terms of no significance except as a quantity resulting from an operation. Instrumentalism, like nominalism, is therefore at odds with the Realist theory by which knowledge is reduced to an awareness of that which exists independently of all observation. But in Dewey's work, it is fused with an Idealism, by which the mind and the object known are ultimately one. Therefore, Dewey concludes: "first and foremost that there is complete correspondence between knowledge in its true meaning and what is real. What is known, what is true for cognition, is what is real in being. The objects of knowledge form the standards of measures of the reality of all other objects of experience. If they can be warranted by knowledge, if we can know objects having these value properties, we are justified in calling them real." Dewey felt able to claim "experience warrants existence" without acknowledging that the status of this warranty is limited by inaccuracies in the performance of any operation and by necessary illusion inherent in our experience.

Dewey recognized that a requirement for an instrumental methodology followed as a consequence of Heisenberg's Principle of Uncertainty, whereby no given observed particle actually has a fixed position or velocity, but instead constantly changes through interaction with the act of observation. The visualization of an electron requires the emission of a photon, which causes displacement of the electron, and although this displacement could be calculated, its corroboration would require the observation of another photon and another displacement. Therefore, knowing is a participant in what is finally known. For philosophy, either knowledge defeats its own purpose, or the objective of knowing is in itself the consequence of purposeful operations.

Dewey therefore attempted to determine the protocols of science and relate these to the warrantability of knowledge. Dating from before the publication of Popper's theory of scientific method, Dewey's ideas were based on the traditional concept of induction, with an emphasis on the role of activity. Thus, to advance our knowledge, Dewey demanded "what to do?", whereas Popper would at first have answered the question, "Where are we deficient?"

Dewey rejected the then common assumption about inductive method that the operation of inquiry excludes any element of practical activity that enters into the mental construction of the object known. He rejected the idea that the object itself is antecedent to and unaffected by acts of observation. He described as the "spectator" theory of knowledge the idea that knowledge is only of the "appearance" of objects and not of the objects themselves.

Instead, he argued that science, by becoming experimental, has become a method of practical action, destroying the barrier between theory and practice. Instead of a quest for absolute certainty by cognition, Dewey substituted a search for security through practical means by which, he hoped, "a high degree of probability" of scientific ideas can be established to within a "known and sufficiently small degree of uncertainty." Dewey asserted that "The method of physical inquiry is to introduce some change in order to see what other change ensues" and closely studied the manner in which from this conception, scientific knowledge could be derived. Dewey described the process in three stages. Inserted within his sentence I have bracketed in comparison differences from Popper's theory of scientific method, which, for reasons already given, I consider to be the minimum adequate. Dewey began, "Given data which locate the nature of the problem (Given data which conflicts with an established theory) there is evoked a thought of an operation (there is evoked an explanation of the difference) which if put into execution may eventuate a situation (which will suggest to further thought an operation that will falsify itself if it is incorrect) in which the trouble or doubt which evoked the inquiry will be
resolved (and which if it passes will serve as corroboratory evidence in its favor as a hypothesis). Dewey's suggestion that the operation "tests or proves the ideas that have been improved" overstated his result, which is not proof of the ideas that have been improved, but merely a determination of how they compare against competing ideas. The final act is analytical, not operational, and the final knowledge is best by preference i.e., "preferential", rather than "warrantable."

Dewey vacillated as to the status he believed pertinent to his "knowledge". On the one hand, he realized that "there is no knowledge self-guaranteed to be infallible," and that "hypotheses which have later been rejected have often proved serviceable in the discovery of new facts, and thus advanced knowledge. A poor tool is often better than none at all," and noted that objects of the most valuable current hypotheses, i.e., electrons, are still questioned as to their actual existence. In this respect, the ideas of Dewey and of Popper are in accord. Dewey realized that existential objects could not be considered to bear fixed characteristics, nor could such objects be discovered by experimental method. Yet in apparent self-contradiction, he followed, "Hence forth, the quest for certainty (my underline) becomes the search for methods of control..." Dewey was led into confusion by the common mistake of applying "truth" to "knowledge". Hence, he asserted, "In so far, when we secure dependable sense-data, we know truly," and "The objects of physical sciences (i.e, the consequences of actions), if the operations are adequately performed, are truly known. The development of operations through symbols gives formal objects of mathematics and logic, which, as consequences of suitable operations are also truly known. And when in combination, such operations solve problems connected to everyday usage, the solutions, as consequences of actions, are truly known." By some operations conclusions emerge in which objects once uncertain are rendered clear and stable, and, "It would be the height of absurdity to assert the reality of these relations while denying the reality of the things between which they hold".

Because of these assertions, and more directly, because of his conventional conception of "truth", Dewey's "warrantability" lapses into a form of relativism much in the manner of pragmatism. Dewey hints at this himself, in saying, "scientific thinking is just an instrument, one of many methods of thinking or experiencing objects or events, none of which are rivals or substitutes for the "real object." This is just the argument that the Pope used when Galileo claimed that his telescope provided a new understanding of the universe.

Specifically, Dewey held that by studying the types of inquiry that had been successful in reaching warrantable conclusions, we could abstract rules, procedures, norms and methods for directing further inquiry. He said that even these operational methods were likely to change with time if results suggest they can be improved upon. But this creates a relativity of standards in a historical context, and justifies historism as a study to define assertions warrantable in different historical periods of inquiry. But if a finding is warrantable at the time it is made, it is warrantable, period. Hence either warrantability (and truth with it) is impermanent, or science is relative. This quirk within his theory of inquiry is unfortunate, for the bulk of Dewey's work has a relevance which is clearly not merely relative to his own era.

**Behaviorism**

The two philosophies to be considered next deal less with truth and knowledge than with Free Will and determinism, but assumptions about truth and knowledge are presupposed. J.B. Watson and B.F. Skinner, both psychologists, maintained that man has no Free Will or even freedom of choice and that all behavior is a direct response to stimuli from the environment. The mind is a "black box" whose internal workings need not be considered: it can be entirely
described in terms of input and output. In Skinner's scheme, objective event causes objective event, and there is no consideration of subjectivity whatsoever. Because it is purely objective, he considers his findings have value in that they are absolute, and, hence, he refuses to consider the importance of objective ideas, such as genetics, in their influence on behavior. All in vain, because the stimuli cause a response only after acting on the subjective consciousness. The perception of the stimulus, not the stimulus itself, elicits the response, and, thus, the stimulus is really a subjective, not objective event, which is perceived differently by different individuals. That is why a lion will behave differently than will a goat in any given environment. This difference is genetic in origin and the behaviorists are incorrect to dismiss its relevance.

**Existentialism: Jean-Paul Sartre 1905-1980**

Although there are religious existentialisms, those of atheist thinkers have been more rigorous and better able to acquit themselves in this type of discussion. Common to these is the belief that Existence precedes Essence; "first of all, man exists, turns up, appears on the scene, and, only afterwards, defines himself." Sartre denies there is a god who designed us according to some preconceived essence, hence, "Man is nothing else but what he makes himself". Sartre is concerned with the uniqueness of the individual, the meaning of the individual and the freedom of the individual. Therefore, he assumes at the outset that the subjective is more important than the objective. Consciousness necessarily has an object - something which is not itself - and yet can always be aware of itself as well, and it is thus able to distinguish things. In making this distinction, one must be conscious of what is not the case; i.e., nothingness. The crucial role of nothingness is the capability it confers to us in our freedom to imagine other possibilities. Because there are always other possibilities that can be conceived, we can never be more than part of a universal consciousness, nor can we realize all possible objective states. The power of negation, nonetheless, gives freedom of mind to imagine possibilities and freedom of action to carry them out. Therefore, to be conscious is to be free. Sartre here is saying that the subjective consciousness can never realize the objective event nor can its ideas match exactly with objective ideas responsible for the universe. The role Sartre attributes to nothingness is part of the process of creating a subjective consciousness. In this way, the subjective consciousness appreciates that it is associated with an object distinct from any other object, but sharing with all objects the quality of elusiveness to subjective inquiry. From this the mind versus body dualism has its origins.

Self-reference within the consciousness causes certain technical problems, the mathematical solution of which is reproduced below. Only the conclusion that individual consciousness is limited within the range of all possible consciousness is relevant to our discussion. Sartre, in "Being and Nothingness", addresses Descartes’ postulate, "I think, therefore I am." He says the person may think of an object or of himself as an object. As long as he has self awareness, he knows he exists (though he can exist at times without self-awareness), and this takes place when he thinks of another object (which is always thought of in relation to the self). But deliberate self-reflective thought treats "I am" as an external object and is an activity further to mere self-awareness. The consciousness of the world that is conscious of itself in the world is also conscious of its own consciousness. Sartre limited the self-reference sequence this far, maintaining that all further internal reflections of consciousness were part of one and the same whole body of consciousness. He further said that consciousness created states of emotion and attitude, choice between which helped fashion ego. Ego was not the fount or source of consciousness, but vice versa. Also, by removing consciousness from ego, he placed it external to the Ego, as was the world at large. Consciousness and the world at large share a
non-causal relationship, linked only by the ability of the ego to direct its awareness to either of them separately.

Sartre’s limited self-referential sequence of consciousness can be compared to the self-consciousness described by Douglas R. Hofstadter, writing in his column, Metamagical Themas, in Scientific American, Sept. 1982. Hofstadter considered building a machine possessing common sense, which is programmed to recognize repetitive sequences in its performance and to question the necessity for this performance. Thus he quoted J. R. Lucas, from Minds, Machines and Godel “in saying that a conscious being knows something, we are saying not only that he knows it, but he knows that he knows it, and that he knows that he knows that he knows it, and so on, as long as we care to pose the question... an infinite regression. It is the questions that peter out, as being pointless, rather than the answers”. Hofstadter coined the term "sphexishness" (after the automatic behaviors of an eponymous wasp species) as the circular repetition of a self-referential question. Such loops can infallibly be detected only by the introspection of a self-watcher with infinite depth, who will detect and terminate any and all patterned behavior. The habit of "Breaking Out Of Loops Everywhere" was called by Hofstadter "BOOLE behavior". Hofstadter denied that such infinite self-watching (or anti-sphexishness) is a human capability. Even our greatest geniuses exhibit repetitive characteristics, called style, that are their hallmarks and their greatness. Hence, as Hofstadter explained it, it was not a weakness that Mozart failed to progress to the music of Chopin, or that Chopin did not anticipate Maurice Ravel.

Sartre considered perception and imagination. In the former we are conscious of the object, we recognize it and annihilate it within our self-consciousness, recognizing nothing else to be that object. Imagination is a double annihilation. The object is annihilated within the consciousness to distinguish it from the non-object, but the consciousness must annihilate within itself the possibility that the object was real, i.e., existed. According to Hofstadter, "Important to the organization of memory is the pressing need to come at the question of what a concept is". Critical to the way our memory is organized is our automatic mode of storing and retrieving items, our knowledge of when we know and do not know, of how we know or why we do not know. This "metaknowledge" is an inherent and thoroughly in-mixed aspect of knowledge, on the same level of consciousness. The apparently distinct levels of watcher and watched are totally fused. To incorporate this conception into one self-referential model, for instance, a computer program, requires the application of the Incompleteness Theorem of Kurt Godel. Hofstadter demonstrated that to write a flexible program that could recognize and root out "sphexishness" within itself would not be to bring about total "anti-sphexishness", or complete consciousness. This is a result of the finding that no system of logic based on well-defined rules of operation can be both contradiction-free and comprehensively able to derive all statements that are true with the system. This is equivalent to Sartre saying that we cannot acquire total consciousness because the sum of all the extant consciousness in the universe is not equal to all possible consciousness. In a school of like-minded individuals, we have less sphexishness and more development of consciousness than in any member alone, and so on. It is this wide ranging of consciousness beyond individual confines that (Sartre says) leads to alienation, a feeling of one's consciousness being trapped into a limited expression.

However, Sartre now proceeds to make unnecessary mistakes and unforced errors. He holds that all our sensations, emotions and decisions are fully conscious to our experience and denies that we have any instinctual motivations or subconscious experience. Here he takes a stance in direct contradiction to experimental evidence. Because he considers our behavior to be purely conscious and rejects any influence of objective events, including physical constitution, on our behaviors, he makes the same mistake as Skinner, only in reverse. The subjective
consciousness is a system of perception and conception leading to behavior, but, as we have seen, it is different for each individual, because there is no subjective absolute. The difference is due to the different physical constitution of each individual, and, once again, we are able to explain why a lion will behave differently than a goat in any given environment.

However, the great value of Sartre’s philosophy lay in demonstrating that man's consciousness makes him free. He recognized that no God or moral code, no subconscious or genetic influence on us can compel us to adopt any given code of behavior. Failure to recognize this causes "bad faith", while anguish can result from the consciousness of one's own freedom. As far as ethics is concerned, Sartre’s advice was, "you are free, therefore choose". Self-knowledge is the only basis for authenticity and, hence, morality. "When we say that a man is responsible for himself, we mean...that he is responsible for all men". "In creating the man that we want to be, there is not a single one of our acts which does not at the same time create an image of man as we think he ought to be". His thoughts on morality evolved from the “first ethics” of his early work, through a second and then a third ethics, taken from texts that were not published, according to Jeanette Lowen’s essay “Jean-Paul Sartre: Philosopher for the 20th Century” (Free Inquiry, Winter 1999/2000). Having established our responsibilities as individuals, he expanded those to encompass others, based on “universal human needs” and “interconnection”. Seeking to “resurrect morality” away from relativistic or individualistic positions, he recognized our “commonality”, the “universal human condition”. He saw an “incomprehensible force that demands an end to the subhumanity of man and is the very root of ethics. This root is ‘need’” (citing David Pellauer, in Notebooks for an Ethics, Chicago University Press, 1992.) Need established the criterion for objective ethics. Lowen notes that in Sartre’s last major work, he said: “True humanism can be built only upon the mutual recognition by men and women of their ‘human needs’ and of their right to satisfaction.”

In later years he came to see Marxism as the only way social conditions could be created in which all men could exercise their freedom. Of course, Sartre was wrong to assume that each individual is totally free, just as Marx was wrong to assume that we are totally predetermined. Consider a street in downtown Manhattan, as a wealthy but harassed businessman steps around a drunk who is sprawled across the sidewalk. For Sartre, each is free to abandon an unsatisfactory lifestyle and become a lumberjack in British Columbia. Obviously, the businessman could, if so inclined, make the move, even with his family in tow, comparatively easily. The down and out, however, is not so free. He would need to get a great deal of money, cure himself of an addiction and possibly mental illness, and effect what would probably be an unprecedented general uplift in his morale.

Sartre had to admit that many factors could restrict our freedom, or at least, our chance of success, hence he said it was the freedom to make the choice that was important. But why do the businessman and the homeless person begin this illustration in their respective positions? It is possible they both went to school together, and that one elected to persevere with his studies while the other did not. Alternatively, the homeless person may have tried hard to succeed but found that socioeconomic considerations, or even plain bad luck, were insurmountable obstacles. Or he may have served in the military, and his post-traumatic stress disorder treated with neglect. Thus, it is seen that Marx's socioeconomic factors can be a limit to personal freedom. However, even if socioeconomic factors were to be equalized for all individuals by an existentalist Marxism, it is hopeless for Sartre to suppose that there would be any improvement. Marxian dogma can allow no trace of personal freedom without disintegration of society's destiny. Similarly, Sartre can allow no possibility of Marxism without imposing constraints on his own freedom.

Instead, we should profit by treating freedom as an objective/subjective dualism,
analogous to truth and knowledge or objective/subjective morality. Therefore, we are subjectively free to attempt any lifestyle that appeals to us; yet, at the same time our objective freedom is limited to those possibilities in which we discover we can actually succeed.

From a practical standpoint, our subjective freedom is wide-ranging, and Sartre is correct in claiming that it includes the choice of emotions that we display in a given situation, since, with determination over a period of time, we may consciously modify our emotional reaction. Even such elusive mental powers as sense of humor or reliable memory or outgoing personality can be entrained by a consciousness that is determined to do so, although it may take years. And finally, from the standpoint of morals, the stark fact remains that there is no God or any other authoritative criterion by which to judge behavior in terms of right or wrong. The moralist in such a philosophical system is, therefore, set the task of devising a code of behavior which can be justifiably enforced to limit behavior that would otherwise in itself be perfectly justifiable.

RELIGIOUS BELIEF IN GOD

It would be wonderful if, everywhere, people were students of philosophy, but the majority of the world's people have their ideas about truth and knowledge formed by their religious teachings. Thus the most widespread and historically significant form of Absolutist belief has been the profession that God exists and that He can be "known" with "Absolute certainty". This knowledge of God typically takes the form of a direct experience, the nature of which is exceedingly variable among individuals. However, like all experience, experience of God can be manifest either as an event or as an idea. An event can be a direct manifestation of a god or the performance of a miracle in a god's name, and an idea might be the subjective apprehension of God during prayer, or a logical argument for God's existence, or an authoritative command. As Professor Wallace Matson, in "The Existence of God"(46) pointed out, it is necessary to examine belief in God based on the following: the authority of respected people, ancient or modern, the possibility of (mystical) experience, the possibility of logical proof, and the pragmatic argument of belief being useful to our lives or our orderly society. To begin with, consider God as an event.

In the historical past the most persuasive evidence of God tended to be His direct manifestation before the populace, followed by word of mouth accounts that were eventually written down. It is not unknown even today for people to claim to witness God as an event perceived by their senses. Such phenomena can take three general forms. Natural phenomena have been explained as acts of God when no better explanation for them was known. Personal feelings or states of mind would also be attributed to God, especially if induced by various rituals. As many natural phenomena began to be understood, educated people came to reject many of the old beliefs as superstitions, but there remained a need for a God to be responsible for certain supernatural events, including miracles and the result of prayer. Many modern religions disavow a supernatural connection as unfashionable. However, a God who acts only in accordance with natural laws is a God only in name, in content being identical with nature. As the 19th century philosopher, Ludwig Feuerbach, explained, only an unlimited, wonder-working God, bound by no laws, who by man's faith and imagining can save us from trouble and affliction, whose every action is an unprecedented miracle, is truly a God. As we have seen, the consequence of a miracle-working God is the futility of all science or indeed any endeavor besides worship which distinguishes man from other animals. There is a modern tendency to be amused at our superstitious past, but it is still commonplace to be referred, by religious apologists, to the occurrence of miracles brought on by prayer.

Typically, one will be presented with anecdotal evidence. For instance, Mr. Jones, who
was on the verge of death one Saturday evening, made a dramatic recovery after the congregation prayed for him on Sunday. For some reason the cases that don't work are never mentioned. I personally remember that when President John F. Kennedy was shot in Dallas, everyone in America was asked over the radio to pray for his survival during a minute's silence.

Various explanations of miracles noted for their absence can be given, and it seems generally to be assumed that for some reason it was His purpose, and that His reasons were undoubtedly for the benefit of everyone. Such assumptions raise an interesting challenge. Can one justify praying for something that won't be granted if it is against God's purpose, and will happen anyway if it is God's purpose? It can only be assumed that cases in which He can be swayed by popular desire are cases which haven't any part in His grand design, and for which He has no real preference either way. In which case, I'm afraid, we have bad news for Mr. Jones.

In modern times it is more common for people to experience God as an Idea than as an Event. Many people experience God as an emotion, as a love which is directed over the course of a series of events towards the idea of God. The fact that we are capable of directing emotions towards an idea does nothing to prove the idea. The power of prayer is still used as an index of God's veracity, but in the context of "God as Idea", prayer has the quite different function of "bringing one closer to God". In this context, by catering to our own experience of the idea rather than of the event, it is able to raise morale and inspire a sense of security. Indeed, so commonly is this alleged that it is difficult to be less than arbitrary in selecting an example. For instance, the American tennis player, Stan Smith, after winning the Wimbledon final against Romanian Ilie Nastase in 1972, claimed his victory was due to praying very hard when he had been losing in the fifth set. We needn't in this case ask if God favored Smith because Smith prayed harder, or whether perhaps all the good souls of his viewing American fans were able to muster more combined prayer than the smaller number of viewers in then Communist Romania. We can assume that God did not intervene in a "miraculous" way to swing the match, because the unfairness towards the victims of such action would be impossible for a totally benevolent God to commit. In addition, such a sporadic action would reflect an alarming inability to discern events through which Divine intervention would be of importance to the course of human history. The victory of Smith was not a miracle nor were his prayers a supplication for one. In the form manifested by Smith, prayer is but a conscious effort at mood manipulation and a confidence booster, if not possibly a subconscious neurosis of the individual in response to stress. Modern theologians have suggested that when people take their needs to God, they acknowledge and reinforce bonds of trust, confidence, appreciation, repentance and dependence. Faced with a sense of powerlessness, children adopt their coping mechanism at about the same time and equally non-objectively as they develop their dislike of vegetables. Once established, it may be relied upon to help in coming to terms with problems, even to the point of helping to win tennis matches. Clearly, it can be very useful for people to have this inner reserve of strength, whether God exists or not, and this can be used to justify the religious outlook. The ontology of the religious outlook was analyzed by Ludwig Feuerbach, who concluded that "the ground and source of religion is within man.\(^{47}\) Arguing that man created God, a view he called Anthropotheism, he wrote that humanity was already in God before God became man, and only thus did God understand human suffering.\(^{(48)}\) Religion, he wrote, is based on a vaulting egoism which craves incessant satisfaction, and a self-love, which, in the face of Nature, creates a feeling of dependency, or fear for life. The Gods are objects of our worship because they are potential benefactors in a world over which we have no control.\(^{(47)}\) Thence, "the power of the divine object is derived from the power of human need". With primitive peoples whose principal need is food, the worship (of animals) culminates in the consumption of the object of worship, and religion consists of moments both of dependency and satisfaction. In more complex societies
with abstract needs, the religious feeling during life becomes one purely of dependence, while satisfaction is postponed until the Hereafter. However much the act of prayer may be emotionally satisfying, it is an affirmation of individual dependency. To the extent by which this dependency can be overcome by study of science and the humanities, it is illusory. Likewise, the emotional security generated by prayer is an illusory solution to what are in many cases devastating problems. Most importantly, many of the devastating personal tragedies for which prayer is prescribed as a solution are themselves illusory, generated directly by the rule of religious principles within the individual consciousness and its application to life writ large. With this in mind, though it can be hard to condemn, it is questionable whether to defend prayer even as a method of emotional support.

Logical Arguments for God's Existence

Religion is a subjective idea of the class that admits no falsification. The philosopher Sir Karl Popper often pointed out that the secret of the enormous psychological appeal of these various types of theory (in particular, Popper considered psychoanalysis and Marxism) lay in their ability to explain everything. To know in advance that whatever happens will be understandable gives one not only a sense of intellectual mastery, but even more important, an emotional sense of orientation in the world. Acceptance of one of these theories had, he observed, the effect of an intellectual conversion or revelation, opening one's eyes to a new truth hidden from those not yet initiated. Once one's eyes were opened thus, one saw confirming instances everywhere. The world is full of verifications of the theory, and its truth is manifest except to unbelievers who do not want to and refuse to see it. Of course, as we have discussed in Chapter 1 of this new philosophical system, we can admit no certainty to subjective knowledge. If certain belief is impossible, we might expect disastrous results from trying to apply it in practice. Therefore, we may expect an erroneous belief in certainty to result in hatred, violence, repression, terrorism and warfare. There is no reason to suppose that absolutist religions are, at worst, benign, and unlikely to hurt anyone.

There have been many attempts to prove that God exists. In the thirteenth century Saint Thomas Aquinas developed, in his Summa Theologicae, Anselm of Canterbury’s “ontological” proof of God’s Self-evident existence. Premise (1) is “God is that thing than which nothing greater can be conceived”. Premise (2) is “Existence is greater than non-existence”. By Aristotelian logic, we conclude: “Hence, God exists”. On its face, this seems stubbornly difficult to disagree with, although St. Thomas himself came to agree with the analysis of a monk, Guanilo, who had pointed out that there must be a flaw in the argument somewhere, or else one could define into existence a perfect island, (or anything else). The fallacy lies in the first premise, which, for the purposes of the syllogism, is misleadingly worded. Correctly, the unstated wording of the first premise is: “The concept of God” is that thing than which nothing greater can be conceived. This is because the result of conceiving a thing can only be a concept. Then, by adding the second premise, we arrive at “The concept of God exists”. This is undeniable. So is the concept that there is a Rolls Royce in my garage, but I can guarantee that when I open the garage door, no such model will be found there. Conceptual existence is not, by itself; sufficient to cause material existence.

Both Hume and Kant exercised themselves on this riddle, on the theory that “to exist, or have existence”, would be a predicate, or description, of the sentence’s grammatical subject, which does not constitute a property of that grammatical subject (actually an object) in the same sense as would a description of its color or solidity, hence “existence is not a predicate”. To say it has a color gives one an expectation of what it will look like should one encounter, or behold, it;
to say that it exists does not alter the expectation one has of the object’s natural properties other than to establish whether it be possible to encounter it at all. Said Hume, in Dialogues Concerning Natural Religion: “Whatever we conceive as existent, we can also conceive as non-existent. There is no being, therefore, whose non-existence implies a contradiction”, while Kant maintained that if existence was a property, like color, then we could never compare an imagined object as being the same as its real-life referent(46). He wrote “In whatever manner the understanding may have arrived at a concept, the existence of its object is never, by any process of analysis, discoverable within it; for the knowledge of the existence of an object consists precisely in the fact that the object is posited in itself, beyond the thought of it” (KrV, B667). I think Guanilo had the less confusing argument. However, the idea that “Existence is not a predicate” also renders the phrase “logically necessary being” meaningless, which serves to refute the Cosmological argument of God as necessary First Cause.

Human concern that God must exist has even led theologians to argue from the basis of probability, basically, that the Universe is more probable if there is a God than if there is not. “Christian philosophers have revived faith as a subject of rigorous academic debate, steadily chipping away at the assumption...that belief in God is logically indefensible”, as reported by Emily Eakin from a 2002 conference at Yale.(50) The contemporary “Evidentialist” school accepts the principle that a belief is justified only when evidence from the outside world can be found to support it. Evidentialist Professor Richard Swinburne spoke on his efforts to assign a probability to the reality of the Resurrection through the (mis)use of the mathematics of Bayes theorem. By using a formula into which he plugged his own numbers for the per cent likelihood of a number of Christian values - the probability that there is a God, the quality of witness testimony to the life of Jesus, etc - he arrived at the incredible figure of 97%! But since everybody is free to insert their own numbers, the final result will be equally valid with any value between zero and 100. The only surprise, then, besides the fact that this nonsense was validated with an invitation to speak at Yale, was that Swinburne’s result was less than 100.

The odds of God’s existence were, of course, the subject of a famous metaphorical wager by the 17th century mathematician Blaise Pascal. If God exists, and rewards belief but punishes disbelief, it is better to believe, said Pascal, because if God doesn’t exist, you have nothing to lose. Although aware that (a) “belief that belief in God is rational” differs from (b) “belief in God”, and that journey from (a) to (b) might be difficult, he urged that it was worth it. But does the atheist really have nothing to lose by adopting Pascal’s belief? (And here, we are assuming that God doesn’t care that you are only hedging your bet, and that He is sure to punish sincere independent thought.) By accepting Pascal’s wager, we are indeed losing something valuable - our Freedom, something which people have fought and died for over all of recorded history.

Pascal also said: “We know the Truth, not only by reason, but also by the heart”. A modern take on this comes from Alvin Plantinga, a leader of the school of “reformed epistemology”, which rejects the “evidentialist’s” insistence on independent proof for the justification of belief. Plantinga argues that, if the ability to distinguish between good evidence from bad depends on reason, why trust reason?(50) If reason is to be accepted, a priori, as a “basic belief” for judging evidence, then so can faith in God. Thus faith can still be rational, Plantinga maintained, by analogy to our apprehension of mathematics, and introspective feelings that are self-evident. That “True belief can be instinctual” reduces to theistic relativism, since two people may hold instinctual beliefs in different Gods, or even the Devil, that cannot be arbitrated by appeals to reason or experience. While Plantinga has argued that one can “certainly not” believe in the Great Pumpkin”, his argument, that our capacity for True beliefs proves a Divine creator, is perfectly circular. The answer to his question: “How else can we be sure of any of our beliefs?”, is, of course, that we can’t, and that is how science works.
Platinga’s argument is not dissimilar to the argument from Pragmatism. William James declared that a True belief was that which benefits the believer. Smith will therefore claim to benefit from his Christian belief being Absolutely and entirely True, but Patel will claim the same of his Hinduism. James was primarily concerned of these beliefs that he could accept one, and risk its being false, or deny all religious belief, and risk missing out on the Truth. In an attempt to justify a “leap of faith” to the truth, he put forward a version of Pascal’s wager that ups the ante by analogy to discovering one’s house on fire. Not knowing whether one’s children are inside or not, one’s options are (a) to run in to find them if one thinks they might be, or (b) to stay put if one thinks, or “bets” that they are not. Unlike with Pascal’s wager, a decision must be made, since failure to decide would be indistinguishable from choosing option (b), and the flames licking the bedroom walls are analogous to the immanence of the coming Day of Judgement. However, a rational person might run into the building without any belief that the children were there, purely as a precaution. In this case, one’s default condition, that one is responsible to rescue the children at any cost, overrides one’s default position on whether it is rational to believe that they are in there. The default settings are different because our responsibility towards our humanist values is more important to us than our need to adopt esoteric beliefs. The analogy of choosing a belief and the expediency of an action fails.

Regardless, the pragmatic argument has been used to uphold Theism in general. Here, the pragmatist may quote Voltaire: “Si Dieu n’existaient pas, il faudrait l’inventer”, in the sense that, out of fear of Divine punishment, our fellow citizens will remain orderly and law-abiding. As an argument for God’s existence, it is hampered by its dependency on other arguments, such as those from Authority, or logic, or miracles, to establish God’s credibility. Meanwhile, as Professor Matson pointed out, the pragmatic argument for public morality must be kept sotto voce, since no one will be converted to a belief if they understand that it is purely a form of crowd control.(46) It would not be pragmatic to make use of this pragmatic argument. Of course, one could fill volumes debating as to whether religion has helped or hindered the maintenance of just, harmonious and progressive societies. But, as the Dubliners song has it: “What’s done is done, and what’s won is won, and what’s lost is lost and gone forever”.(51) From this point forward, notwithstanding the fact that Humanist principles will not soon displace religion among huge numbers of people, I would submit that Humanist tenants should be more than equal to religious ones at maintaining law and order.

There are several important philosophical questions to which traditionally religious non-falsifiable theory has provided Absolutist and correspondingly simplistic solutions. It is now recognized that falsifiable regular scientific theory can provide more satisfying, though less certain answers.

**Entropy and the Very Beginning**

The first question is: how do we explain the Universe? Can we have come into existence as a result of chance? It is intuitively understood, and supported theoretically, that unattended objects deteriorate with time, that matter becomes progressively disorganized. This tendency of matter to seek disorder, called Entropy, has been cited as an impediment that should prohibit the “random” accumulation of atoms into stars, planets, life-forms and intelligent brains. Classical Physics argues, on the contrary, that Entropy is applicable to entire systems only, and not to every bit of matter within it. Hence, in restricted localities, the tendency of matter to run counter to entropy is a matter of statistics. The statistical basis by which molecules associate was formulated by Ludwig Boltzmann, who, in the 1870’s, published a series of papers showing that the second law of thermodynamics could be explained by applying the laws of mechanics and
the theory of probability to the motions of atoms.\textsuperscript{52} Maxwell - Boltzmann statistics describe the distribution of the total energy equally between different individual parts of a system in such a fashion as to allow the localized and temporary accumulation of energy or matter. All systems observed to date obey these statistics provided that quantum mechanical effects are not important.\textsuperscript{53} Indeed, instead of declaring against the unlikelihood of our existence, we could appreciate that the best way to try and imagine the size of the Universe is to imagine the improbability of the planet Earth.

However, there is more to it than that. Maxwell - Boltzmann statistics do little to convey the inevitability of the evolution of higher life-forms. The Universe, cosmologists believe, began as a point source with such an enormous energy that the fundamental forces of nature - gravity, and the Strong, Weak and Electromagnetic forces between particles - were indistinguishable and no particles existed in association with them. In this state of perfect symmetry, there was no distinction between time and space, energy and matter, or entropy and structure. There was nothing to tell apart from anything else, and there was a potential to satisfy variables associated with parameters that had not yet come into existence. At the beginning of the Universe, there were three things: an enormous potential energy, a state of perfect symmetry, and an absence of disorder related to the distribution of any non-existent matter. Because this high energy situation was extremely unstable, the symmetry became broken, destroyed by becoming committed to a particular set of conditions and no longer identical to all preexisting potential conditions. This released an explosion of energy known as the Big Bang, and led to forces and particles becoming distinguishable, and fixed them with specific values. At this point, it was possible for matter to be distributed in a random or disorderly fashion, where-upon it became subject to the effect of Entropy. This was destined to increase the amount of disorder progressively within the dimensions of space-time, which has been expanding ever since. Professor Richard Muller, in “Now: The Physics of Time”(W. W. Norton & Co., 2016) has explained most convincingly how this generates what we call the “arrow of time”. By now, there was much less potential energy, a progressive loss of symmetry through continued fracturing, and a cooling and expansion of the Universe driven by the Big Bang. However, disorder was limited because initially there were few different types of energy or matter, and there are only a limited number of ways to ‘disorganize’ a bunch of identical units. In order for Entropy to increase, structure had to be built into the Universe, such as by inflating its size, and by causing attraction between electrons and nucleons to form atoms of different sizes and stabilities, and finally, by causing attraction between atoms to form molecules. The result was a diffuse scattering of different particles throughout the post-inflationary Universe, which was more disorderly than would have been a dense accumulation of particles that were all the same. That, together with the mysterious Dark Matter, and the equally mysterious Dark Energy and its associated Cosmological Constant, have strongly influenced the known matter’s behavior.

Entropy is traditionally defined as a transformation of the energetic state of a physical system, leading to the irreversible conversion of other forms of energy, which are capable of doing work, to heat energy, which is incapable of doing work. This definition dates from the time of its discovery and naming by Rudolf Clausius in the 19\textsuperscript{th} century during attempts to analyze the efficiency of steam engines. Its unit of measurement, S, is defined as calories per degree Kelvin of absolute temperature.

For the purposes of this discussion, Entropy resembles a Force that does work. In Physics, a force, which describes how matter behaves, is represented as being conducted by a “field”, involving the exchange of “bosons”, or particles such as photons, gravitons, W and Z bosons and gluons, that do not follow Pauli’s Exclusion Principle with respect to their distribution. But matter also behaves according to the Second Law of Thermodynamics, which is
based on a statistical analysis of the gross distribution of particles over time and space. In other words, particles distribute themselves according to the law of averages. Entropy increases because there are more ways to be high entropy than to be low entropy. While particles remain free to collectively move in a way that defies an increase in disorder, in practice they behave collectively as if driven to seek an increase in disorder, or decrease in usable energy, unless one is thinking of nearly infinite time scales.

A force is defined as being equal to a mass times its acceleration. The mass at this point is all the matter in the Universe, and the acceleration is the expansion of the Universe. Of course, matter is equivalent to energy, and can be measured in calories. The expansion of the Universe can be measured by means of the concomitant drop in its temperature. Hence the Force of Entropy can be expressed as calories times the inverse of the absolute temperature in Kelvins, giving units of S.

Having said that, Physicists reserve the term “Force” for gravity, electromagnetism, the weak force and the strong (nuclear) force. I propose the consideration of Entropy as “force-like”, or, philosophically, as a “meta-force”.

It is notable that the ‘Entropic Meta-force’ that drives the world towards greater disorder over time does so by employing the combined effect of the fundamental forces of Nature. These arose during three episodes of what is known as Spontaneous Symmetry Breaking, and include Gravity with the creation of tempor-o-spatial dimensions, and the Strong, Weak and Electromagnetic forces. With each Symmetry breaking, previously undecided sets of variables became fixed in such a way that new distinctions between types of matter could force new behaviors on some but not all particles. In this way, much more complex patterns of disorder could be created. The energy driving the expansion and symmetry breaking of the Universe, and all the fundamental forces, or ‘Entropic Meta-force’, was that originally stored in the potential of the purely symmetrical, pre-Big Bang state. In other words, Entropy is not merely a drive towards disorder, it is also, at least to begin with, a drive away from symmetry.

Next we need to consider how the ‘Entropic Meta-force’ can act to secure a seemingly paradoxical increase in complexity, or perceived order, whilst actually pursuing a continuing increase in the level of universal disorder. In fact, there are two phases with respect to complexity in any system being driven by entropy. Professor Sean Carroll discusses this in his “Great Courses” lecture “Mysteries of Modern Physics: Time”(2012). In Chapter 14, “Complexity & Life”, he notes the definition of complexity given in the 1960s by mathematician Andrey Kolmogorov: The length of the shortest description that captures everything relevant about that thing. In the case of a living being, we are talking about a “coarse grain description” of the number of proteins, molecules and so forth. Even though disorder increases through-out, the system also increases in diversity, and thus complexity, for a significant length of time. Eventually, the diversity reaches a maximal limit, complexity declines, and the system proceeds to a state of a uniform distribution of components with the greatest possible entropy. A simple example consists of pouring milk into a cup of coffee. If one observes with time-lapse photography, at first one will see the milk in the center of the coffee in a vortex of swirls and splashes, providing a complex distribution of the milk within the coffee that would be unique for each occasion that you repeated the experiment. A short time after the milk ceases to be poured, however, the milk begins to distribute itself evenly within the coffee, reducing the complexity of the initial patterns until a uniform distribution within the coffee is achieved.

Professor Hans Christian von Bayer, writing in ‘The Sciences’, May 1997, described recent discoveries by Anthony Dinsmore and his colleagues with the following analogy. Imagine a fenced playground where children roam at will. The Entropy, or disorder of the system, is proportional to the size of the area accessible to the children. Suppose the power company has to
install a transformer in the middle of the playground, surrounded by a fence closing off 10x 10 feet, or a 5 foot distance all around the transformer. The children have lost 100 sq. ft of playground. Then the power company announces the need to place a second transformer on the lot. One of the parents points out that instead of occupying 200 sq. ft of play space by pacing it randomly in the field, the two transformers would occupy only 25 sq. ft if placed right in the corner together and given a common fence jutting only 5 feet out into the playground. The effect to an observer of the transformers is to create an orderly line up of the transformers along the playground fence, decreasing entropy. However, this is more than offset by the increased entropy of the children’s activity in an enlarged play-space. Therefore, the Second Law of Thermodynamics allows a pressure on large objects (generated by and proportional to the number of smaller ones sharing their closed system) that pushes them to line up along boundaries in a crystalline pattern. As Professor von Bayer concludes, the experiments of the Dinsmore group demonstrate with unusual clarity how order can arise spontaneously at the expense of hidden disorder.

After lining large molecules up, the next step in the history of Earthly entropy was the development of structural units that could reproduce themselves. Molecular assemblies derived from entropic forces would be prone to splitting up, increasing their disorder, but then each fracture fragment in turn would attract structural elements from the milieu, enabling reproduction of the original unit with further increase in the amount of entropy. By the time ribonucleic acid arose as a self-replicating chemical, the mistake-prone and disorderly conduct of its self-replicating faculty ensured that successive generations would differ from their forebears in a manner conducive to the selective pressures of evolution. The result was an increase of complexity and entropy at the same time.

As in the example of the playground transformers, the general drive to increase entropy can decrease the entropy of given objects within the system. These objects have the power to do very interesting things. They can arise naturally, as in the cooling down of the proto-planets in a galaxy, which decreases their entropy, or as a result of living agency, such as in the formation of an egg, even the very egg which is used as an example of increased entropy when it is dropped. It is important to note that, as Professor Richard Muller points out in “Now: the Physics of Time” (Op-cit, Chap 24), local decreases in Entropy are associated with increases in complexity, even as the Entropy increases overall. Local Entropy decrease is characteristic of the spread of life and civilization. “When the Entropy of our bodies begins to increase dramatically,” writes Muller, “we call that phenomenon death.”

The drive towards increased complexity is a temporary manifestation of the Entropic meta-force powered by overcrowding of the Universe and deriving from the enormous potential energy of the originally perfectly symmetrical state. When the expansion has continued much further, the pressure from surrounding particles will be much diminished, like a schoolyard with one child playing, and complexity will start to dissolve into simpler units seeking their own space. Most of the matter in the Universe is probably destined to be consumed by one or more black holes. Complexity will be maintained until objects approach the center of the black hole, or Singularity, whereupon enormous gravitational forces will shred them into their simplest particulate components. These in turn will be promptly vaporized into gamma radiation. Entropy will have reached a cosmic maximum, but symmetry, having bottomed out, will rebound. In the Singularity, the Symmetry will regain its enormous potential energy, and may possibly, it is speculated, go on to generate a new Big Bang.

It has been claimed that the emergence of life in the Universe was contingent upon a very narrow range of values being set for a number of critical conditions soon after the Big Bang, and that this requires either a Creator or the acceptance of an enormous coincidence. That the laws
and parameters of physics in the universe should be so conducive to the formation of material systems is another subject that has recently been given an explanation that bypasses reference to a Creator, or even a creation event. Professor Andrei Linde of Stanford University has proposed that new universes are perpetually ‘budding’ off older ones at the site of black hole events in the parent universe. Linde suggests that the frequency with which new universes successfully form depends upon a type of evolution. The physical laws and parameters evolve towards an ability to generate stellar systems that will culminate as black holes. These Universes will tend to be suitable for the evolution of Life.

In addition it is now recognized that because of the vast scale of the Universe, it is inevitable that a certain number of planets will be formed that will be capable of supporting life. We should not be surprised at life's arising on a planet capable of supporting it. If a number of blocks, crystals or grains of impure mineral have properties by which they can be distinguished, it is clear that the frequency of their occurrence will be influenced by the rate at which they can form. A mineral unit which accidentally develops the trait of being able to reproduce itself from chemicals in its surrounding environment will of necessity proliferate until its environment is exhausted. Because of the tendency to disorder, mutations will also be inevitable, and because of environmental pressure, different chemical forms will compete. More complex, life-like forms will evolve with the inevitable progression of Thermodynamics, the Second Law. While many people find it impossible to conceive the evolution of man from a few organic molecules in a coacervate film on a rock, or in a tide pool, or on the rim of a deep sea vent, it must not be forgotten that the 4,600 million years of the Earth's existence is also impossible to conceive. The best way to try and conceive the time scale is to view it as the time required for the inconceivable series of events.

Richard Dawkins, in “River out of Eden”, (Weidenfeld & Nicolson, London, 1995) answers at great length the question of how a seemingly “created” structure such as an eye could arise gradually, beginning with small groups of photosensitive cells. Although the first organism to have a half-built eye would seem to be poorly endowed by our standards, in the land of the blind, half an eye is king. Early animals with partly organized eyes would be hugely successful at stalking and evading eyeless fellow animals. Dawkins cites Nilsson and Pelger’s “A Pessimistic Estimate of the Time Required for an Eye to Evolve”(56) in which computer simulation developed a good camera eye from a simple photocell in 400,000 generations, or about half a million years. Vertebrates began their evolution 600 million years ago. Hence it is not surprising that the eye evolved independently 40 times in the animal kingdom.

Of course, the final shape of things developed in large measure through random occurrences. Although poets will continue to celebrate various subjective wonders and maintain that coincidence is incapable of explaining life's more important esthetic arrangements, nevertheless, probability is a well-established theorem in mathematics. To explain these things in terms of chance is often to give a very satisfying scientific answer. Few scientists doubt that, given the Laws of Physics and the Laws of Chance, all else follows. Indeed, Biologist Sean B. Carroll, in his “A Series of Fortunate Events”(Princeton University Press, 2020) gives a very readable account of the role of chance in our being here.

The belief (non-falsifiable, and hence some have called it a religion) that the laws of Physics determine and can explain the entirety of the Universe and our experience within it, is called Physicalism. It is important to temper the application of physicalism with the caveats that relate to randomness and indeterminacy in quantum theory and the mathematical limits to computation pace Godel. The new physicalism is this: that the human mind will be able to solve any type of problem it seeks to understand, but that our knowledge will be incomplete, and that each problem solved will probably unveil new ones.
To What Purpose would God Create a Universe?

Consider the proposition that the formation of the universe is more probable if there is a god than if there is not. However, in the absence of a universe (i.e., before it was created), the proposition that there existed a god would in itself seem improbable. The proposal of an improbable god to explain the formation of an improbable universe really just multiplies one improbability by another. The assumption that the existence of God would make the universe more probable implies that we know God to be a creature defined by His intent to build a universe, rather like a beaver is genetically programmed to build a dam. What if all He wanted to do was relax all day long and play Solitaire? Or to look for a suitable Mrs. God on a dating app? If God really was motivated to create a universe, surely this imperfect version would be an early effort, one that Her mother put on the refrigerator door for a week or two before throwing it out with the kitchen trash. The assumption that God, if He existed, would want to create a Universe has been evaluated probabilistically as SNAP - the Super-Natural Anthropic Principle - but proved to be based on circular reasoning. (57) Personally, I strongly suspect that if there was a god, It would be preoccupied with trying to discover how It had been created, and could hardly be bothered with the distraction of creating and maintaining some glorified toy. More likely, to solve the meaning of Its existence, It would have to create something to serve as a universal computer and then allow various algorithms to proceed to completion. By creating the universe It certainly would gain a universal computer. If this is God, then we are just algebra in His algorithm, just pixels in God’s printout. Yes, there could be a God that wanted to create, and watch over, our Universe, but it is by no means certain.

The Cosmological Argument for the Existence of God can be stated that all things must have a cause, and the causes have causes, until we delve back through time to the beginning of the Universe, the cause of which must be God. Or, if the Universe had no beginning, that God was nonetheless the Cause of it. It asserts of the question “What was the cause of God?” that it shall beg fruitlessly for an answer. It serves to imply the Argument from Design, whereby Aristotle’s Final Cause, or “telos”, becomes St. Thomas’s “arrow shot by an Archer”, directed towards its end by God’s Purpose. It is even presupposed by the argument of Gottfried Leibnitz that God must have created the “Best of all possible Worlds”.

In accepting that God must explain a material base for the Universe we accept that matter behaves according to Law, as in, the observed Laws of Science. At time of writing, theoreticians are working on a Scientific explanation for the ultimate of all problems in physics, i.e., why Physical laws take their observed form. Whilst it is possible that the resolution of the current frontiers of knowledge may eventually give some single "Grand Unified Law" which will explain the origin of the Universe, it will probably be couched in the mathematics of extra-dimensionality and be for practical purposes inconceivable, as well as being uncertain. It could even be that the deeper we plunge into mysteries of the quantum world, the more perplexing and baffling will be the outcomes: an ironic effect of entropy, perhaps, increasing the disorder of our understanding. Nonetheless, these endeavors can be expected to have practical utility, from the functioning of our Global Positioning Systems, to Supercomputing, to travel, perhaps, ultimately, beyond our Solar system. On the other hand, religion can provide no answer to the question: "Why does God will the observed Laws of Science?". There are two possible alternative answers. It might first be said that He wills the particular Laws of Physics we observe rather than any others because they happened to meet His fancy at the time, and for no better reason. With this answer the Laws of Physics are reduced to chance, and the theologian is playing his old trick of postponing the awkward question by one more step again. The Laws of
Physics would be no less arbitrary with or without Him.

The other possible answer is that God chose the observed Laws of Physics because he knew that the choice of any others would not give the desired results, i.e. the creation of the Universe. This argument, however, implies a Law above and beyond Him, one of which He must take account before choosing His Physical Laws. This displaces God from first Cause, and is therefore unlikely to be a desirable answer.

Nevertheless, the close of the 20th century has witnessed a debate between science and religion on the Arguments from Cause and from Design, or the question of whether the Universe was caused to be the way it is because a Creator wanted it this way. Although it has not been generally acknowledged, a Creator would face the following problems, which severely undercut His relevance within His own Creation.

First, His choice of Laws and Parameters. He is either not the First Cause at all, or His choice, being randomness guided by His Will, would have no practical difference from the randomness guided by cosmic evolutionary forces of the Lindean generation of Multiple Universes.

Second, if He existed before the Big Bang as a Perfect Symmetry, He was destroyed during the Creation, and there are no physical mechanisms through which His prior choices of Laws and Parameters could be transmitted through the Perfect Symmetry to the Big Bang as a guiding Will that could insure His desired result. And if He existed after the fracture of the Symmetry, then He couldn’t have been present beforehand, so He couldn’t have caused it. If He is inside our Universe now, He couldn’t have created it, and if He is outside of it, He cannot influence it. If God was the Perfect Symmetry, sadly, He was destroyed.

Third, The Argument from Design was given this form by William Paley in the 18th century; if we observe a pocket watch, we notice that it is able to fulfill a function for which it appears to have been designed and manufactured on purpose; from this, we surmise its creation by an intelligent watch-maker. Likewise, the natural world around us, though almost infinitely more complex, appears to be arrayed in such a way as to ensure the successful generation of human beings. Therefore, we may infer the existence of a Creator of practically infinite intelligence, who must be God. David Hume, in Part II of his Dialogues Concerning Natural Religion(1779), argued that the Universe was not very much like a machine, but that even if it was, its design by an intelligence would not prove the unity, infinity, benevolence, origin with regard to infinite regress, or even the continued existence of God, and “affords no inference that affects human life”. However, he allowed that the “cause or causes of order in the Universe probably bear some remote analogy to human intelligence”. (Hume concluded his Dialogues, in consideration of human intelligence, with the gratuitous proposition that; “a person, seasoned with a just sense of the imperfections of natural reason, will fly to revealed truth with the greatest avidity.”)

Fourth, as far as the appearance of Man on this planet is concerned, general principles of evolution are one thing, but we must admit the huge role of random chance. Without the impact of an asteroid on the Yucatan peninsula 65 million years ago, dinosaurs might never have become extinct and mammals may have remained as small nocturnal ground burrowers or tree-climbers. The evolution of life was marked by several other similar mass-extinctions. It is hard to imagine God guiding the evolution of life on His favorite planet by randomly throwing rocks at it. Perhaps He throws them purposefully. These arguments combine to suggest that any belief that God has a design for us has to be uncertain at best, and cannot be Absolute.

Greater still than concern about the origins of our existence is concern about our destiny - our Purpose or Design. This relates to God not as Event but as Idea. Drawn from this is the Teleological proof of God, which suggests that the world is created out of thought in a fashion
It seems natural to many that a universally cognizant spiritualism should be responsible for human sensibility rather than the brute material of organic objects and events. More than merely intellectually appealing, the teleological sense of purpose can result in a spiritual craving. It is in this sense that many Christians feel insecure. All the acting Christians I have met tell me they wouldn't feel complete, nay, that life would hardly be worth living, without this feeling of Purpose. Let us examine the fate of the Universe to see if any comfort can be found there in God's purpose.

The fate of the Universe is speculative, but it is thought to depend on the total mass in the Universe, in relation to a critical value, and to whether "dark energy" accelerating the Universe is linked to Einstein's Cosmological Constant. If the amount of matter in the Universe exceeds the critical mass, then the current expansion of the Universe will be reversed, and the entire Universe will come to reside in a single, unbelievable dense, black hole of infinitely small size. If the total mass present is less than that value, (see "Five Ages of the Universe", by Fred Adams and Greg Laughlin, Free Press, 1999), then the galaxies it contains will recede from ours at a rate which will increase the further away they become. At a time such that our speed of mutual recession equals that of light, their light will never reach us. Within a finite time, our galaxy or our cluster will be entirely alone in the visible Universe. In the meantime, it seems likely that black holes that we have been nurturing within the nucleus of our own galaxy will coalesce with all the rest of the matter in the galaxy, and the Universe will finish as nothing more than an unimaginably vast number of black holes speeding away from each other at such enormous distances that light, if there were any, would be unable to reach from one to another. Eventually, it is thought, the black holes would shrink and disappear, or explode, leaving radiation pervading an infinite, multidimensional vacuum at a temperature approaching absolute zero. Because all matter has been converted into heat energy, and heat cannot perform work, this scenario is known as "heat death".

It is hard to see a purpose behind these models of the Universe. In the second case each galaxy meets a singular doom. In the former case at least there is a more unifying theme, in that the doom is a common one. The former case might allow the Universe a cyclical nature, in that from the point collapse of the present Universe a new Big Bang could begin. This would result in a Universe that never began and will never end, like the race in Alice in Wonderland. Suddenly there is no need for a First Cause at all, and the Purpose, or Grand Design, would seem to be equipollent to that behind digging a hole in the garden only to fill it up again, and then by a process of like stages, transferring the hole round and round the garden. Cosmologist Dr. Steven Weinberg in his book "The First Three Minutes" (Basic Books, 1977) wrote: "The more the Universe seems comprehensible, the more it seems pointless". For those people who worry about a point to the Universe, it would seem that its Creator didn't see fit to give it one. On the other hand, as Dr. Weinberg later pointed out, "Though aware that there is nothing in the universe that suggests any purpose for humanity, one way that we can find a purpose is to study the universe by the methods of science, without consoling ourselves with fairy tales about its future, or about our own."

The deflation of Purpose may be brought closer to home by considering the fate of the solar system. It is known that within 5,000 million years the sun will evolve from its position as a Main Sequence star, expanding in size and luminosity to the stage of the Red Giant, and making life on Earth untenable. It may be asked whether there is a Purpose in slowly roasting us to death.

Yet strong persons do not hide under their beds or pull their pillows over their ears because they fear the world will end in 5,000 million years, and so the argument may be taken even closer to home: to the very heart of the matter. What people really worry about when they
worry about Purpose is the Purpose of themselves. To believe in a Purpose behind oneself leads to belief in Life after Death, in eventual justice after an unfair world.

Evidence suggests that throughout recorded history, in Babylon, Assyria, Egypt, Persia and in ancient Greece, people believed in the Immortality of the Soul. Such, also, is an official doctrine in Judaism. Nearly all of Christendom’s hundreds of churches, the different sects of Islam, Hinduism and Buddhism, etc., preach of Immortality, Resurrection or Re-incarnation. These comments focus on Christianity in part because of my own cultural familiarity, but also because Christians, when their religion is challenged, while not above death threats, do not usually launch themselves into the rampaging murderous mobs so commonly seen in Arab lands and the Subcontinent.

According to the Bible, “The dead know nothing... There is no pursuit, no plan, no knowledge or intelligence within the grave.”(Ecclesiastes 9:5,10) and “he goes back to the ground; in that day his thoughts do perish.”(Psalm 146:4) Upon death, “the spirit itself returns to the Lord who gave it” (Ecclesiastes 12:7) Only God can restore Spirit, or Life-force, to the dead, and bring any person back to life. After the conquest of the Middle East by Alexander the Great in 332 BCE, Hellenistic concepts of the Soul’s immortality, i.e., those of Socrates and Plato, were introduced. Resurrection is crucial to the ministry of Jesus. John 11:23-26 has Jesus telling the sisters of Lazarus, after his untimely death, simply “Your brother shall rise.” Sister Martha answered “I know he will rise in the resurrection on the last day” as she already had faith in resurrection after death. Then, Jesus said: “I am the resurrection and the life. He that exercises faith in me, even though he dies, will come to life. Everyone that is living and exercises faith in me will never die at all.” (It is not clear at this point that Jesus intended to raise Lazarus. They proceed to the tomb, a crowd gathers, and Jesus is challenged to work a miracle, which he then asks his Father to perform). And Acts 24:15 prophesied “There is going to be a resurrection of both the righteous and the unrighteous”. Jesus appeared to believe in the resurrection of the dead in the Jewish manner, rather than in human immortality, as suggested by Matthew 22:31,32 “God is not the God of the dead but of the living”. And Matthew (27: 51-54) gives us, as Jesus was being crucified, “… the earth quaked, and the rocks were split, and the graves were opened; and many bodies of the saints who had fallen asleep were raised; and coming out of the graves after His resurrection, they went into the city and appeared to many.” We are left to marvel with Dan Barker (whom I quote from “Free Thought Today”) “What did they look like? What did they smell like? Did they stumble back to their shocked families with arms outstretched? Did they get their jobs back?” Or did they, I wonder, return to terrorize their neighborhoods? Did Matthew even know how much the movie rights to “Zombie Saints of the Resurrection” might be worth? And why, on “Easter”, do we celebrate with bunnies and gaily painted eggs (not in the Bible), instead of the living dead (yes! In the Bible!) I jest out of love, of course. But I digress.

Jesus seemed to believe that the eternal life contingent on the coming of the “Son of Man” and the Glory of the Father with his angels was imminent. “Verily, I say unto you. There will be some standing here which shall not taste death, till they see the Son of Man coming in his Kingdom” (Matthew 16:28) “And then shall they see the Son of man coming in a cloud with power and great glory...So likewise ye, when ye see these things come to pass, know that the Kingdom of God is nigh at hand. Verily, I say unto you, This generation shall not pass away, till all be fulfilled” (Luke, 21:27-32) and, in Mark (13:26-30) “And then they shall see the Son of Man coming in the clouds with great power and glory... Verily, I say unto you: that this generation shall not pass , till all the things be done”* (Footnote: These quotations from the New Testament, being extremely similar in wording and deriving from all 3 of the Synoptic Gospels, must have a credibility as good as anything else attributed to Jesus. Strangely, Jesus does not claim himself to be the Son of man, or otherwise explain the odd Old Testament location, but it

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is assumed to be a self (third person) reference. The failure of these prophecies, in my humble opinion, invalidates his entire ministry and exposes him as one of the itinerant preacher/faith healers that Professor Bart Ehrman(60) notes as having been common in the Palestine of that era.) With these critical prophecies being unfulfilled, only later was the concept of Immortality of the Soul introduced to Christianity via Socrates and Plato through the writings of Origen of Alexandria and Augustine of Hippo. Many believers are happy to assume that upon ascending to Heaven, life with their loved ones will proceed as before, but in Revelation and elsewhere, the Bible suggests that the world soon will be destroyed, and only the faithful will be saved. “Eternal Life meant the age to come, the time when God would bring Heaven and earth together, the time when God’s Kingdom, a new Jerusalem, would come and His will would be done on earth as it was in Heaven.” (Here, Bishop N.T. Wright is quoted by Jon Meacham in “Heaven Can’t Wait” (Time magazine, April 16, 2012)). This follows a period of waitful resting by the soul, having departed the body, in preparation for its resurrection.

There is no scientific evidence to suggest a life after death. We might expect a persistent soul to be resistant to biological influence. Increasingly, psychologists have discovered biological determinants, both hereditary and pathological, which shape our behavior, personality and character. The most obvious is sex. That men and women tend to make up behavior patterns which are rather different and characteristic of their sex is due to nothing metaphysical. If male hormone should reach the hypothalamus of a child before birth, it will behave like a male, whereas if not, it will behave like a female, irrespective of its genetic gender. Intelligence has been shown to be proportional to the amount of gray matter in certain areas in the front of our brain, which is tightly controlled by the molecular composition of our genes.(62) Research published by Dr. Antonio Damaso in Nature Neuroscience (November, 1999) shows that even our ability to distinguish right from wrong depends on intact cells in the front of our brain, which can be permanently destroyed by fluke childhood accidents. Perhaps our "souls" have more in common with the mortal souls of animals than many people would like to think.

But if Life after Death is unlikely, then the Divine Justice which supposedly accompanies it is even less so, as it is difficult to imagine on what basis it would be meted out. The first impulse of the clergy would be to say "Righteousness before God", whereby God judges each soul and consigns it accordingly. But which God? It cannot be believed that the majority of the inhabitants of this planet, and, for that matter, any other in need of salvation, will roast in Hell over a matter of geographical indoctrination. It is plain to see that of the different religions prevalent today, only one at the most may be correct, but who is to say which one? Far more likely, none of them.

On the other hand, justice could be dispensed in the hereafter on a more liberal basis if those people who lived their lives in accordance with their particular religious code were allowed a place in Heaven. In the absence of God, the soul judges for itself according to its conscience. But we fare no better. Everyone has their personal heroes and villains out of the pages of history, and it is nice, but irrational, to suppose that they received their just deserts. According to this later scheme, it is reasonable to suppose, in as much as it is possible to visualize Heaven, that it will be shared with such unsavory but devout characters as the inquisitors and the Conquistadors, the witch hunters and the heretic burners, the rapacious Cardinals and the licentious Popes of the Renaissance from now to eternity. After all, it is quite possible that even Hitler, a Christian, by the way, acted in good faith as he perceived things himself. So even if we wish to believe in all the Gods, each judging the souls of their own followers (into which Pantheon we must throw the Gods of the Celts and Norsemen, the Greeks, African tribes and aborigines, etc.) it would appear that our perfect Heaven is going to suffer all the flaws of either a dictatorship or an unruly democracy.
The question which penetrates into the root of the matter concerns none of the foregoing and is this - "Do we need to believe in Life after Death in order to feel complete and to make Life worth Living?" It is well known to followers of Epicure that a period of happiness, no matter of what magnitude, will eventually be followed by a depression. Happiness does not last forever. Yet knowing this, it does not make our happiness less whole, or make one feel that happy is simply no longer worth being. Life, like happiness, does not need a meaning instilled into it from an external agency. It has intrinsic meaning, as expressed by one's relationships with friends and acquaintances. The wonder of life is the very richness of this meaning. Too often, people who feel insecure about life feel so only because this is instilled in them in early youth. Surely life is such an imponderable that we should be grateful to partake in it briefly. It is certainly asking a lot to expect it to last forever. I see no grounds for an Absolute faith in the certainty of Eternal Life.

**Mysticism**

Having said the foregoing, it must be acknowledged that not all belief in God is motivated by a desire to "go to Heaven". The spiritual quest of the most sophisticated religious practitioners, described as "Mysticism", is characterized by a belief in God as a life-force who shapes our destiny and who is capable of bringing Grace if not justice into our affairs.

Professor Timothy Johnson in his Mystical Tradition: Judaism, Christianity & Islam(63) discusses different traditions of mysticism, ranging from scholarship, debate & poetry through devotion and prayer, fasting, solitude & discipline, a focus wholly on God, or achieving the same through ecstatic experience: “a glimpse of the divine given as a gift from above that cannot be controlled or even fully described by the mystic”. In common, they share a commitment to learn of God’s nature as the heart of religious experience.

Frederick Crossfield Happold identified three broad types of Mysticism.64

1. Nature Mysticism, historically primitive, whereby God expresses himself in the works of Nature. Man's first beliefs were in the truth conveyed by his senses, and belief in outward gods was contingent on the divinity of the senses. Hence the eye deified itself in worship of the sun, moon and stars, the nose in worship of fragrance, the ears in holy music. In nature religions, men worshiped the sun not merely from dependency but also from a belief that the sun moves of its own, human-like, volition, and bestows upon us its benefits voluntarily. By transforming the forces of nature into the deliberate actions of one or more personal, human-like beings, at first deities, later becoming saints, nature mysticism strives to put nature into the human hands. Folklore and ritual are then able to build a rapport with the otherwise threatening elements. Human-like gods are able to suffer human wants in order to appreciate and respond to people’s devotion and sacrifices. It should be noted that Pope John-Paul II felt it necessary to censure “bitter, ideological” feminism among American Catholic women, which had led to “forms of nature worship and the celebration of myths and symbols” in the place of traditional Catholic worship. (65)

The early Celtic and Northern European religions illustrate the simple beauty of Nature mysticism. These people worshiped gods who were not so much spiritual or mystic figures as they were legendary or mythical, and they assumed anthropological positions in the tribal histories. During their reigns, each possessed a number of supernatural powers that were repeatedly put to use in mythical battles against one time rival settlers. When the gods were finally banished, each went into a sidhe (barrow or hillock), that was the doorway to a beautiful underground realm. Here, as Fer-Sidhe and Bean-Sidhe (fairies, elves, brownies, pixies, goblins
and leprechauns), they, and their magic power persist, albeit elusively. Mounds, wells and springs were associated with the dwelling places of these gods, as were trees growing near these places. Cults formed around trees sacred to different gods: oaks, laurels, olives, myrtles and mistletoe were venerated in different localities, while Yggdrasil, the Cosmic ash tree, was held to unite Asgard, Midgard and the Abyss. From different types of wood came charms, talismans and amulets, runestaves, metewands, and quarterstaffs, ceremoniously prepared so as to preserve the wood's powers. The year was divided into airts according to solar and lunar observations, and the ceremonial calendar celebrated rebirth, fertility, rearing and the harvest with rituals that included races, ordeals and sacrifices.

There is nothing in Celtic writings that could be compared to a "theology" or summary of beliefs, but among the oldest stories are legends of rebirth, and a land of perpetual beauty and youth, perhaps a reflection of their aspirations for an afterlife. They also believed in reincarnation and the transmigration of souls. They did not recognize the concepts of sin, punishment or damnation.

Ludwig Feuerbach credited nature mysticism for not requiring Nature to have an external author, since we owe our existence only to a nature of the kind in which we live. However, even if a first cause authored nature, the result would be predetermined by the consequence, since nature must be as it is in order to allow our existence. Therefore, a first cause would have no physical significance. However, nature mysticism does offer an explanation of nature that differs from that offered by scientific investigation. In "Practical Magic in the Northern Tradition" (Aquarian Press, 1989), Nigel Pennick describes "energy fields" known as Ond, possessed by everything in the Universe, but which have yet to be characterized either theoretically or experimentally. An active essence, it is drawn from the sky to flow through the landscape. It gives plants their medicinal qualities, food its power to promote growth, and to initiate, powers of meditation, spiritual teaching, healing and martial prowess. Practitioners may seek to manipulate these fields in order to improve themselves or the human condition generally. Practitioners of Wiccan, or witchcraft, may seek to achieve teleportation, invisibility, shape-shifting, super-human strength, and fortune-telling. Healers based in this tradition have been documented apparently to have achieved successful cures where doctors had failed and which Science could not explain. (Refer to "Healing and the Mind", by Bill Moyers, published by Bantam, Doubleday, Dell, 1993, to accompany a PBS special series.) In respect of which, it should be acknowledged that Nature mysticism both has a utility, albeit limited by its inconsistency, and an ability to challenge our understanding.

2. Soul Mysticism: the quest of one's own soul in isolation and the ultimate knowledge of it. Notable in Hindu and Buddhist philosophy. There is much that one can discover about oneself by contemplation that no amount of even sophisticated scientific experimentation could deduce. People owe it to themselves to plumb these profundities in occasional moments of quietude. In December, 1989, the Vatican issued a letter warning that meditation "can degenerate into a cult of the body", or "could lead to psychic disturbance and, at times, to moral deviations." Practitioners of Yoga, however, maintain that their exercises benefit their physical and spiritual health. Because it is hardly a Universal philosophy, it is an inadequate basis for the day-to-day ordering of the Twentieth century. As a formally-reasoned philosophy of the world, it is, to say the least, incomplete.

3. God mysticism. The God mystic is a person who eschews any purpose in life other than uniting with Godhead, and who realizes that the soul has no character of its own or any trace of its own identity that will be recognizable in the Life hereafter. Mystics may prepare for the
greater part of their lives by trying to obliterate whatever personality they started with. As a reward, they achieve what they consider to be an extension of their consciousness and learn that there is more to life than material existence. Therefore, mystics consider an understanding of the material world useful but not of any singular importance, and prefer to complement this with a comprehension of the Spiritual world, which they consider to be infinitely more extensive and of importance accordingly. This understanding of the Spiritual world is usually based on direct experience of God by the mystic, and is independent of any beliefs about miracles or Heaven.

The return of the spirit to Godhead: In Eastern religions, it is absorbed into Godhead and obliterated. In Western religions, it is deified and transformed, without losing its identity.64

We must understand that the self, "the ego", of which we are normally conscious is not the true self; it is bound up with bodily organizations and mental happenings subject to change and decay; it is ephemeral and phenomenal. The mystic would rather contemplate something like the Hindu "Atman", an immortal constant, unbound by Space-Time. In Christianity, it is called the True Self, or Spark, Apex of Soul, etc., i.e., that which receives the Holy Spirit. In the return of the Spirit to Godhead it is only this crucial part of us that is "transformed without losing identity". It is already only the triple-distilled, refined, purified, filtered, strained and separated part or heart of us, and it is stripped of personality and character. It is stripped of all those "ephemeral, phenomenal" traits by which we recognize each other.

This is why we must use different arguments and talk of different things when conversing about Faith with a mystic than when discoursing with a normal religious person. The latter aspires to a Heaven where he or she will recognize him/herself and possibly all his or her friends and relations by much the same particulars they admire in themselves now. They are, therefore, susceptible to the sentimental appeals of the common churchmen. The mystic, on the other hand, is aware that these strictly human manifestations of ourselves will be lost in Godhead. He devotes his time and energies towards discovering within himself that "True Soul" that will eventually be united with God, in an attempt to snatch a brief glimpse on Earth of Heaven. The method by which he pursues this is called the Mystic Way.64

This comprises the Way of Purgation, the Way of Illumination (contemplation), and the Way of Union. To get an idea of what this means, one may read the description of St. John of the Cross in the "Ascent of Mt. Carmel". For instance: "attain complete detachment by renouncing all pleasures of the senses:" and "Take your seat within the heart of the thousand petalled lotus".

So Mysticism we will define with Frederick Crossfield Happold as an extension of normal consciousness both in feeling and in thought so as to apprehend an immanence of the temporal in the external and an external in the temporal. It is a direct experience of the presence of God, inexplicable in words, but nonetheless convincing. Happold quotes Saint Paul, in poet & psychic F.W.H. Myers’s “Saint Paul” (1863):

"Whoso has felt the Spirit of the Highest
Cannot confound nor doubt Him nor deny
Yea with one voice O World, through thou deniest,
Stand thou on that side, for on this am I."

Before we can talk of normal consciousness, we must define levels of consciousness. Objectively, our consciousness is the analysis of our situation from a sensory input. The subjective consciousness is the impression we have of our situation arising from that analysis. The objective part of this analysis occurs subconsciously, so that we are unaware of it taking place. To arrive at a conclusion concerning the world around us that is unbiased by our own perception of it, we must consciously analyze our own subjective consciousness in terms of the function of the objective consciousness. Only then do we deduce that what we perceive as noise
is in fact density waves traveling through an invisible atmosphere, acting on our nervous system, and being introduced to our consciousness half a second later. This same introspection also introduces us to our Preconscious level: that experience which we can become conscious of at will, but which routinely is subconscious. Therefore, the subjective consciousness is an extension of the objective subconsciousness through the preconscious level. At a preconscious level the subjective perceptions can be modified by feelings, and at a subconscious level feelings can be modified by emotions. Thus the sensation of wine trickling down a thirsty throat is modified pre-consciously by the feeling of pleasure, while, at the same time, if one is sharing the bottle in a romantic setting, it may be further modified by a subconscious emotion of love. Similarly, the conscious perception of an incongruity or joke is greatly extended by the preconscious modification of a generally happy mood, and this, in turn, is critically influenced by the subconscious mechanism of a sense of humor. In this way we can account for an extension of normal, i.e., subjective, consciousness that is inexplicable and indescribable and which fulfills the above definition for Mysticism. Something we might be no more than subjectively conscious of instead has a most remarkable effect on us, the which effect completely dominates the original perception. Thus, the brain mechanism whereby mysticism takes place is certainly effective, convincing and True, but mysticism itself is no more True than a girl is lovely to a man who is not in love with her, or a joke funny to someone who doesn't laugh.

Mystics have been found in all ages, in all parts of the world and in all religious systems, and Mysticism manifests itself in similar forms; because of this it has been called the Perennial Philosophy. Also because of this, we know it to be an attempt by the non-scientific but questioning mind to understand more than can be ascertained by the subjective consciousness. Mystics are people lacking the technique and understanding of scientific method who are trying to probe the relationship between their consciousness and the cosmos with the only tool at their disposal; namely, contemplation. The Perennial Philosophy of the mystic says two things.64

1. The phenomenal world of matter and individual consciousness is only a partial reality and is a manifestation of the Divine Ground in which all partial realities have their being.

2. It is the nature of man that not only can he have knowledge of the Divine Ground by inference, but also, that he can realize it by direct intuition, superior to discursive reason, in which the knower is in some way united with the known.

The phenomenal world of matter and individual consciousness exactly corresponds to the subjective consciousness and is thus only a partial reality in terms of what the brain is capable of imagining or thinking. Other examples of partial reality include the performance of the brain under hypnosis, alcoholic stimulus or hallucinatory drugs, religious hysteria, dreams, electrode experiments, neurosis or after brain lesions. This wide, bizarre and unlimited range of partial realities constitute not a Divine Ground, but organic brain function. The most important thing it is capable of is analyzing itself (objective consciousness), in which it tries not to expand the subjective consciousness, but to strip away the imagined perceptions inherent in it. This can only be done as an exercise in pure reason based on and backed up by experimental evidence.

**The Primary Act of Faith**

The mystic argues that he perceives two worlds - an external world made of objects which can be investigated scientifically and an internal world of thought, emotions and feelings. Happold says that one can either start with experience of the outer world, which is assumed to be Reality, and assess other aspects of experience in the light of this assumption, or begin with the assumption that the inner experience (including consciousness of God) is the most significant experience. The external world can then be interpreted in the light of that. To begin with the
second assumption rather than the first one, he calls the Primary Act of Faith. This approach is artificially divisive. One cannot consider an object in the external world without (a) creating an imagined concept of it within one's own mind and (b) comparing it to the other objects like it already experienced, actively attempting to recognize and name it, and often attaching some value judgment to it, i.e., pleasant, ugly, or even an emotional mood such as nostalgia, sentimentality, anger or hatred. Therefore, a study of the external world involves, ipso facto, a study of the internal world, and the objective of studying the external world is to understand the internal one. On the other hand, emotions such as devotion, awe and love can be contemplated in isolation from external objects that provoke them, and the mystic who makes this primary act of faith to understand them will not automatically come to understand the external world as a result. Indeed, it should not be wondered if his conclusions about the external world, based upon his contemplation of the internal world, should prove wrong; like those of the proverbial blind man who felt only the elephant's tail were about the elephant. The history of the world is littered with examples of the church's teaching being proved erroneous, and this is not something the churchman should be allowed too easily to explain away; it is significantly indicative of a fatal flaw in his outlook on his experience. It is a consequence of making a primary act of faith when no such faith is justified.

In Happold's "Mysticism", he says, "It is difficult, however, to avoid the conviction that there must be some "pattern of organization" inherent in the whole evolutionary process, a dynamic urge impelling structures to behave in certain ways and to develop in certain directions; in particular, the eventual evolution in man of mind, a vast expansion over that which existed before, and then the soul." The "within psyche" has evolved to overcome the "without psyche". In man, emergence of a power of reflection, i.e., the "hominization" of Pierre Teilhard de Chardin, is a new creation, a leap in the evolution of life. Teilhard de Chardin talks of a progressive interiorization of the soul until, ultimately, all will be able to partake in the Divine Ground. Man is "another membrane added to the majestic assembly of telluric layers". This can be stated to be an example of speciesism; the ultimate statement that man is not only superior to other animals, but inherently different. It is judging other species by our own standards and not their own. All creatures have evolved in response to a changing environment that created a niche into which they could adapt better than others. Successful evolution is nothing more than successful adaptation to a niche; the eagle has learned to soar, cheetahs to run, the freshwater shrimp to scavenge detritus; people have learned to think. The only "leap in evolution" to occur here is that people no longer need to adapt to their niche. We can create it at will and, at the same time, destroy those of others. We have an almost God-like power over the fate of this planet that we abuse in so many ways. Instead of inflammatory speciesist statements like those of Teilhard de Chardin, people need to be taught to accept the requirements of other species and to take responsibility for them. By looking after others, we will look after ourselves. One could make further comments on the perceived decline rather than advancement of moral standards, and the on-marching greed and corruption that ever threatens to engulf this planet in a final Apocalypse, but none of this would be to directly answer Teilhard de Chardin's argument. Whether for good or ill, humanity has evolved a mind and spirit. It is demonstrably not unique, it is seen in a more primitive form in other primates, and it can be added in many other mammals like-wise. But in people it has evolved to a premium. Is there some "coordinator" behind it? Teilhard de Chardin is not the only one to think so. Astronomers Sir Fred Hoyle and C. Wickramasinghe have postulated a mechanism for it. Their mechanism allows only for the evolution of a premeditated intelligence somewhere in the Universe, while the Christian requires reassurance that God intended it to happen here, and as it did. Such an evolution would have been no mere guidance of the life-stream of consciousness within the world's protoplasm. It would need to have been
highly interventionist. Evolution has taken place hand in hand with massive land movements across the Earth, drastic climatic changes and cataclysmic events, like the meteor responsible for, amongst other things, an iridium-enriched layer in sedimentary rocks around the globe and a role in the extinction of dinosaurs. This much is clear: belief in Teilhard de Chardin's evolution requires belief in the full-blown majesty of a thunderbolt-hurling Biblical God, unfashionable now in many intellectual circles. It is not what was envisaged by Teilhard de Chardin, who dreamt of a true evolution, unfettered by interventionism, where the spirit is allowed to develop to its full potential without external influence. It is certainly not compatible with Darwinism and the survival of the fittest. It is survival of God's chosen - merely creationism dressed up.

Our final consideration is relevant to the Mystic who believes the subjective experience to be more valuable than the objective external world. The question was alluded to in chapter 1 when we asked whether we could be sure the material world exists as we perceive it. We have discussed the uncertainty that exists in knowledge of things outside our direct perception and the partial falsity of our subjective perception of things. But we can take it only on faith that the things we perceive aren't entirely false and actually non-existent. Exploration of this faith uncovers a new disproof of an Absolute God, previously unreported, for instance, in B. C. Johnson's "The Atheist Debater's Handbook." 66

The Argument from Solipsism

Most of the time, people have a very subjective view of their surroundings. If asked "how do you know material exists?", the reply is that obviously it can be seen, and heard, and felt. Bishop Berkeley suggested in the 18th century that these qualities are all imagined in the brain and are only assumed to correspond to concrete entities. Theoretically, the whole procedure could be simulated with correctly-positioned electrodes. As a result, we cannot be sure that anything we have ever experienced really exists. What we "see" is an imagination based on the activity of photo-receptive cells. If we are to accept that the brain has the power to vividly abstract images from a welter of electrical pulses flying about its neurons, we must wonder whether it has the power to imagine them without the aid of neurons, pulses within neurons and, indeed, whether all physical matter is imagined. We cannot doubt but that the brain has tremendous powers of imagination, hence we cannot be certain that the brain does not imagine itself. An immaterial power of Imagination, acting entirely alone in a "non-Universe", might be responsible for one's individual but poly-demographic subjective experience, i.e., one's perception that one is sharing a world with other people. Such a hypothetical situation, of an immaterial singularity containing thought alone, is termed a state of "Solipsism".

Ironically, discussion of Entropy can be drawn out to result in an eventual solipsism. In an eternal, infinite universe at thermal equilibrium, even if the Entropy is very high, and few low energy particles remain, there will be fluctuations in the entropy, creating regions of space in which molecules will randomly find themselves in a low entropy configuration. At some point, in an infinite Universe, they will fluctuate into a solitary brain, isolated in the Universe, a so-called Boltzmann Brain, that could believe itself to be housed in a body and living in a world indistinguishable from our own. (See Sean Carroll - Mysteries of Modern Physics: Time (op cit) Chapter 13)

Religions speak of a concept called "Revealed Truth", a form of Absolute knowledge that God is able to insert inside our brain to give us a deeper understanding. But if God is able to insert a revealed truth into our brain, He could also insert the entirety of our lifetime’s experience into our brain, even, as Bishop Berkeley showed, in the absence of a brain really existing. If this was possible, again, our lives would be indistinguishable from solipsism.
There is little practical difference between our common-sense perception of the world and solipsism. However, if oxygen is something imagined by an imaginary brain, then it doesn't really exist. Therefore, if one suffocates oneself, one isn't really depriving oneself of anything, and the Imagination should be in no way affected. On the other hand, if there is such a thing as a material world, such a deprivation of oxygen would affect the Imagination, by causing it to stop cell by cell the brain's gray matter died. If the brain is material, and its powers of imagination depend on material, then death will be final, and no "after-life" could possibly be imaginable. Only if the power of imagining should be independent of material could it conjecture a level of consciousness, indistinguishable from the "Soul", that could survive death and experience a "Hereafter".

The immortality of the soul has disturbing implications, since when one ultimately suffocates, and the soul is in no way affected, this demonstrates to us that we may have never really existed. The distinction between the soul being in no way affected, and the soul dying and being resurrected, while of some dogmatic significance, is of no consequence here. You might feel life ebbing away, and then arrive at an after-life; there would be no difference in what you experienced whether your soul actually died and was resurrected, or simply imagined resurrection without dying. Likewise, the 'out of body experiences' and other hallucinations reported by near-death survivors testify to the powers of the mind's imagination during near-death experiences without proving or disproving that they would continue after death.

In effect, there are 3 beliefs open (i) That of the non believer, that death is final and that life is wholesome, real and worthwhile, versus (ii) that nothing really exists, and that I am alone in emptiness, versus iii) that we all exist, that death is final, but there is an after-life for our soul which lives with God (or in Hell) for Eternity..

Now, just as a person who takes material for granted may believe in a soul, for which there is no evidence, so a person who believes in a soul may also believe that matter exists, as seen. However, the conventional faith is made much easier by the conviction that at death, belief will be confirmed. But supposing hypothesis (iii) was correct all along, then it would take a monument of posthumous faith to believe that matter ever existed, since there would be no way to distinguish between ii) and iii). After death, there can be no further revelations. To this argument it might be objected that on dying one would meet the Lord, who would explain that of course matter existed all along. The point is this - if there is no logical basis for believing one's senses before death, there can be no logical basis for believing them afterwards. In the case just described, one would be forced to conclude that the God who had just been so reassuring might be as much a product of your fertile imagination as this book is and we return to solipsism.

William of Ockham argued in the 14th century thus:

Assume God is all-powerful
Therefore, God could make it to be the case both that
a) there is no material world, and
b) my experiences continue just as if there were a material world.
Therefore, I cannot conclude solely on the basis of my experiences, that there is a material world.
We might summarize this as
1) If God exists, then I cannot be certain that there is a material world, and the contrapositive of this is
2) If I can be certain that there is a material world, then God does not exist.

William of Ockham's argument is frustrated by the impossibility of determining whether an all-powerful God exists. But as a result of our discussions above, we can rephrase William of Ockham thus:
1') If Life after Death exists, then I cannot be certain that there is a material world,
with, as the contrapositive:

2') If I can be certain that there is a material world, then Life after Death does not exist.

Unlike William of Ockham, we do in theory have a method of distinguishing whether there is a material world, i.e., by dying, although in practice it reveals nothing to anybody else. Since we cannot believe in certainties, the next best thing is to deal in beliefs. It is logical to directly deduce the modification of the statements thus:

1") I believe that God can grant Eternal Life, so I expect that the existence of the material world can never be proved, and

2") I believe there is no life after death, which reassures me that there must be a material world.

As a result of this transformation, it can be said that if we believe that the material world exists and refuse to adopt any belief that leaves this in doubt, then we must believe that Life after Death does not exist, and that there is not a God who grants one. Belief in that God can grant Eternal Life is equivalent to a failure to reject Solipsism outright.

Of course, there is no way to be sure of the matter until death, but one can say that if we are prepared to INSIST that the material world exists, we MUST believe that a God of Resurrection doesn't, for the existence of such a God would mean we could never tell. This goes to show that belief in life after death, although justifiable, should not afford comfort and security. Being trapped within the consequent extension of the belief, an eternity of doubt, would be a sure way to send someone crazy, like being locked up in an insane asylum. Which is, of course, the deserved fate of people who go out babbling that the whole world is a figment of their imagination. Obviously, if it is undesirable to believe that God can grant Eternal Life, there is no justification for a belief in God. The existence of God, itself forever unverifiable, would cast into doubt the validity of our own existence, creating a cosmic uncertainty. Argument from the philosophy of the uncertainty of knowledge is therefore able to disprove the existence of any Absolute God that is compatible with our definite, incontrovertible, meaningful existence. “Meaning” is a term we use to relate our expectations to that which is outside our consciousness, and in a solipsism, there is nothing outside our consciousness. Since the provision of meaning to our existence is the essential psychological attribute of God, and God cannot validate that our existence is not a Solipsism, this argument provides conclusive psychological proof that we can have no certain, meaningful relationship with an Absolute God. And to have an uncertain Faith in God is to accept the possibility that one might face an Eternity of doubt as to the nature of existence itself.

**Personal Humanism**

It is not surprising that Religious belief, flawed in theory, should prove problematic in practice. Indeed, the only practical test we have for the "Truth" of religion, based on the assumption that an Absolute God is absolutely perfect, is to expect the world of His creation to be perfect, and, correspondingly, for religious faith to be unanimous and universal. Clearly, God fails the test. Nonetheless, there is no shortage of adherents to religious doctrine, and this has, from a pragmatic perspective, a number of adverse consequences regarding our human dignity, strength and meaning.

Religion erodes our strength by relieving us of some of our responsibility. Fully responsible people, confronted with a problem, have a right to adopt what they feel to be the best solution. This sense of responsibility is seriously weakened if Freedom to act is arbitrarily curtailed by religions imposition of sin. To commit sin is not necessarily to act irresponsibly or to commit a crime.

People who commit crimes are punished for the deleterious effect the crime has on their
neighbor. People who commit sins are punished for defying authority. By committing a sin one is subjecting oneself to judgment by reactionaries whose authority is based on the fear and hatred that they are capable of inducing in others. Frequently, compassion and love seem not to be mingled with their judgment. To recognize sin is to derogate one’s responsibility. To live free of sin all one must do is reject such authority. The imposition of sin can have terrible effects on well-meaning people, whose actions are often otherwise justifiable. But even worse is the effect that this sin has on people who would otherwise be expected to love the guilty party unreservedly. So vicious and pervasive is the notion of sin that it can totally overwhelm parental affection and turn it into bitter rancor. When this happens, it is not the fault of the person sinning, but rather it is the fault of the religious training that generates such predictable over-reactions. It is the worst and most poignant example of the victory of hatred over love in the religious complexion.

Another example of the religious degradation of human strength is seen in exhortations such as Christ's Sermon on the Mount in which he discouraged attempts to improve one's station in life. Rather than to teach self-help, religion teaches that misery is inevitable. The Roman Catholic Church positively revels in suffering. Pope John Paul II at Lourdes in August 1983 was heard by thousands to exclaim how joyous he felt to be in the presence of so much suffering and that he had found the moments to be amongst the most touching in his life. In his anti-abortion address of October 16, 1984, "Human Lives, Human rights", Archbishop J.J. O'Connor, before doctors, nurses, nuns and priests in New York, began "There is a great deal of pain in our country today. I am not happy about it, but I am encouraged by it. I am encouraged to believe that there is deep pain throughout the land in respect to a number of crucial problems". In an interview with the New York Times magazine, printed Dec 11, 1994, Cardinal Etchegaray is quoted: “I see so much misery throughout the world. But I see so much hope. People wonder how I can go around and see so much tragedy, why it doesn’t get me down. Amazingly, I find myself refreshed when I return. I come home and go to have supper with the Pope and I tell him all that I have seen and we are both uplifted.”

Furthermore, many Church policies promote suffering, and none more so than religious embarrassment at the existence of women and sex. Because of certain well-known prejudices of the early Church leaders, it has always been deemed immoral to take pleasure from sexual intercourse. In accordance with the tradition that the sin of the parents may be subsequently visited on the children, it has always seemed natural that the most fitting punishment for unlawful sexual intercourse should be to have to rear the consequence. The punishment for sex-crime is children. Therefore, the Church disapproves of birth control. In an audience at the Vatican in September 1983, the Pope urged U.S. bishops to fight contraceptives, saying, "We simply cannot accept the contemporary pursuit of exaggerated convenience and comfort". It is from these roots that opposition to abortion really springs. It is fair to say that "Pro-life" is "Anti-Child". Whenever children are brought into the world as a punishment for their parents, they cannot help but share in the punishment. Of course, women deserve a large share of the blame, they say, for seducing men from the path of Righteousness, and so it is fair to say that the Church subjugates the rights of women. In the more traditional Churches even today, women do not enjoy the rights of men. These and many other abuses result inevitably in suffering. Therefore, it is clear that the Church glorifies suffering both as a punishment for sins and as a noble facet of the human spirit. Only thus can we understand the Pope's address to the European Economic Community (a region not noted for its misery) in Brussels, 1985, when he said "We find ourselves confronted with the moral and spiritual decline of Mankind, particularly visible in your countries. It is as if human beings see life as being a game, that is, whenever they are not seized by despair." Or on April 26, 1997, when the Pope, in Prague after the fall of Communism,
announced that the world today resembles “the epoch of the Roman Empire’s decadence”.

Once a healthy amount of suffering is seething in the population, the Church can step in and attempt to relieve despair. The Church unrelentingly preys on despair. Despair can be consoled with promises of a never-never land of Justice and joy; meanwhile, Suffering is barely ameliorated. Often not even the despair can be abated. Difficult circumstances force many people each year to feel betrayed by God; and often the loss of their faith afflicts them more than the loss of their livelihoods or loved-ones. Here the need is particularly acute for a faith in oneself that can be relied on never to let one down.

Unfortunately, in every population one will find those individuals for whom, some might say, a faith in their own mind would scarcely be justified. For such people the most important aspect of faith in an Absolute God is the sense of consolation that it gives them. It would be unfair to criticize Personal Humanism for trying to rob them of this consolation, because, in practice, their faith is invariably unshakable, and will never be supplanted. For almost everyone else who clings to the Church through the motivation of guilt, anxiety, fear or despair, the new faith offers not only the chance to escape but the courage to act. The new faith shows despair to be unrelated to sinfulness or betrayal and overcomes it with effort rather than pity. Any faith can give a believer strength, but with the new faith there is the bonus of realizing that this strength is all one’s own. These reserves of strength come from within ourselves and are not given to us by God. In the strength department, we all can be self-sufficient. A belief in the power of the mind is intensely liberating and optimistic. It is as useful to those who are full of self-confidence as it is to those who are full of self-doubt. It is a faith that recognizes the exquisite sensitivity of each individual together with his or her capacity for heroic action. In our new faith, Christ is not the only hero. Too long has the Church been able to boast that it watches over us like we were a flock of sheep. I’ve worked with sheep, and I love them, but they are not very bright. They are a herbivore barely able to outwit its prey. There are no individuals in a flock of sheep. "The leader of a flock of sheep is that sheep which happens to be in the front at any one time", said Tolstoy. It is time for men and women to stand up to this subtly-insinuated abuse. Only Personal Humanism allows us to act responsibly according to our own judgment, in a fashion that asserts our self-respect. Although the Church claims to be deeply concerned with promoting this very quality and has issued numerous encyclicals to that effect, I will draw a few comparisons, and readers may draw their own conclusion.

Not until his attacks on "Liberation Theology" during September 1984, did Pope John Paul II unambiguously support the call by third-world countries for a redistribution of the world’s wealth. But he attacked "Liberation Theologians" for using Marxist analysis of revolution and struggle to achieve this goal. Instead, he offered that the "poor people and the poor nations, poor in different ways - not only lacking in food, but also deprived of freedom and other human rights - will judge those people who take these goods away from them…", and that "this poor south will judge the rich north". The focus of this same address, in Edmonton, Alberta, on September 17, was a passage from the Gospel of Matthew in which Jesus calls on his followers to feed the hungry, clothe the naked and give comfort to strangers, the sick and the imprisoned. Earlier that month, he had stressed that the role of the church in these situations was only to help the oppressed prepare to save their souls. We must ask: Is it dignified for a poor peoples to rise up and work towards a better future, or is it dignified for them to accept foods and other handouts from an organization that tells them to accept their enslavement without resistance? On December 11, 1984, Archbishop Josef Tomko, Secretary General of the Synod of Bishops, said the Church could not accept class struggle, a theory “that affirms the positive value of hate”. I must interject here that “hatred” is the emotion usually displayed by the authorities in these situations. The emotion most properly displayed by a people rising up and demanding their
freedom is anger. This anger has a positive value when directed against tyranny, and towards a better life for one's children. Not until after the popular uprising against President Ferdinand Marcos of the Philippines did the Vatican issue in April, 1986, the document "Christian Freedom and Liberation", which acknowledged the right of the oppressed to revolt, and even, "as a last resort", to use "armed struggle" to "put an end to an obvious and prolonged tyranny." However, during the 1990's, the Pope, using transfers of bishops, closures of seminaries, dismantling of anti-poverty programs, and new appointments, especially in South America, extinguished the Liberation movement and restored the Church as "an institution of the rich, for the rich, by the rich", actions which made any remedy to the widening wealth gap between North and South less feasible.(71)

The support of the Church to those who need it has been likened to the support of a crutch to aid the crippled and lame. Of course it is dignified to issue crutches to the lame, but would it ever be considered dignified to force the use of crutches on every man, woman and child? Is it dignified to stunt the growth of children in mandatory leg braces? A crutch given to the lame cannot cease to be a crutch when it is adopted by the sound of limb. Can the moral crippling of an entire country in order to support the sensibilities of its most insecure members be justified on the grounds of Human Dignity?

To describe a respectable member of such a community as "God-fearing" is to pay him or her a compliment, but has it ever been compatible with Human Dignity to live in fear? Is it dignified for all your self-restraint to be attributed to a fear of the consequences, for all your noble deeds to be derived from someone else's strength? Is it just to thank God for our foods when it is the farmer who did the work of sowing and reaping, the engineer who designed his agricultural equipment, and the geneticist who bred his high-yielding crop of wheat? Where is the dignity in this perpetual belittlement of our achievement?

In short, I ask the reader's choice between a faith that finds dignity in human strength and a faith that finds dignity in human weakness. But religion also belittles our dignity by taking away the meaning of our lives. Our human meaning is gained through our success at problem-solving, and the way that we interact with others. Dignity is not supplied to us by God but rather is directly proportional to the extent we realize our own personal meaning. To the extent that religion attributes our dignity to divine agency rather than to ourselves, it is demeaning to that dignity.

Of course, because the dignity conferred by belief in an Absolute God is very much less than that conferred by belief in oneself, it is at least much easier to understand its meaning. This is why religion is justly defended as a crutch for the feeble, who might otherwise be stripped of all dignity whatsoever. And this is why it is so dangerous to enforce that crutch on the sound of mind. Not only is our "religious" meaning truncated and abbreviated, but it is also factually incorrect and not infrequently at odds with our experience. Therefore religion is often an inadequate consolation to us in times of personal tragedy. How can we be expected to believe that God has a purpose for us when He is capable of annihilating a life at the height of its aspirations in a quite arbitrary fashion? And when such a calamity should cause persons to lose their faith in God, the subsequent vacuum and meaninglessness of their lives must and can only be blamed on the unwarranted and excessive propagation of false "religious meaningfulness" in the first place.

Faith in oneself copes with bereavement even in cases of natural disaster in a much more satisfactory fashion. In practice, it is the approach of most people anyway. It is recognized that the mortal aspirations of the deceased have come to reside in ourselves. Consolation is derived not merely by supposing that the deceased is currently at rest in peace, but rather by honoring the memory of the deceased, by acting in accordance to what we know that person's wishes to be.
We may undertake to complete any important projects in which the deceased was involved, or erect a suitable monument, perhaps endowing scholarships or a charity for research into a particular disease, and finally, if appropriate, we may exact revenge. The fact that all these are common procedures, despite their not being commensurate with a belief that the deceased has graduated to an ultimate fulfillment, is proof that throughout ages people have found the advice of the Church inadequate to console the most intimate of losses and have intuitively behaved according to the logic of Personal Humanism.

That logic is, of course, that while the subjective consciousness of our World 2 is mortal and subject to termination according to chance fortunes, it can, nonetheless, be turned into the immortal objective knowledge of World 3 through the mechanisms of remembrance, inscriptions and records, and in a small number of cases, fame in general. Our meaning in the eyes of others, as conveyed by these remembrances, wildly exceeds our religious meaning. According to great mystical saints of the Church, the only part of the Soul that survives death is its "apex", devoid of all personality or character traits by which it might have been recognized in life. According to these saints, one's meaning, as far as anyone living can be aware of, is thus approximately nothing.

It is, therefore, my contention that Personal Humanism rather than an absolute belief in the Lord confers a greater dignity to our lives by increasing our meaningfulness just as it did by promoting human strengths. In this way we can justify the greater self-confidence and responsibility which it also confers. Because it denies sin (as opposed to crime) it is also a philosophy of Life and joy instead of the mixture of suffering and hatred that religions in practice tend to become. Is this not a philosophy fit for Humanity, for Heroes as opposed to sheep?

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Sonnets from the Southern Bar 3

Topple out of the sunlight’s early amorphous reasoning
And close behind it; advance into the summer cool of darkness
Here where amber lanterns slumber and the russet sparkle
Of brass appointments jewel the arras drawn like velvet lids
Across the persiflage: this shrine still echoes to the dance of careless moments
Long forgotten. The veneer shines with a panoply of reflected marks
That chases a tail of fabled form, and on imbibing we thus embark
On projects of pure pleasure and renown at the close of the season.

What is the Poet doing here? Does he seek to find
The Archmagus or prestidigitator of poor rhymes?
Of effrontery a new style, of phrontistery a new clime?
Say no! It is merely legends that relive in his mind
    And in to this domain he seeks an apodictic latch-key
    Not eschatology this, but restless sciamachy.