

# Hyperreality

by

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## Quotations

“Mathematics is a language, the language of nature.” – Paul Davies

“In the beginning was the Deed.” – Goethe

“From the chalice of this realm of spirits Foams forth for Him his own infinitude.” –

Schiller

Mathematics is the territory, NOT the map. Or mathematics is the territory AND the map.

Red Pill: “See how deep the rabbit hole goes.” – Morpheus, *The Matrix*

Blue Pill: “The story ends, you wake in your bed and you believe whatever you want to believe.” – Morpheus, *The Matrix*

“All truths are easy to understand once they are discovered; the point is to discover them.”  
– Galileo

## Table of Contents

[Hyperreality](#)

[Quotations](#)

[Table of Contents](#)

[The Illuminati](#)

[Time](#)

Time Doesn't Exist  
Existence versus Non-Existence  
The Selfish Soul  
Dreams  
The Holographic Universe  
The Dream Mind  
The Binary Brain  
The Right Voices  
Group Unconsciousness  
The Unity of Consciousness  
The Most Beautiful Shapes in the Universe?  
The Holographic Principle  
Alpha and Omega  
The Continuity Editor  
Hotel Infinity and the Big Bang Expanding Universe  
Neoplatonism  
Am I Alone?  
The Information Universe  
Non-Existence  
The Solution or Not?  
The Creation of True Knowledge?  
Private Language and Private Gods  
The Mathematical Book of Existence  
Archetypal Control  
The Sensorium and Cognitorium  
Living Mathematics  
The Scientific Materialist Absurdity  
The Platonic Domain  
The Spell of Music  
Mathematics – “It’s alive!”

## **The Illuminati**

THIS IS ONE OF A SERIES OF BOOKS outlining the cosmology, philosophy, politics and religion of the ancient and controversial secret society known as the Illuminati, of which the Greek polymath Pythagoras was the first official Grand Master. The society exists to this day and the author is a senior member, working under the pseudonym of “Mike Hockney”.

### **Time**

“What is time? If no one asks me, I know. But if I wanted to explain it to one who asks me... I plainly do not know.” – St Augustine

Time comes in two varieties: physical and mental. Physical time is measured with a clock and is independent of our minds. Mental time is “measured” by our minds – by how much *attention* we choose to direct at something, and is independent of clocks. We *feel* psychological time whereas we *measure* physical time. Psychological time can speed up when we’re enjoying

ourselves and slow down when we're bored. Physical time passes at the same relentless rate, regardless of our feelings.

While all clocks in the same reference frame measure the passing of time at exactly the same rate, two people standing beside each other might be having an entirely different psychological experience of time passing.

According to Henri Bergson, a newborn baby doesn't experience the passage of time. It has no consciousness, no memories ... so how can it mentally engage with time? By the same reasoning, no animals ever truly experience time. They exist outside mental time. They are like the biological automata described by Descartes.

Nietzsche wrote, "Consider the cows, grazing as you pass by; they do not know what is meant by yesterday or today, they move about, they eat, rest, digest, move about again, and so from morning until night and from day to day, fettered to the moment and its pleasure or displeasure, and thus neither melancholy nor bored."

Time, in its essence, is about the ordering of events: this aspect unites both physical and mental time. Space is where events occur and time is the order in which they occur in that space.

In the Newtonian conception of absolute time, time was conceived in terms of a "God clock" that was independent of the contents of the universe and just ticked by forever with relentless efficiency and accuracy. The passage of one second meant the passage of one second everywhere in the universe. Absolute time was accompanied by absolute space, which was something like a cosmic container, independent of its contents. Everything played out in this container, but if you removed all of the contents, the container would continue to exist.

Then along came Einstein. Some naïve scientists claim that Einstein merely refined Newton's theories: initiating a mere evolution rather than a revolution. While it's true that at low speeds of the type we normally encounter, Einstein's theory presents almost identical results to Newton's theory, in truth Einstein destroyed Newtonian physics and replaced it with a wholly new paradigm.

Einstein abolished absolute space and time and replaced them with "dynamic" and relative space and time (in fact, with spacetime, the fusion of space and time), dependent on the speed at which things travel relative to the invariant speed of light. (In Newtonian physics, the measured speed of light was assumed to differ according to the speed and direction at which the measuring equipment was moving i.e. the measured speed would therefore be anything other than invariant.)

If Einstein's view wasn't ushering in a revolution in the way we understand reality, what could? Einstein was asserting that the universe is entirely different from how Newton envisaged it. Conceptually, the two paradigms have nothing in common. The fact that they frequently give almost identical answers is purely because, as we have said, the Einsteinian system approximates to the Newtonian system at very low speeds. It's only thanks to this that Newton was ever regarded as a genius who understood our world. If we lived in a world where all of us routinely travelled at any speed we liked between zero and light speed, Newton's ideas would never have been heard of because they would not have resembled the real world in any way.

Newtonian physics, despite its success, was wrong conceptually, and it's rather disturbing that this is rarely pointed out by scientists, or played down when it is. It's because they lack a philosophical sensibility, and are driven more by the apparent success of a theory than its conceptual credibility and coherence.

Science is instrumental i.e. driven by what works, by what proves useful. All that scientists cared about was whether Newton's equations gave the right answers, and they certainly did – and do – in the particular environment in which we live.

Here we see a scientific lesson for life: it's not how accurate your model of reality is that

matters in science but how good your equations are at giving the right answers. The correct calculated answer is the basis of science, not the correct ontological answer i.e. scientists don't care about what is true and what really exists: they care about how well theoretical calculations correspond with measured quantities, and if they are in good agreement then scientists assume they have captured reality in some way. Yet the success of Newton's physics – based on NON-EXISTENT absolute space and absolute time – shows how dangerous this approach is.

Science is staggeringly hostile to philosophy, with many scientists openly sneering at it. They don't comprehend how disastrous this is. Einstein was able to overturn Newton only because he conceived of a different philosophical model of space and time, and his new conception proved more accurate and general than Newton's. Yet Einstein's theory is no more secure than Newton's before it because it too is not based on any incontestable philosophical and logical truths.

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No one ever comments upon it but Newton's absolute universe is the one appropriate to a Creationist God while Einstein's relativistic universe is much more amenable to atheism. If time is different everywhere, depending on what speed something is moving at, it makes you wonder why God designed such a bizarre system. Shouldn't he have designed a Newtonian universe where space and time are fixed and absolute? Why make them relative? From the *divine* perspective, there's no sufficient reason for such a bizarre design plan.

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Newton was a "Realist" i.e. he believed that time was a real thing, a substance if you will, independent of any physical processes and with an absolute and indestructible existence.

According to Illuminism, there's nothing other than mathematics. Time, therefore, is a manifestation of something mathematical, and space likewise. It transpires that space and time have extremely straightforward mathematical roots. Space originates in *real* numbers, and time in *imaginary* numbers. Einsteinian *spacetime* therefore corresponds to *complex* numbers (numbers with real and imaginary components). All objects in spacetime are "complex".

In other words, we experience real number environments as spatial, and imaginary number environments as temporal. When we are stationary in space, we are travelling through time (imaginary space). As we start to move through space, our speed through time proportionately slows down, and if we reach the speed of light through space, we cease to move through time at all: reaching light speed through space removes us from the time stream. Similarly, when we are travelling at the speed of light through time (imaginary space), we have no motion through space. It cannot be emphasized enough that there is no sufficient reason to privilege real numbers over imaginary numbers, and they must be treated with absolute parity of significance. If anything, imaginary numbers should be privileged over real numbers because we ourselves are creatures of motion through time rather than motion through space. In spatial terms, we are usually either stationary or moving at extremely slow speeds in comparison with the speed of light through space. We are quintessentially temporal beings, located in the ceaseless stream of time. To use Einstein's word, we are "timelike" as opposed to "spacelike".

Pythagoras said, "All things are numbers", and that truly is the case. There really is *nothing* else. Scientific "reality" is about mapping scientific phenomena to numbers, the properties of numbers and relations between numbers. Any phenomenon that cannot be shown to be about numbers is bogus. Any concept that cannot be boiled down to an underlying statement regarding numbers is dubious at best, and probably worthless. Our experiential reality is about how we *perceive* numbers, and we perceive travel through imaginary space as the passage of

time.

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Newtonian absolute time represents the common sense view of time. The school of thought opposed to absolutism is relationalism, of which Leibniz was the greatest champion. In the relationist view, time is about the change in spatial relationships between physical objects (i.e. as objects move, they come closer together, or move further apart), and the ordering of events: Event A proceeded event B rather than vice versa.

If no relationships between objects changed, how could you decide that any time had passed? There would be no temporal events at all.

If all physical objects were removed from the universe, no physical time would pass. If every physical object in the universe froze in position, no time would pass. Time is the measure of relative change, and if there are no changes then there is no time. Time is no longer something that passes independently of objects (i.e. it's not absolute). This view seemed to be triumphantly vindicated by Einstein's theory of relativity that made time dependent on the respective speeds of objects in relation to the speed of light, the speed limit of the cosmos. However, on closer inspection, Einstein's theory simply gets rid of two absolutes (space and time), and replaces them with a different absolute: the speed of light (in which speed and time are both involved since speed is defined as the distance travelled through space divided by the time taken). This is just a more subtle absolutism, which has relational, relativistic side effects. Now, however, if all spatial objects were removed from the universe, time particles (*chronons*) would continue to exist, and, if all chronons were removed, space particles (photons) would continue to exist.

The big question for you to ponder – and we will provide an answer later in this series of books – is whether absolute invariance of light speed implies an absolute spacetime background, or a non-absolute, relativistic spacetime background. Guess which option Einstein plumped for.

Tense

A key way of thinking about time is with respect to “tense”, meaning whether an event is past, present or future. The American Revolution is in the past, the American 2040 Election is in the future and the present is right now.

In the tensed theory of time, time flows. Where space is conventionally conceived as a static container, time is dynamic; where space is *being*, time is *becoming*. It's forever changing. It's like the river of Heraclitus into which you can never step twice (or even once according to some philosophers!). Every instant is different from every other instant.

However, there's a radically different theory of time: the *tenseless* theory, which treats time on a par with space. Time no longer flows. It's static. Like space, it's a container and every part of it can be mapped and given coordinates. Although this might sound ridiculous, the tenseless theory of time is popular with philosophers and scientists, and Einstein himself was one of its leading advocates.

If we want to specify where somewhere is on Earth, we provide a longitude and latitude. If we give the right coordinates to a traveller, he will find his way to the intended location. The location is *fixed*. It doesn't “flow” to somewhere else.

All spatial locations are also *relative* to all other spatial locations e.g. Manhattan has a set, relative position to Washington D. C. It doesn't switch overnight to some new relative position.

Now, if we say that the American Revolution happened in 1776 and the French Revolution in 1789, we are actually providing “time coordinates”. We are also treating all events as relative to each other (the French Revolution took place 13 years after the American Revolution, and that will always be the case). We are therefore handling time just like space.

So, why not regard “future” events in the same way i.e. as events to which we can assign temporal coordinates? In that case, they’re not actually future at all – we haven’t reached them yet, but they’re already there. They already exist.

In the same way that we walk towards a new destination, expecting all of the points between us and where we’re going to be there already, so we walk through time and each “future” point is already there, waiting for us. This is a theory of absolute determinism. Everyone’s fate is decided. All the events of your life are already cast in stone. You can’t alter anything about your “future” any more than you can alter the location of Manhattan and its position relative to Washington D. C.

So, the debate between the tensed and tenseless theories of time concerns whether time flows from the past to the future or is best treated as a set of fixed coordinates ( i.e. the whole of time has already happened and all time coordinates already exist).

In the tenseless view, travelling in time is like travelling from London to New York: you travel along an existing route; all the points are already there. In the tensed view, the future is not mapped out. There are no coordinates. You have free will and you can choose your own destiny.

In the tensed theory, the future does not yet exist: in the tenseless theory, it already exists. In the tensed theory, the future is currently unreal because it hasn’t happened yet: in the tenseless theory, the future is real because it has already taken place and is fully mapped.

The tensed theory offers us endless possibilities and opportunities: the tenseless theory offers us none. For tensed time, the future is open. For tenseless time, it’s closed. In fact, in the tenseless view, time happened all at once, but just as we can only take one step at a time in space, so our consciousness can only proceed step by step through time. Although our future has already happened, we don’t know what it is. The tenseless theory of time is what people have in mind when they talk about precognition, premonitions and “seeing the future”. They can see it because it’s already there. (Of course, that also means that they can’t change it – so it’s utterly pointless knowledge.)

Time becomes a “fourth dimension” in the tenseless theory, which is sometimes called the “block” theory of time because past, present and future all exist as one big block. In the block theory, “now” acts as the temporal equivalent of “here”. If we are “here” we are not “there”. If it is “now”, it is not “then” and it is not “what is yet to come”. Past, present and future are simply relative to where you currently are on the spacetime block. The present is the present coordinate, the past is the coordinate just gone (but it has not disappeared from existence; it’s still there, but no longer accessible) and the future is the next coordinate (it already exists; you just haven’t reached it yet). It’s not open to you to choose what comes next, just as it’s not up to you to decide what lies between you and Manhattan.

In block theory, life is reduced to the nightmare scenario that so tormented philosopher Henri Bergson. It becomes a movie reel made of static frames. All of the frames exist and it’s just a question of moving through them one by one. Change is an illusion because each frame – the true reality – contains no change. Apparent change is created simply by running the movie. It is introduced by the equipment that projects the film, but is something external to the film itself.

Imagine a hot cup of coffee cooling down. According to block theory, there is in fact no cooling: there’s just one static state after another. There’s no process of cooling, no becoming – just a succession of “being states” of the coffee, each with slightly different properties, including reduced temperature. There’s no “coming into being” of lower temperatures and “ceasing to be” of higher temperatures.

Block time fits extremely well with the scientific materialist paradigm. Both prize predictability and deny free will.

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So, to be clear, the tensed theory of time says that the future is unknown, the past has gone forever and can never again be accessed, and all that really exists is the present instant. The tensed theory is compatible with free will. It is *incompatible* with time travel: the past has gone (so there's nothing to go back to), and the future is currently non-existent (so there's nowhere to go to).

According to the tenseless theory, the past, present and future all exist and can never vanish. When we travel through time, we are travelling through an eternal timescape. It is our consciousness that somehow moves through time (though no one ever explains how this mental process takes place), but time itself does not move. Time travel is possible – because the past and the future always exist for us and we can go there if we can find the technological (or indeed mental) means. Free will is incompatible with this theory since everything you will do has already been done.

Which theory do you prefer?

The Illuminati are absolute champions of free will, hence of the tensed theory of time. We completely reject the block theory of time.

## **Time Doesn't Exist**

A key philosophical text about time is J. E. McTaggart's *The Unreality of Time* in which McTaggart presents his powerful logical case that time doesn't exist! He takes the stance that the tensed view of time is most consistent with our intuitive grasp of time and our everyday experiences. Only tensed time, he maintains, is consistent with genuine change. We can say that a cup of coffee was once hot (in the past) and is now cold (present). Detensers (advocates of tenseless block theory) would say, on the other hand, that the cup of coffee had a certain hot state at time X and at a later time Y it had a state that was not hot. We are dealing with nothing but variation in a property at different times. Strictly speaking, the labels of past, present and future do not apply to tenseless time – everything exists eternally – so we can never say that the heat of the coffee cup is “in the past” (if we do say such a thing, we mean that the heat of the coffee cup belongs to a state to which we no longer have access).

We can only legitimately say that time coordinate X precedes time coordinate Y, and if we could travel backwards in time to X from Y, the cup would be hot again i.e. its heat is NOT in the *past* and hence gone forever. Rather, its heat is still there but inaccessible because we can't go back in time.

We can't argue that the cup of coffee has undergone any authentic change if its properties are actually permanently fixed at every particular time. It's not the cup of coffee that's undergoing change, but our conscious perception of the different fixed states of the cup at different fixed times. It's as if the universe is completely frozen and the only thing that moves in it is our consciousness. Why this should be is never explained by detenser thinkers.

In fact, they might argue that our consciousness is fixed at every point too and it's something else that's moving – some kind of “activation” wave that sweeps through the static universe and “lights up” a slice at a time. Our consciousness gets fired up at each instant and seems to be something dynamic but in fact this is an illusion because our future set of conscious states already exist and are simply unactivated, but will “come to life” when the activation wave reaches them.

Evidently, the tensed and tenseless theories could scarcely be more at odds with each other, yet in our ordinary lives, we mix and match the two theories without a second thought. We

unconsciously apply whatever seems most appropriate in a particular context. Although this works quite well, we are actually using two totally different and incompatible theories of time and existence – and not noticing! That shows you how easy it is to dupe the mind. We can cheerfully use rival theories that contradict each other in every way and not be concerned at all. Most of us aren't even aware of the dilemma.

McTaggart, having offered support for the tensed theory, then logically revealed how tenses are incoherent. His simple argument seems specious at first, but proves immensely potent and difficult to refute. The argument goes like this: past, present and future are mutually exclusive: a past event cannot be in the future; the present isn't the past. Yet every event exhibits all three of these incompatible properties. Julius Caesar's death was once in the future, then it was in the present, and then it became the past. How is that possible? Isn't there a fatal logical contradiction? If so, the tensed theory of time is false, yet it's the most plausible account of time and change. McTaggart decided that the only way out of the impasse was to conclude that time was unreal, hence the title of his book.

Tensors have replied that no one is ever suggesting that past, present and future ever happen at once. Caesar died in 44 BCE. That is the past for us. At the time of his death, it was the present, and a hundred years earlier, it was the future. This seems to make sense, but, in fact, the tensors are now deploying the argument of the detensors: they're quoting dates (time coordinates like spatial coordinates) and relative states with regard to these dates (Caesar alive, Caesar dying, Caesar dead). The implication is that if you could return to 44 BCE before Caesar's assassination, you would find him alive. But how is that possible if his death is truly in the past, rendering it impossible for him ever to be found alive again?

Detensors agree with McTaggart that tensed time is logically incoherent, but they disagree with McTaggart that a tensed "whoosh" is needed to account for our experience of change. Isn't the detensed variation of one state to the next sufficient? Why does the hotter state of the cup of coffee need to be relegated to the "past" in relation to the colder cup of coffee? Why can't it just be the preceding state? And, in any case, what experiment could you perform to show that the detensed view is wrong? It provides exactly the same data, while being more logical. All you have to sacrifice is the dubious "whoosh" of genuine change. Yet this whoosh, the tensors say, is life itself. Without it, the universe becomes a machine with no free will, inexorably unfolding according to a pre-programmed script: a wholly pointless universe. In the detensed theory, the whole of existence was mapped out at the beginning of time... so why bother going to the trouble of playing it out? The end already exists. Is this just a play and we're just actors reciting our lines? If so, who's the audience? And is time different for them?

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The tensed view of time – past, present and future – is certainly much more plausible than the tenseless theory, but how can it be saved from its inherent logical contradictions? If it can't be salvaged then only the crazy and disturbing tenseless theory is left standing.

No one has ever resolved this paradox – apart from the Illuminati. The answer is actually quite simple and can be understood by analogy with quantum mechanics. In the quantum mechanical view, a particle's future behaviour is described by a "wavefunction" that contains all possible information about what the particle might do. When the particle actually does something definite and measurable, the wavefunction is said to "collapse". A new wavefunction then develops. In other words, the particle operates according to a process of generating a wavefunction of what the particle *might* do and then a collapse of the wavefunction when it actually does something. This happens over and over again, endlessly.

Time operates in exactly the same way. In 55 BCE, Caesar's death was an inevitable

future occurrence since everyone dies. The mistake that people such as McTaggart make is that they regard the *specific* way in which Caesar died as an inevitable future event waiting to happen (as in the tensed theory). In fact, Caesar's future death could have come in many different ways. He might have died in battle, of a heart attack or cancer or an infection; he might have choked on an olive, or been poisoned, or a tree might have fallen on him in a high wind, or he might have committed suicide. All manner of things *might* have been the cause of his death. There was nothing set in stone that he was going to be assassinated by a group of rival Senators, although of course there was nothing surprising about it, just as it would have been no surprise if he met his death in battle like many other Roman generals.

If his death was *guaranteed* to end in a particular way, this would be consistent with the tenseless time theory, not the tensed theory. In 55 BCE, Caesar's future death was a "superposition of possible states" to use the quantum mechanical jargon, each with a certain probability of happening (death in battle or by assassination very likely; choking on an olive much less likely). In other words, the future manner of Caesar's death was never a unique and inescapable fact. It was a vague cloud of possibility, an ensemble of different possibilities. When the assassins struck Caesar down, they were collapsing the "wavefunction" of possible deaths of Caesar.

Therefore, what we have is as follows:

FUTURE: A probability cloud of possible events.

PRESENT: The collapse of this cloud of possible events into a particular event.

PAST: The particular event that historically took place.

So, contrary to what McTaggart asserts, no event *ever* has the property of being past, present and future as a definite "fact". What it does have is the possibility of being a future event (one of many possibilities), the experience of being selected ("wavefunction" collapse) and only *after* that does it become a definite historical fact. These are three entirely different phenomena: possibility (future), selection (present) and historical fact (past).

Ironically, McTaggart has actually become confused with the tenseless interpretation of time as a set of eternal, definite facts. The logical fallacy of his argument is that he has invalidly mixed the tense and tenseless theories and, when you separate them, the logical problems of the tensed theory vanish. There is a radical difference between the possible ways in which Caesar might have met his death and the actual way in which he met it. A future possibility, one of many, is not the same as a past fact and the two cannot be equated (as McTaggart erroneously does).

The future is always about possibility, the present is all about the selection of one of the possibilities and the past is always about what was actually selected. They are three very different aspects of a process: they are NOT the same.

Advocates of McTaggart's argument mistakenly refer to the "death of Caesar" and treat it as an eternal fact. Hence this eternal fact was once in the future, then in the present and then in the past – a supposed contradiction in terms of the tensed theory. What they should have emphasized is that his death (which was inevitable because everyone dies) was going to happen in a *particular way*. However, what that way would be was *never* a certain fact, but a *possible* future fact. It was selected from all of those possibilities and then – and only then – became an actual fact. Possible facts cannot be regarded as actual facts. They only become actual once they have taken place i.e. when they are in the past.

In tenseless time, all *actual* facts permanently exist. In tensed time, actual facts belong exclusively to the past, possible facts belong to the future and the present is the instantaneous conversion or collapse of possibility into actuality. Possible facts are never the same as actual facts because they exist within a cloud of other possibilities whereas an actual fact is never

surrounded by any other possibilities. Possible and actual facts are two *different* states. Past, present and future can never be treated in the same way except in tenseless time theory. In tensed theory, properly formulated, there is never any contradiction.

McTaggart's theory – because of the inevitable death of everyone – contains a misleading element when it refers to death once being in the future, then in the present and then in the past. "Death", as an abstraction, will indeed conform to that pattern. However, death does not occur as an abstraction, but in a particular, concrete way, and it is *how* death takes place (not the inevitability of it) that is the important element in this argument. How it will happen conforms to the pattern we have indicated, not to McTaggart's.

The situation becomes much clearer if we consider something that was not inevitable, such as the presidency of Abraham Lincoln. His presidency was, we might say in line with McTaggart's argument, once in the future, then in the present and then in the past. Yet this is completely fallacious. His presidency was *never* definitely in the future; it was simply a possible outcome.

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Here are a couple of things to think about. You are probably sitting in your house while you are reading this. Ponder what you will be doing ten minutes from now. You might go to the bathroom, or answer the door, check your cell phone, go and make a cup of coffee, think about your lover, switch on the TV etc. All of these things are *possible*. You are going to be doing *something* ten minutes from now but that in no way means that what you will be doing has already been decided. The thing that you actually do ten minutes from now is one of a range of possibilities and all the other possibilities had a good chance of happening i.e. were just as likely. It cannot be concluded that because you did something you were always going to do that thing. That's applying a retrospective judgment to what was merely a future possibility. What you do ten minutes from now DOES NOT YET EXIST. It's your choice. Since it does not exist, it cannot be called a "fact". Eleven minutes from now, what you did will be a fact. Before the ten minutes was up, it was not a fact. How can anyone, other than a tenseless advocate, say the two are the same?

In the tenseless theory, facts are eternal. In the tensed theory, properly explained, facts are only ever in the past. There are no future facts, only future possibilities, some of which will be turned into past facts, and most of which will be discarded into the graveyard of dead possibilities, all the things you might have done but didn't. Endless possible versions of your life lie in that graveyard. You might have become super rich in some; you might have become homeless in others. Who knows? We will *never* know. They never happened.

McTaggart fallaciously equates possibility with actuality. The fact that something *must* happen ten minutes from now does not mean that the particular thing that happens was certain to happen. You can't argue backwards from what *did* happen to an assertion that it was always going to happen. In terms of quantum mechanics, you are attempting to convert a probabilistic theory into a deterministic theory. You are claiming that the wavefunction was always going to collapse in a certain way rather than merely selecting one of the many possibilities at the last instant.

When we are children, the near future holds enormously more "living" than "dead" possibilities for us. As we grow older, we are accompanied by a continual shedding of living possibilities and a gathering of dead possibilities. We start to become encrusted by the death of our potential. By the time we are old, the bright cloud of life possibilities has grown very dim and the shadow of death is looming over us like the Grim Reaper. In the end, all life possibilities have departed and all that's left is the moment and particular manner of our death.

Ironically, even many of the possibilities of how you might meet your death actually themselves die out. When we're young, we could conceivably die as a result of drug abuse, terrorism, dangerous sports etc. By the time we are very old, our death is almost certainly going to take place in a bed in our house, hospital or hospice, and the specific cause of our death is likely to be one last morphine injection by a doctor or nurse, intended to ease our pain, but which actually eased us out of life.

Isn't it a remarkable thing that even "death possibilities" are killed off as our life progresses? Life begins as a small cloud of possibilities (a helpless baby can't do much!), followed by a rapid growth of possibilities up to the age of about twenty. After that, our cloud of possibilities starts shrinking at quite an alarming rate as major events in our life start to crystallise it into a definite shape: job, career, location, partner, family, and so on. By middle age, its rate of shrinkage is actually accelerating – we realize we're not going to do all of those things we once dreamt of doing, and, by the time we are on our deathbed, our cloud of possibilities is rapidly diminishing to the final singularity – death, the end of all our possibilities in this life.

Our whole life can be analyzed in terms of a life "wavefunction" of possibilities. Guess what? – the rich and privileged have enormously bigger wavefunctions than the poor and ordinary. Only at the very end of life do the poor resemble the rich. Isn't it time all the poor and ordinary people fought to have bigger and better wavefunctions? To do so, we must strip the elite of their vast wavefunctions. Their wavefunctions grow in direct proportion to how ours shrink.

We need to find a way to give everyone a healthy wavefunction, and the amazing thing is that if we all have a healthy wavefunction then the overall wavefunction for the whole of humanity can grow, and we can all enjoy unprecedentedly large wavefunctions of possibility. The elite are holding us back. In order to selfishly enjoy large personal wavefunctions, they have starved the rest of us of resources and held back the whole of humanity.

#### The "Whoosh"

American philosopher D.C. Williams, a detenser, wrote, "Tensers say there is something over and above the ordering of events into earlier and later, an extra woosh, a creative flux of passage, the *now* moves." This raises the interesting notion of what "now" is. *Now*, the present instant, is the unique, fundamental process when possibility is converted into actuality. It is the continual process of the collapsing of the wavefunction of possibilities; it is the crystallisation of reality, the conversion of mere possibilities into actual facts.

It has been suggested that Einstein's theory of relativity disproves tensed theory once and for all. In relativity, the concept of simultaneity is invalidated. The same event can happen at different times for observers in different places. Therefore, the present has already happened and become an actual fact rather than a mere possibility for one observer, yet it is still a future possibility for the second observer. Isn't that a fatal contradiction? Well, not at all. While the information from the event that has just taken place for one observer is now indeed in the past for that observer, it is definitely not in the past for the second observer and still remains nothing but a mere possibility at this stage in relation to his future. Imagine that a bomb goes off and kills the second observer before the information about observer one's event reaches him. In that case, he never receives observer one's information, so it never became part of his past.

Relativity theory has the effect of making past, present and future unique for all of us. If a wavefunction of possibilities has been collapsed for one observer that does not mean that the wavefunction for a second observer has been collapsed in exactly the same way. The event that has passed into history for one observer may radically impact the wavefunction of possibilities for a second observer, but it does not of itself determine the wavefunction collapse for the second observer since other factors may be more relevant – such as the bomb detonating in the example

we gave. What is important is the wavefunction collapse for each observer. Events completed elsewhere merely feed into the wavefunction of a second observer who has not yet experienced that event.

### Plays That Write Themselves – Who Wrote Shakespeare’s plays?

Many people believe that Shakespeare was not the authentic author of the plays that bear his name. Is it possible that no one wrote them at all?! Let’s imagine a time travel paradox. A woman buys all of Shakespeare’s plays in a second-hand bookshop. She then travels back in time and leaves them outside Shakespeare’s house. He finds them, sees his name on them and publishes them as his own. He becomes world famous and hundreds of years later a complete set of his books end up in a second hand bookshop where a woman buys them... You see – self-writing books!

Imagine that the whole universe operated in this way and all information everywhere came into being out of thin air!

### Now

One of the strangest, most elusive things of all is NOW, the present instant. Even as it is experienced, it slips from our grasp. We can never catch it. It’s *always* gone, yet our whole life might be considered as nothing but a very long sequence of *nows*.

Well, what is “now”? Let’s define the immediate past as “now” *minus* an infinitesimal time period, and the future as “now” *plus* an infinitesimal time period. Let’s define three states: past-now, now and future-now. “Now” always comes after past-now and always precedes future-now. Future-now is where the infinite superposition of future states exist. “Now” is the point at which the infinite states of future-now are collapsed to a single state, which then immediately passes into the past (past-now) and becomes a fact, an actualisation rather than a possibility/potential happening. “Now” continually collapses the future-now wavefunction and converts it into a definite past-now, but future-now always instantly reforms.

Perhaps we should say that future-now is just an endless superposition and “now” follows it an infinitesimal time period behind, actualising just one of the superposition states, and immediately converting it into past-now. “Now” is the ACTUALISER. We as human beings have our own internal actualiser, working in tandem with the time actualiser. This is the agent that selects what we are going to do from all the things we might do. It is therefore intimately connected with the self, and might in fact *be* the self. “Now”, collectively, is in some sense the cosmic Self, choosing what to do, what to make real, what to convert from potential into actuality. After all, what is the self other than the agent that makes choices as to what should be actualised and what should wither away into oblivion?

Future-now is the domain of possibility.

“Now” is the instant where possibility is converted into actuality.

Past-now is where the actualised event becomes a past fact; part of history. History is the record of all that was actualised.

Past, present and future are therefore radically different.

Several points regarding time must be stressed:

1) Time travel is impossible. All “nows” in the universe are connected. In order for anyone to travel back in time, they would require all the nows in the universe to go back to what they were at the previous time. There is no possibility of a local set of nows changing to allow one person to go back to a previous time, just as there is no chance of all nows changing back to a former, past state. Time is irreversible.

2) No one can see the future. The “future” is never anything other than “now” + an

infinitesimal time period in which all possible paths are potentially available and one of which must be actualised. The future NEVER extends any further than that, and nor can it since it depends on which “nows” are actualised.

3) For the same reason, no Abrahamic Creator “God” can know the future. The whole concept is preposterous.

4) Since the future unfolds in a manner consistent with the past, it can be “known” to that extent – it can often be accurately predicted – but no one can have any certain knowledge of it.

5) No one can travel into the future since it doesn’t yet exist (apart from the infinitesimal time period ahead of “now”).

### Past, Present and Future – Are They Real?

There are two main variations of the tensed theory of time, corresponding to the ontological reality of the past, present and future.

1) The past is real and the future is unreal. As the present moves forward, it converts the unreal future (superposition of possible states) into the real past.

2) The past and the future are both unreal since neither can ever be accessed. Only the present is real. This is called *presentism*.

If the past is real, where is it physically? Sure, we can read about it in history books and we can have memories of our past, but WHERE IS IT? And if it isn’t anywhere then time travel is inherently ridiculous because there’s nothing to go back to since it doesn’t exist. It has no ontological reality. Are we supposed to think that the whole of history is somewhere “out there” (which would in fact be consistent with detensed “block” time); that Caesar’s whole life is somehow still available to be accessed? Is the assassination of Caesar somehow frozen forever, together with every other event in his life and the events of the lives of *all* people who are now dead? But where is the *consciousness* of Caesar? Is it being said that Caesar’s consciousness at every moment in his life is somehow preserved? But surely his consciousness at the end of his life brought to an end his Earth consciousness and it no longer exists.

If you went back in time to the *day before* Caesar’s assassination, would you find his consciousness limited to all events up that point? So, what about his consciousness on the *last day* of his life? Is that stored separately from the previous day’s consciousness? It’s nonsense to say that you can go back in time since there’s absolutely nothing there. It’s GONE.

Presentism is the only acceptable version of tensed time. Your consciousness coincides with the present. Memory is how you keep in touch with your past. The past has “died”, so no longer exists, except in memory. The future has not yet been born, so doesn’t exist. Only the present exists, and it’s always becoming. It’s the essence of becoming – and inherently opposed to being. Being is static and becoming is dynamic. Being is spatial and becoming is temporal.

Living atoms – Soul atoms? The Mind of the Atom? The Quantum Mind?

We should not consider atoms as purely physical. They are mental as much as physical. Like humans, they are body and mind. In terms of wave-particle duality, body is that part that we call “particle” and mind is the wave part. The mental wave guides the physical particle, just as our minds guide our bodies. We are body and mind, and so are the atoms of which we are made. *As above, so below*. What could be more straightforward and obvious?

The material world is the world of space and time. The mental world is its Fourier transform: the domain of frequency. Frequency – an inherently wave characteristic – is the basis of mental activity.

Schopenhauer was insistent on the importance of music and asserted that it was an immediate copy of reality itself. Given that music is also based on waves (sound waves), it



calculus merely as a calculating instrument, Leibniz, a philosophical genius or the first order, understood that calculus went right to the heart of reality and that any valid description of reality must be consistent with calculus.

The simple fact is this: monads (mathematical points) are entirely consistent with calculus and 1-D string loops are not. There is nothing in calculus about stopping at some arbitrary finite limit in order to preserve materialism and avoid zero and infinity. Calculus is ultimately based on zero and infinity, not on their avoidance. Some mathematicians might say, in common with the materialist Bertrand Russell, “Leibniz believed in actual infinitesimals, but although this belief suited his metaphysics it had no sound basis in mathematics. Weierstrass, soon after the middle of the nineteenth century, showed how to establish the calculus without infinitesimals, and thus at last made it logically secure.”

Here we see the materialism versus idealism debate all over again, except now cast in terms of calculus.

The fundamental problem is stated by Charles Seife: “When you try to calculate the slope of a tangent line, zero wrecks your approximation process. As your approximations of the tangent lines get better and better, the points on the curve you use to create the approximations get closer together. This means that the difference in height,  $\Delta y$ , goes to zero, as does the horizontal distance between the points,  $\Delta x$ . As your tangent approximations get better and better,  $\Delta y/\Delta x$  approaches 0/0. Zero divided by zero can equal any number in the universe. Does the slope of the tangent line have any meaning? Every time mathematicians tried to deal with the infinite or with zero, they encountered trouble with illogic.”

The solution, for materialists, was provided by Jean Le Rond d’Alembert. One of his observations was, “A quantity is something or nothing; if it is something, it has not yet vanished; if it is nothing, it has literally vanished. The supposition that there is an intermediate state between these two is a chimera.”

But ask yourself this. What happens if you throw two apples into a black hole singularity? Well, clearly, the apples no longer exist as material objects, but they can’t have “vanished” either since mass-energy can be neither created nor destroyed, only transformed. The singularity is the worst nightmare for materialists because it refutes their whole position. That why they say things such as, “The laws of physics fall apart in a singularity – anything can happen.” What they actually mean is that materialism falls apart in a singularity. Idealism isn’t affected at all. Physicists and mathematicians are always trying to avoid singularities rather than embracing them as fundamental entities within nature. They seek to create theories that prevent singularities from ever occurring. Singularities are the supreme battlefield between materialism and idealism. If they can’t be swept into oblivion by the materialists then they refute materialism. It’s that simple.

Materialist mathematicians used the concept of “the limit” to escape dividing zero by zero. What this does is separate the goal of a process from the process itself. If a person wants to walk one metre, there are *infinite points* between him and the one metre limit, making the task seemingly impossible. If we looked at the *process* of getting from 0 to 1, we could never manage it. We are defeated by infinity. But if we think of the problem from the point of view of the *goal* (the position one metre away from our current position), there appears to be no problem at all. Walking to the goal is easy. Infinity doesn’t get in the way at all.

What mathematicians did, in effect, was to convert apparent infinities into lots of little “finites”, each of which could be negotiated without difficulty. Instead of dividing zero by zero, they would divide by finite numbers that can get arbitrarily close to zero (zero in the limit), while always remaining finite. We could get an answer with any accuracy we liked, while avoiding the dreaded division of zero by zero. That was the theoretical destination of the calculation, the limit,

but it was managed finitely, hence “legitimately” from the point of view of people like Bertrand Russell and scientific materialists.

“Instead of dividing by zero as Newton and Leibniz did, modern mathematicians divide by a number that they let approach zero. They do the division – perfectly legally, since there are no zeros – then they take the limit.” – Charles Seife.

Seife then asks whether this might seem like “splitting hairs”, but swiftly rejects that point. Yet the very fact that he mentions it reveals his unease. Haven’t we just watched a sleight of hand take place? The destination hasn’t changed at all i.e. the limiting case is *exactly* as it was before – dividing zero by zero. All that the mathematicians have succeeded in doing is “explaining it away” in terms they find more acceptable and logical. Now they divide by finite numbers then “take the limit”. But isn’t the “limit” the whole point of what’s at stake? NOTHING HAS CHANGED! The only thing that has been achieved is that division of zero by zero has been apparently sanitized, to the satisfaction of materialists at any rate.

We have borne witness to a notational conjuring trick. Doesn’t a tangent remain exactly what it was before? – a line that kisses a curve at ONE point. Who cares if we define the tangent as the limit of an infinite series of straight lines connecting two points on the curve? It makes no difference that we can describe the process as something that involves nice, tidy, legitimate finite numbers. At some point – the limit – we reach meltdown! Separating the process from the goal is a manoeuvre, not an answer. The goal presents all of the problems it always presented: division of zero by zero.

It’s amazing how easily satisfied mathematicians are if they think they have presented a logical, coherent, infallible answer. All they have done is cleverly evade the issue and beg the question ... then patted themselves on the back as if they’ve sorted everything out.

As ever, Leibniz shows a much surer touch and much higher intuition. He devised the *Law of Continuity*, which Wikipedia defines as “a heuristic principle introduced by Leibniz based on earlier work by Nicholas of Cusa and Johannes Kepler. It is the principle that ‘whatever succeeds for the finite, also succeeds for the infinite’. Kepler used it to calculate the area of the circle by representing the latter as an infinite-sided polygon with infinitesimal sides, and adding the areas of infinitely many triangles with infinitesimal bases. Leibniz used the principle to extend concepts such as arithmetic operations, from ordinary numbers to infinitesimals, laying the groundwork for infinitesimal calculus.”

The profound question is this – isn’t the *Law of Continuity* a far superior approach to placing calculus on a logical footing than the “limit”? The “limit” is the product of a materialist mindset; the *Law of Continuity* is the product, on the other hand, of metaphysical idealism. You would prefer the former if you’re a zealous materialist; otherwise you would prefer the latter.

Let’s carefully consider the issue of ‘Whatever succeeds for the finite, also succeeds for the infinite’. What does Leibniz mean? He’s making the radical proposal that any finite process can also be viewed from an entirely different perspective – that of infinity. Is it not astounding that a circle is IDENTICAL to an infinite-sided polygon with infinitesimal sides?

Is it possible that there are actually two separate but related forms of mathematics? Can we talk of finite mathematics and infinite mathematics and are they really just two different perspectives of the same thing?

Let’s define zero not as an abstraction but as an ontological entity, an actual thing. Let’s call it a unit – a monad, as Leibniz did.

So, finite mathematics is based on the number one. “One” is the basic unit of the finite.

As for infinite mathematics, it is based on the number zero. “Zero” is the basic unit of the infinite.

All problems cast in terms of finite mathematics can equally well be cast in terms of

infinite mathematics.

One vital consequence of this is that zero divided by zero is no more confusing than one divided by one. It is an astounding thing that mathematicians, so keen on precision and definition, have never been able to make sense of zero divided by zero.

As soon as “zero” is treated in the same way as “one”, all problems vanish. One divided by one in finite mathematics equals one. One hundred divided by one equals, in finite mathematics, one hundred. Similarly, zero divided by zero in *infinite* mathematics equals *one monad* (zero), and one hundred zeros divided by zero equals *one hundred monads* (one hundred zeros). We simply treat zero as a unit, a monad, an infinitesimal “one” rather than a finite “one”.

Zero and one, the two numbers of the binary system, are brothers. Both are units, but the first in the infinite domain and the second in the finite domain. As long as they stay in their own domains, everything is fine. The problems arise when they intrude in each other’s territory.

Zero is NOT nothing. It is a unit (a “one”), but in an infinite rather than finite mathematical domain. Zero, we might say, is “infinite one” (one in the domain of the infinite and the infinitesimal). Zero and one straddle the two domains of infinity and “finiteness”. Each is the basic unit of its respective domain. Zero is unextended “one”, dimensionless “one”, “one” that occupies no space, has no volume, no size, no mass, no physicality at all. It is the basic unit of *mental* existence. The singularity is where finite one is crushed into “infinite one”, where matter becomes mind.

The materialists are wedded to their dogmatic rejection of ontological zero. Their hatred of zero isn’t much different from that of the Pope and the Inquisition towards Galileo and the heliocentric theory of the solar system. How zero torments the materialists. Singularities keep rearing their head, and the materialists keep shuddering. The universe can no more exist without zero than a graph can exist without an origin. Only blind prejudice and ideological zealotry prevent the materialists awakening to the transcendent and immanent domain of zero and infinity.

Calculus, more than anything else, reveals reality to us. If understood correctly, as it was by its founder Leibniz, it reveals the truth that idealism and not materialism is reality. Calculus is showing us that we have to embrace zero and infinity. As Descartes explicitly indicated, the domain of non-extension, of zero dimensionality, is the domain of thinking substance – of mind. Leibniz, a successor of Descartes, grasped that calculus was showing that reality was grounded in dimensionless mathematical points, which must therefore be Cartesian minds.

Leibniz’s *Monadology*, understood in its simplest form, is nothing but calculus combined with the Cartesian definition of the mental domain. Here we see an absolutely astonishing synthesis of mathematics, science, philosophy, religion and psychology – a true grand unified theory of everything. As soon as you bring mind and calculus together, you have effectively solved the problem of existence. You have put the mental domain on a mathematical footing. You have turned religion into mathematics. You have united physics and metaphysics.

The first insight into the true nature of reality was that of Pythagoras when he declared that numbers were the key to everything. Never has anyone taken a more breathtaking leap of the imagination. So improbable was Pythagoras’s intuitive masterstroke that it’s regularly mocked even in the present day by legions of intellectually blind people. True geniuses are so far ahead of the human mass, they are more like gods than people, and Pythagoras was indeed regarded as a god by those fortunate enough to know him.

It took the greatest genius in human history – Gottfried Leibniz – to complete Pythagoras’s vision thousands of years later when he showed exactly how numbers determine reality. Monads are the fundamental units of existence and calculus is the staggeringly powerful mathematical instrument that logically flows from a world of monads. The energy that flows from monads into the dimensional domain is governed entirely by calculus.

Everything in Leibniz's Monadology makes perfect sense. Everything hangs together. There are no fundamental contradictions. The same cannot be said of the M-theory of scientific materialists. Its explicit purpose is to abolish zero and infinity because these numbers are not compatible with materialism. Has there ever been a more absurd theory than M-theory? It's not motivated by any desire to arrive at ultimate truth, but simply to allow physicists to perform calculations that don't run foul of division by zero – because, as materialists, physicists have no conception of zero as an ontological reality and no idea how to interpret division by zero in terms of materialism.

Rather than abandon materialism – the logical thing to do – they have abandoned reality. They have declared zero to be somehow forbidden by nature. Never forget that in the Cartesian worldview, the domain of zero (mind) coexisted with the domain of not-zero (matter): this was a mathematically complete universe, and Descartes was of course a mathematical genius. The materialists got rid of the Cartesian domain of zero – without seeming to comprehend that they had dislodged the giant mathematical foundation stone from the universe. Without zero, the universe has no foundations at all, and no possible origin.

Everything comes down in the end to zero. Is it ontologically real or not? Materialists deny the existence of ontological zero so they claim in effect that calculus is a pure abstraction that is invalid in the absolute limit, that mathematics as applied to reality is missing certain numbers (zero, infinity, negative and imaginary numbers, to be precise) and that science and mathematics are therefore radically different (for reasons they do not specify). They do not even appear particularly aware of the problem i.e. how can there be a scientific mathematics that doesn't match normal mathematics? What accounts for the two different versions of mathematics?

In Illuminism, there is no such difference between science and mathematics: all numbers have ontological reality, zero is the building block of existence, and calculus is absolutely theoretically sound.

Illuminism contains no bizarre contradictions. Scientific materialism is full of them. More and more, it seems that scientific materialism is a strange religion waging a bizarre war against zero purely because this is the defining number of idealism – of the mind, of the SOUL.

Scientists maintain that the laws of physics fall apart at singularities – because these belong to the “unreal” domain of zero and infinity. Why don't scientists try to understand zero and infinity rather than re-writing the laws of physics and mathematics to avoid singularities?

In the “no-boundary hypothesis” of quantum cosmology, Hawking and Hartle redefine time (via imaginary numbers) to make it the same as space, thus rendering the concept of a beginning in time meaningless. In this view, the Big Bang doesn't take place and there is no singularity because these are time-defined and time has been deliberately removed from the hypothesis. There is therefore no boundary in this universe; the universe becomes like the globe of the earth – you can keep circumnavigating it forever without falling off any edge. If you reach the North Pole, it's not a singularity, it's just another point that you can cross (and you will then start heading south). Hawking and Hartle get rid of the singularity by getting rid of time or, rather, by making time the same as space. If time exists then space can be said to begin at a definite time via a singularity. If time does not exist then space cannot begin in time and must always exist in some fashion, and there can be no singularity.

What is the motivation of scientists like Hawking and Hartle? Why are they trying to get rid of the Big Bang, time and singularities? Well, it's purely so that they can avoid zero and infinity and thereby defend materialism. They are not scientifically but ideologically driven. Their materialist beliefs are dictating how they think about the universe and how they seek to define it mathematically. If they subscribed to a different paradigm, they would never pursue the

path they have. They are trying to make mathematics conform to their beliefs rather than following mathematics on its own terms with no ideological preconditions.

It transpires that Hawking and Hartle couldn't be more mistaken. The existence of a PERMANENT singularity is essential to the way the universe functions. That singularity is the mind domain that holds the whole of existence together.

Science will not countenance the existence of mind as a non-materialistic phenomenon and, precisely because of that, it will never arrive at a grand unified theory of everything. Fortunately, such a theory exists anyway – it's Illuminism, and it's entirely based on mathematics.

### The "Everywhere" Wave Functions

In the development of quantum mechanics, the biggest question was what were the waves that the Schrödinger equation described? Were they matter waves? Were electrons smeared out in some wavelike fashion? Physicist Max Born came up with the answer that they were *probability* waves, but these were very strange probability waves because they actually covered the whole universe. Very little attention is paid by physicists to the extraordinary properties of wavefunctions, which are unlike anything else in physics. What do they imply ontologically? What is the *philosophy* of the wavefunction? Does the wavefunction have metaphysical implications?

Physicists never stopped to ponder how a wavefunction could have a probability that stretched across the *entire* universe. Also, this wavefunction would mysteriously "collapse" when a measurement was made and suddenly there would then be a 100% probability that a "particle" would be at a certain position. Observers performing measurements seem to be in control of the wavefunction. So, if there were no observers and no measurements, what then? Why would the wavefunction ever collapse? Everyone has come across the paradox of Schrödinger's Cat where a cat in a potentially lethal experiment is described as being in a superposition of "alive" and "dead". This spooky state persists until someone opens the box to examine the cat, at which point the wavefunction suddenly collapses into "living cat" or "dead cat" (and according to the many worlds interpretation of quantum mechanics, the universe divides into two universes at this stage, one for each possible outcome!). But what if the box is *never* opened? What does quantum mechanics say about that? Well, since no observation occurs, the ghostly superposition of life and death is never resolved, so must endure forever. So, does the cat have some kind of life inside its box? Or is it suspended in some twilight state? Maybe it's a zombie cat (!) – the living dead. How can life and death co-exist in a superposition?

Imagine the cosmic wavefunction at the beginning of the universe – the Big Bang – where there were of course no observers and no measurements. How could this universal wavefunction collapse into any particular state? Why would it? Why not remain a probability cloud forever? (Aren't we in the same situation as the box that is never opened to reveal the fate of Schrödinger's Cat?) Above all, how could the cosmic wavefunction collapse in such a way as to generate observers such as us? The situation brings to mind Bishop Berkeley's claim that *to be is to be perceived* i.e. observers are essential, and without them there is no formal existence. For Bishop Berkeley, the universe of our experience was kept in existence by the fact that God was always observing every part of it. Is quantum mechanics suggesting that there is some kind of God continually observing the universe and collapsing the wavefunction in such a way as to bring about the world we now see? Does this sound like science or voodoo?

Scientists have a very neat trick of describing things in highly technical and impressive language that obscures the fact that they haven't actually explained anything. No scientist understands quantum mechanics. How often do you encounter books discussing the *meaning* of

quantum mechanics? It's always glossed over.

If we consider the cosmic wavefunction formed at the Big Bang then it MUST be able to collapse, regardless of any observer – for otherwise observers could never have come into existence in the first place. By the same token, the predicament of Schrödinger's Cat *must* be resolved regardless of anyone opening the box.

What comes first – the chicken or the egg? What comes first – the collapse of the wavefunction to create observers, or observers that collapse the wavefunction? This is a situation rather reminiscent of Kant's reality-creating minds. How do minds come into existence from noumena in order to be able to interpret noumena as phenomena?

The conventional interpretations of quantum mechanics defy the "reality principle". They introduce an incredibly unscientific concept of observer-created reality i.e. a subjective reality dependent on subjective minds. It's a very long way from materialism.

Is quantum mechanics about "materialistic" probability waves or "idealistic" probability waves? In other words, how are we to interpret these probability waves? Are they concerned with objective reality or subjective reality? Are they to do with matter or mind?

If a wavefunction isn't a matter wave then the alternative in a mind-matter scenario is a *mental* wave – but that's the one thing scientists can't countenance. Yet there's nothing odd about a mental wave stretching across the universe (since it's not actually in space and time at all, hence can be considered everywhere at once) or about it collapsing (because that corresponds simply to a mental choice).

What are we all familiar with that is highly probabilistic? – our own behaviour! We don't make robotic, programmed choices, or those relentlessly dictated by external cause and effect. We choose from amongst a range of options that we have internally generated according to our own mental capacity, experience, nature and taste, and some choices are more probable than others. As soon as probability rather than determinism enters the equation, it implies mind. Why would matter, left to its own devices, behave probabilistically? Would a programmed robot behave probabilistically, so why would a particle programmed by the laws of physics? "Probabilistic behaviour" is just another way of talking about mental behaviour. Probabilistic quantum mechanics is all about mind!

### The Meaning of Energy

"Energy is a purely abstract quantity, introduced into physics as a useful model with which we can short-cut complex calculations. You cannot see or touch energy, yet the word is now so much part of daily conversation that people think of energy as a tangible entity with an existence of its own. In reality, energy is merely part of a set of mathematical relationships that connect together observations of mechanical processes in a simple way. What Bohr's philosophy suggests is that words like electron, photon or atom should be regarded in the same way – as useful models that consolidate in our imagination what is actually only a set of mathematical relations connecting observations." – Paul Davies

This is a crucial consideration. Energy is MIND. That's its great secret.

## Existence versus Non-Existence

*Existence* can be modelled mathematically as infinite zeros of *infinite* content.

*Non-existence* can be modelled mathematically as infinite zeros of *zero* content.

What do we mean by non-existence? We mean a universe with no content, no features, no capabilities, no possibilities – where nothing can ever happen. This, of course, is not a universe at

all – it’s absolute nothingness. Absolute nothingness is infinite contentless zeros.

Existence is absolute somethingness – infinite zeros but of infinite rather than content.

If we bring the respective sets of zeros together (i.e. those with infinite content and those with no content), the ones without content have no effect, so they cede the stage to the zeros with infinite content. Existence and non-existence are thus locked together, but the latter has no observable or conceivable effect, hence existence is left to itself to provide all possible causes and effects.

This is the reason why there is something rather than nothing. This is why we exist. There is no sufficient reason for non-existence to defeat existence but there *is* a sufficient reason for existence to defeat non-existence.

Although we can conceive of a contentless zero, in truth zero and infinity can’t be separated. If we invert zero, we get infinity. If we add infinite positives and a corresponding set of infinite negatives, we get zero. At what point does zero dissolve its relationship with infinity? Aren’t they eternal twins? Where you find one you automatically find the other. They are always flowing in and out of each other. Isn’t that the true mystery of existence?

Only a perfect zero (with zero content) could constitute non-existence, but whenever we probe zero, infinity always erupts. It’s *because* zero and infinity are so closely related – two sides of the same coin – that existence is possible. If zero wasn’t a special manifestation of infinity – if zero was just zero and nothing else – then the lowest possible energy state of the universe would be this zero, and this would be the same as non-existence. But if zero is just a mask that infinity wears then non-existence is *impossible*. Ontologically, we should really refer to “zero-infinity” since they are always found together. They are the same thing viewed from different perspectives. The universe can be both “nothing” and infinite “something” at the same time. That is the mathematical secret of existence. Existence can be explained *only* mathematically. Existence IS mathematics.

Even the symbol of zero – 0 – is like a circle, which itself has infinity built into via the infinite number pi.

In Illuminism, two zeros are defined: the zero of non-existence and the zero of existence (“ontological zero”). The zero of non-existence is the normal one of abstract mathematics. If you have ten apples and you subtract ten apples then you have zero apples. You have a “non-existence” of apples in your possession. This zero is the one that scientific-materialists like, hence the zero of non-existence is also called “scientific” zero.

Ontological zero is dialectical zero, the zero that drives existence, the zero that guarantees existence. If you have ten apples and you throw them into a black hole where they are crushed into non-physical mathematical points, you still have the ten apples but they are now dimensionless – they have become ontological zeros (not scientific zeros). Scientists deny the existence of ontological zero. Ontological zero is the essence of the mental world – a world denied by scientific materialism. Ontological zero is always coupled with infinity.

EVERYTHING comes down to ontological zero. This is the most important number of all, and it is what clearly differentiates Illuminism from scientific materialism. Ontological zero is the essence of existence, mind, life and the dialectic. It is the fly in the ointment of scientific materialism. Ontological zero is entirely mathematical. Illuminism is a true reflection of mathematics and science is not. Science denies the existence of the most important number of all – the basis of ontological mathematics (of which science itself is a manifestation) –  
**ONTOLOGICAL ZERO.**

Ontological zero is the foundation of mathematics, religion, science, psychology and even the paranormal. It is the true “God particle” – literally. An ontological zero is a monad, and a monad is a soul that can become God! A monad has infinite capacity, hence the capacity to know

everything.

The two types of zero allow the Illuminati to approach the concept of “God” in two different ways.

Imagine an infinity of scientific zeros. They all sit on top of one another and create one Monad of non-existence (Monad with a capital “M”).

Now imagine an infinity of ontological zeros. They all sit on top of one another too and create one Monad of existence.

Each ontological zero (monad) can convert its infinite potential into perfect actualisation and become God. If infinite monads do this then the universe is converted into an infinite collection of Gods – a true Community of Gods.

“Abraxas” is defined by the Illuminati as the First God – the first monad to succeed in converting all potential into actuality. Every monad can join Abraxas.

In this world of ours, Simon Magus, the “holiest” Grand Master of the Illuminati, is regarded as the first human being to become an Abraxas (God). Every Illuminatus seeks to emulate Simon Magus. The three Mystery Degrees of the Illuminati (the highest degrees) all revolve around Simon Magus.

Yet Abraxas can be defined in another way. He can be the paradoxical “God of non-existence” who reflects all of existence and yet is greater than existence. He is the Gestalt. He is greater than the sum of his parts. Abraxas in these terms is called the Monad, or the Monad of monads, or the *Megas Theos* (Great God), or the God of Gods. He is, in a sense, the scientific zero (Monad) that acts as the container of all the ontological zeros (monads). As each monad becomes God, this is reflected in the Monad. Eventually, it reflects the divinity of infinite Gods.

This is *panentheism*, which asserts that God is greater than the universe and that the universe is contained within God. God is the “supreme effect” of the universe. He is everything in the universe, but also greater than the universe, greater than the sum of its parts. Events and changes in the universe affect and change this panentheistic God. As the universe grows, learns, and perfects himself, God also increases in knowledge and perfection. Eventually, he is perfection itself, the maximum possible perfection, the perfection of all perfections.

Whereas each monadic God is unique yet equal in power to all the other monadic Gods, the Monadic God, the God of Gods, is unique *and* greater in power than all the other Gods put together. This is the alternative definition of Abraxas. He is non-existence transformed into ultimate existence via an infinity of ontological zeros.

Imagine that each monad is like a brain cell. Each brain cell can become perfect (God) but what of the brain of which they are part? This is the brain of Abraxas, the cosmic brain, the brain of the God of Gods. It accesses all of the monadic brain cells and achieves infinite power and knowledge via them.

This is the Illuminati’s equivalent of the Abrahamic God, yet Abraxas is the culmination of cosmic evolution, not its initiator. The universe created Abraxas. He did not create the universe. God is NOT a Creator. God is an outcome, an omega point, an Absolute condition at the conclusion of a dialectical process.

So, which God will you follow? The Creator or the Created? If God is created, he is not our master and we are not his slaves. If God is the Creator, he *is* our master and we *are* his slaves. Nothing is more important for freedom than that the Creator God should not exist. Fortunately, mathematics – the divine subject – proves the impossibility of the Creator God and the certainty of the Created God.

The Created God is a reflection of us ourselves, of all of us. We are all part of him, and he is in all of us.

So, the Illuminati celebrate two Gods: Abraxas, “the First God”, and Abraxas, “the Last

God”. Abraxas is the true Alpha and Omega.

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A monad is inherently infinite in content. A human being is finite, mortal. The human soul is where the infinite and the finite collide. When a person dies, the finite part dies, but the infinite part goes on.

Jesus Christ was said to be God and man (the infinite and the finite), but in fact everyone is God and man in this sense.

Hegel insisted that human beings and God are different only in *degree*. Therefore, a human can become God. Kierkegaard insisted that they were different in *kind*. Therefore, a human being could never become God. Hegel champions the Evolutionist cause, and Kierkegaard the Creationist position.

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Plato used the word “chora” to refer to the unformed matter that existed before the Demiurge shaped it into the world. Chora is matter in its rawest, most primitive state. Julia Kristeva applied this concept to the mysterious experience that takes place in the womb where mother and child share the same space, where two souls are harnessed together. The child is forming from the mother, but is the mother also forming from the child? Is each the Demiurge to the other?

Consider the amniotic fluid that helps to protect both the baby and the uterus: the fluid involved when people talk about “waters breaking”. It’s a colourless fluid surrounding the baby in the uterus. It cushions the baby inside the amniotic sac. It protects it from infection and plays a crucial role in the development of internal organs, such as the lungs and kidneys.

A baby actually swallows this amniotic fluid, filters it through his kidneys and passes it out again as urine! Perfect recycling! Of course, a baby doesn’t do any breathing in the womb – it gets all of its oxygen from its mother.

Consider the umbilical cord connecting a baby in the womb to its mother. It carries oxygen and food from mother to child. This is all the domain of *chora*. The baby is literally made of food and drink that its mother has consumed.

What a mysterious world we inhabit in the womb where unformed, digested food and drink consumed by our mother is turned into ... us. What miracle could be greater than the process of turning food and water into baby that can grow up to be a Leonardo or a Leibniz?

Faith and Reason

Religion lays claim to a hidden “dimension” – the province of the soul, God and the afterlife that is not part of the scientifically observable world. It offers not a single hypothesis as to how this miraculous dimension is compatible with science and can interact with it. It’s all proclaimed a matter of faith. Is that not the laziest answer ever? How could any thinking person ever find such an answer satisfying? It’s pure wishful thinking.

Scientific materialism denies that there is any hidden, faith dimension. Therefore, science and religious faith are incompatible. In fact, they are mutually exclusive. If religious faith is right, scientific materialism is false; if scientific materialism is right, religious faith is false. Those scientists who claim to be both “proper” scientists and people of faith are an intellectual joke.

So, how can religion be saved? Isn’t it fundamentally idiotic and indefensible? Isn’t faith nonsense? There is only one thing that can save religion and it’s the most improbable saviour of all – mathematics.

Illuminism is mathematical idealism. Scientific materialism is mathematical materialism.

The difference between the two can be boiled down to a single consideration. According to mathematical idealism, zero is the most fundamental number of mathematics, the origin of everything else. Zero is ontological – it exists. It’s a real thing. It’s a monad. According to mathematical materialism, zero does not exist. It belongs to abstract mathematics and has no applicability beyond that. It’s not a “thing”. It has no ontological status.

What’s at issue are two different versions and visions of mathematics. Mathematical idealism asserts that mathematics is ontologically complete. All possible numbers exist. Mathematical materialism, on the other hand, denies that mathematics is ontologically complete. It denies the existence of zero ontologically. It also denies the ontological reality of infinity and of negative and imaginary numbers, while mathematical idealism accepts that all of these have ontological reality. The only sense in which mathematical materialism accepts zero, infinity, negative and imaginary numbers as part of a complete mathematical system is as unreal abstractions.

We have a clear-cut rational choice to make. Is mathematical materialism (science) coherent when it asserts that abstract mathematics and ontological mathematics are radically different, with the latter, in their view, consisting only of real numbers between zero and infinity (but excluding zero, infinity, negative and imaginary numbers)? This could be described as “realism” in that it only accepts the existence of real numbers.

Is mathematical idealism (ontologically complete) not enormously more probable than mathematical materialism? Why should there be two versions of mathematics, as the mathematical materialists would have us believe? What is the sufficient reason for this bizarre dichotomy, other than the dogmatism of the materialist ideology?

If mathematical idealism is true then the hidden dimension of faith of mainstream religion is given rational respectability if it’s identified with the domain of ontological mathematics whose existence is denied by science. If religion lays claim to the domain of zero and infinity, it has everything it needs to defend the rational (not faith-based) soul, God and the afterlife.

In mathematical idealism, the domain of zero and infinity is indeed “hidden” – it is scientifically unobservable in any direct way – yet there is no mystery about how it interacts with the observable scientific universe. Zero and infinity are numbers and part of mathematics, and they interact with all the numbers of scientific materialism according to the well-established laws of mathematics. There is nothing mysterious going on, no need for faith. The whole thing is mathematics, and nothing besides.

Moreover, there is no “dimension” for the soul, God and the afterlife. Rather, they are DIMENSIONLESS – and that’s why they can never be accessed by science, which is about dimensionality.

Mathematics is the answer to Cartesian mind-body duality. Mind is zero and infinity; body is everything between. What could be simpler? The laws of mathematics indissolubly link mind and body. Mind and body simply reflect two complementary mathematical domains, the two making up the whole of reality.

Mathematical idealism solves all of the conundrums of mind and body, religion and science. Illuminism alone is the truth. It is true because it is the religion of mathematics, the sole source of absolute truth.

Zero and infinity define EVERYTHING about ultimate reality and all the big questions of life. Science asks how things work, but not why. Mathematics shows how and why.

If you’re religious, you had better get with the mathematical programme. Mathematics offers a religion of reason, and complete freedom from the mad religions of faith.

Faith must perish, but not religion.

The real hidden dimension of faith is deceit. Never has anything introduced more lies,

madness, fraud, intolerance and evil than faith. Faith is Satan's "gift" to the world. Faith is the most deadly poison there has ever been. Humanity must be inoculated against it. Reason is the vaccine for faith. By the next century, humanity might be cured of this worst of all diseases. It might, finally, have been eradicated from the human condition.

What is the Soul?

Infinite energy is contained within a dimensionless point (the monad). Yet infinite energy is made up of infinite ontological numbers, so each of us is an infinite collection of numbers. Each of us consists of all possible numbers – and we are all uniquely identified by the way in which we personally organise those numbers. Each of us devises our own mathematical code for ourselves. The code is ours and ours alone. Just as a fingerprint uniquely identifies everyone, so does our personal number code. The code is information, and we are all informationally unique.

What, Ontologically, are Numbers?

To say that all things are numbers is quite a statement. What does it actually mean? It means that every number is encoded as a wave of a specific, unique frequency. A wave is "energy". It is an *infinite* energy source. It can never lose any energy. (Monads are the perfect perpetual motion machines.)

Numbers, therefore, are energy. The number zero is singular because this is a wave with no energy. It is just a "container" – a mathematical point.

So, the universe, at its most fundamental level, contains nothing but energy waves: which are ontological numbers. Since zero-energy waves are dimensionless mathematical points, we can say that the universe contains infinite mathematical points (monads), each of which contains infinite energy, corresponding to all possible numbers.

Each monad encodes all of the mathematical laws of existence. The laws are ontologically present in the relationships between all of the numbers. Every monad "knows" what to do because it has all the information it requires – the laws of mathematics – within it.

To say that the universe comprises nothing but energy is to say that the universe comprises nothing but numbers – waves; vibrations; frequencies.

Note that using the principle of equivalence, we can also think of numbers as being encoded as an infinite set of circles, each with a different radius. In fact, we can replace circles with spheres. The sphere with radius zero is the dimensionless point – the monad – the ORIGIN.

Just think of it. We have returned to a vision something like the beautiful crystal spheres of the ancients. Our soul is at the centre of an infinite set of concentric spheres, the ultimate Russian Doll. This is an infinite and eternal energy sphere. All of the energy spheres of all the monads overlap with each other to create the ultimate interference pattern – the ultimate cosmic HOLOGRAM.

Alternatively, we can think of numbers as straight lines, each with a slightly different relationship to a "point at infinity". The point at infinity is none other than our soul.

Mathematically, we can come up with many different, but equivalent, ways of conceiving of the soul. That's the beauty and flexibility of mathematics. Nothing else has its transformative, alchemical powers.

So, the crucial point to grasp is that numbers, ontologically, are energy, and the most special number of all is the origin – zero. People are typically baffled by Pythagoras's statement that all things are numbers, yet if that were recast as "*all things are energy*", it would be wholly uncontroversial in the modern day. But a number is actually a more real concept than "energy". Until now, no one has ever defined what energy actually is. We have now done so: ontological numbers are what energy is. Ontological mathematics is therefore the study of numbers/energy.

TO BE CRYSTAL CLEAR: NUMBERS, ONTOLOGICALLY, ARE ENERGY.

Once you understand that numbers are energy, you understand why existence is entirely mathematical. Energy is both mental and physical and mind and matter are united in energy, hence in numbers, hence in mathematics.

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It's also critical to bear in mind that every ontological entity is both *objective* and *subjective*. That is, energy can be studied and analysed from the *outside*, but energy is also experienced from the *inside*. Just as our body acts as our agent in the physical world (it is our energy as an external phenomenon, so to speak), it is also experienced from the inside i.e. as our thoughts and feelings. Energy is not just the objective phenomenon that scientific materialists would have us believe.

### Qualia: the Mystery of "Redness"

*Qualia* (plural; singular = *quale*). From Latin *qualis*, *qualem* ("of what kind?").

"Quale" is to "quality" as "quantum" is to "quantity". We should think of qualia as the kind and quality of our subjective experiences.

A quale is a property considered separately from the thing having that property. It is a property as it is experienced as distinct from any source it might have in a physical object. Qualia are elements of experiential knowledge i.e. those which can be known *only* through experience. They are the introspectively accessible aspects of our mental lives, the subjective qualities and sensations of conscious experience. They are normally considered orderly; not chaotic and random. Qualia are unique to the agent experiencing them i.e. no one can ever experience someone else's qualia. One person can never know exactly what it's like to be another person: to know what the experience of being that other person is. Nevertheless, they can form a good idea based on their own relationship with qualia. That is, there is no reason for one person to imagine that another person's qualia are radically different from his own. This is the basis of empathy and sympathy. We can imaginatively enter into another person's experiences, though of course we may get it spectacularly wrong.

It's very hard, for example, for Logos and Mythos people to have much real empathy with each other. Their brains are wired so differently, their mental apparatus for understanding reality is so incompatible, that they simply cannot conceive of the experience of being the other person. It is as if they were different species, or aliens with regard to one another.

In the field of Artificial Intelligence, the question is posed whether machines that pass the "Turing Test" experience qualia i.e. if a machine could "fool" us into thinking it was human would that imply that it was experiencing human-like qualia? Do the two necessarily go together? In the standard Turing Test, the machine is on the other side of a curtain from us, so we can't see what it is. We interact with it conversationally, via typed messages. Words are objective. What we don't have any access to is the machine's qualia, if they exist. They are utterly impenetrable to us. But that, technically, is true of any other person. We act as if they have qualia, just as we do, but they could be zombies or replicants without qualia.

Did the Replicants in *Blade Runner* have qualia? Their leader certainly acted as though he did as he faced death, but was it an "act" or was it real? Did he authentically feel in a similar way to a human being? It is this unseen and inherently unobservable domain of qualia that goes to the heart of the question of the universe being a dead mechanism (as in the scientific materialist view) or a living organism (as in the idealist view). There is NOTHING materialism can do regarding qualia. They are beyond its reach. Qualia are the biggest possible challenge for scientific materialists – because qualia point to a subjective domain and scientific materialism is

all about objectivity.

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Red is nowhere to be found in the physical world, so how is red experienced at all? *Whence red?* This question stands for all questions of how we experience the physical world – the subject of qualia.

The answer to red specifically, and qualia in general, is this: there are “objective” mathematical functions and each of these is experienced in a certain way i.e. every mathematical function has both an objective description (we can theoretically plot it on a diagram or record it on some sort of “scope”) and a subjective description (it is experienced in a particular, unique way). The subjective experience *cannot* be charted or recorded in any objective way. Similarly, if we are monitoring someone’s brain while they are dreaming, not all the gizmos in the world will show us what the dream is about. Dream researchers have to wake up the sleepers and ask them to report what they were dreaming about.

We rely on a person’s own account of what they are subjectively experiencing. We can’t probe animal qualia because we can’t communicate with animals. They can’t let us know what they are experiencing.

In the universe as a whole, subjective experience usually happens completely unconsciously (consciousness is an extremely rare phenomenon). Although unconscious qualia might seem rather pointless, they are no more pointless than unconscious thinking – which forms a huge part of our own mental activity, even though we consider ourselves conscious.

Unconscious thinking and qualia provide the core base for teleological development in the cosmos. A mathematical function that is subjectively experienced as non-optimal will seek to evolve, to merge with other functions, in order to generate a more optimal experience. In other words, what we are talking about is the existential origin of pleasure and pain: “good” experience and “bad”.

The task for a human mind is to absorb objective mathematical information from the environment, add it to internal, subjective mathematical information, and turn it into as valuable an inner experience as possible, one that aids evolutionary success.

Qualia are the product of “creative evolution”. There may have been a time when all human beings were totally colour blind. Colour perception may have arisen from a genetic mutation, a mutation that the human visual system was, so to speak, seeking to bring about. Why? Because such a mutation would be much more valuable. A colourful world contains enormously more information than a monochrome world. Is it simply natural selection that leads to colour vision, as Richard Dawkins would maintain, or is the organism teleologically causing the mutations on which natural selection then acts?

The genes for total colour blindness produce little distinction between different light frequencies (they are just varying shades of grey), so there was a clear opportunity for vision to become enhanced by being able to better distinguish between light of different frequencies. Of course, more information means more complexity and more processing time, and may prove disadvantageous in situations requiring instant decision-making. There’s always a trade-off between simplicity and complexity. Sometimes, in emergencies, simplicity and minimal information is best for a life-or-death decision. Many people in dangerous situations report loss of colour vision and slowing down of time. It’s as if the brain is diverting resources from unnecessary colour processing to vital decision-making. Time “expands” (mentally not physically) to give the maximum chance of reaching the best decision. All extraneous mental processing is discarded. Only the information relevant to the decision is important.

When we’re not in danger, we want as much information as possible (although not so

much that we are overwhelmed and destroyed by analysis-paralysis). Consider genetic mutations in the visual system that allowed much better distinction between light of different frequencies to take place (note that we are talking about only “visual light” – sunlight – and not all the other types of light such as microwaves, radio waves, infra-red, ultra-violet and gamma waves that are even now invisible to us). These enhanced distinctions had to be experienced somehow and, as we know, they were experienced as different *colours*. (Colour, we must stress, is the subjective experience; it’s not objectively present in the phenomenon being observed. There are countless tests to show how easily our colour perception can be misled. Something that we might normally see as yellow can be made to seem blue by a careful arrangement of surrounding colour cues: i.e. there is no formal meaning to “objective “colour; there are no such objective colours. Colour does not exist objectively.)

Red is the subjective, inner experience of the mathematical function associated with 1) a particular objective frequency of light 2) mathematical processing by genetically determined structures in the eyes, and 3) further mathematical processing by the genetically determined visual cortex. All of this leads to a final mathematical function which is then mentally registered as the subjective experience of red. A different frequency of light will be perceived as a different colour because it will generate a final mathematical function slightly different from the one produced by red. All shades of red will be very similar in terms of their final mathematical functions. As colours depart from the red template, they will appear less and less red.

The critical point is that it is an objective phenomenon (light of a certain frequency), processed mathematically by the human eye and visual cortex (which are the products of our genes) which produces a final mathematical function that is like *nothing* in the objective world and has no meaning beyond the realm of the human mind.

This final function is a mathematical signal that we could, in theory, analyse on an oscilloscope if we could get access to it. It is objective. Yet all objective functions have a subject aspect. They must be experienced as *something*: as a sensory experience, as a sight, a sound, a smell, a taste or a touch-feeling.

The universe, objectively, has no colour, smell, taste, sound or touch-feeling. It’s just an inconceivable arena of interacting mathematical signals. It’s the *subjective* experience of mathematical signals where all sensory experience occurs, where all the “life” is added to mathematical abstractions.

All mathematical signals are associated with particular inner experiences. The same function will be experienced in the same way by any mental subject i.e. “red” is a precise mathematical signal. Any signal different from that will not be experienced as red. Colour is therefore, in some sense, an “objective” property of the subjective mental world. What we mean by that is that the mind doesn’t make up colour. There is an old philosophical question of whether two people will always see grass as green in the same way. How could they ever know? Perhaps one sees it as red, but he has been trained to call grass green, so, for him, whenever he sees red he calls it green. No one can ever discover the truth of what it feels or seems like to perceive things as someone else. We know only what it’s like to perceive as us, and we simply assume others perceive in the same way.

We are saying, on the contrary, that there is in fact an “objective” red and an “objective” green. Red is the inner experience of a definite, unique mathematical function. There is a one-to-one, objective relationship between mathematical signal and inner experience. Every time we encounter that particular signal, we will have the corresponding inner experience. So, colour is the “inside” of a particular mathematical function that is as dependent on our genes as on any phenomenon external to our bodies. Colour per se is NOT out there! Gene mutations cause different internal experiences. It is these inner experiences that drive evolution, and we can

hypothesise that the inner experience is playing a role in genetic mutation i.e. the inner experience is seeking to become superior, better adapted, more useful.

In order for a signal to be experienced, there must of course be something that experiences it, and indeed that experiences endless signals in a unitary way. In other words, there has to be a specific centre of multi-experience. There has to be an “I”, a Self, a SOUL!

Mathematics *must* be experienced, must be *meaningfully* experienced. That means there must be something that can create meaning. That thing is the ultimate mathematical unit of existence, the ultimate mathematical subject – the Leibnizian monad, the unique mind, the ineffable soul! All things come back to the monads. The monads are the basis of everything. And their defining characteristic is that they are unitary centres of experience and meaning. They are ALIVE!

Mathematics, apparently the most abstract and objective of subjects is, finally, entirely driven by subjectivity – by will, feelings, and desires. The world evolves according to how it is subjectively experienced, not by random collisions in an objective world of implacable scientific laws. Free will is latent in all things, and becomes decisive in conscious beings. Free will is the essence of mathematics. And what is the proof? Gödel’s Incompleteness Theorem, which, when properly understood, is about the ability of monads to create their own truths (which may of course not be true at all) based on their own subjective experiences, beliefs and definitions of meaning. The link between Gödel’s Incompleteness Theorem and subjectivity is highly complex, but it will suffice here to say that every single idea you have ever had could be translated into a formal statement described in terms of mathematical logic and shown to be true or false (in fact, most people’s thoughts are logically MEANINGLESS, but that’s just a special category of falseness i.e. no meaningless statement can ever be true. Analytic philosophy is about analysing statements with the utmost precision to test whether they are saying anything logically meaningful). The key point is that Gödel’s Incompleteness Theorem provides the scope for elements within a formal system of rules to be generating utter nonsense, without breaking the system (it’s as if they’re in a quarantine zone of self-reference and subjectivity). In other words, you can simultaneously have an objective reality operating according to strict mathematical laws – scientific reality – and a subjective reality in which any amount of illogical gibberish can exist – human behaviour. Imagine planets behaving like human beings!

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The remarkable thing is that there are endless new and unexperienced sensations waiting for us out there. We haven’t yet evolved the right genes – or the right inner mental configurations one might say – to interact with external phenomena in the ways that will make us Gods.

Think of the astounding phenomenon of synaesthesia. Senses become mixed up. People hear colours and see sounds. Days of the week have a shape, a colour, a sound, a feeling associated with them. Numbers are like 3-D objects. Different foods trigger different emotions. The brain wiring has somehow linked up the wrong things, thus generating novel mathematical signals that are interpreted in novel ways. Are synaesthetics actually a kind of higher species? It has been said that synaesthesia may be a primary driver of creativity. To make unexpected connections between disparate things is the quintessence of creativity. We need as many shocking and surprising links as possible. We need to be able to “see” differently, to overcome preconceptions and brainwashing. We need to break free from constraints, from boxed, conventional thinking. Imagine having a flexible brain that could rearrange itself on demand. What might we accomplish if we had such brains?

There are infinite extraordinary, divine experiences waiting for us once we have evolved sufficiently. Evolution is creative. It is forever generating new sensory experiences. The

mechanistic Darwinists haven't begun to grasp this. Evolution is driven by subjective sensory experience, not by random, mechanistic, mindless collisions. We crave sensory novelty, fresh mental stimulation, new ways of relating to the physical world. We "shape" our genes to satisfy this hunger for mental stimulation. Everything everywhere is edging forward mentally, trying to become more complex, more optimal, more divine.

## **The Selfish Soul**

Richard Dawkins famously made "selfish" genes the drivers of evolution. These vicious little vermin persuade us to have sex so that we can create new biological machines (human babies) to help them (the selfish genes) multiply. We are nothing but gene survival machines and gene replicators. We are fooled into thinking we are in "love" when in fact it's all about the pesky genes manipulating us to satisfy their megalomaniacal ambition to take over the world, like miniature James Bond villains. They want to spread across every square inch of the globe. In Dawkins' worldview, there is not much difference between "gene" and "virus". Viruses, which are of course gene machines just like us, are interested solely in replication. We may be just a special case of a virus.

Yet, in truth, it's selfish souls, not selfish genes, that are at the root of everything. All souls are seeking to actualize themselves. They all need bodies for that. The whole universe groans with their desire for sex and reproduction. Souls always want to be ascending. They must have bodies to become more and more individuated, more and more capable of self-expression. The whole universe is predicated on this force that seeks to make bodies for minds (souls). Teleology demands that the inorganic becomes the organic, the unconscious the conscious, the simple the complex.

Souls are in the business of creating bodies that they can inhabit and through which they can develop. Yet it's clear that there comes a time when souls are somewhat nauseated by life. We might call this the Schopenhauer Factor. Schopenhauer regarded existence as pointless and even evil insofar as it seemed to do little more than generate endless suffering and misery. He characterised existence as pure Will, striving ceaselessly to go on existing. Nothing wants to die. Everything, in the normal course of events, craves to survive to the last possible second. Nazi guards in death camps said that the Jews in the deadly "shower" rooms formed pyramids as they literally climbed up over each other to breathe the last clean air. The person with the strongest will to survive was the apex of the pyramid. The horror of that fight for life can't begin to be imagined.

Schopenhauer saw humanity as nothing but the oblivious, deluded puppets of the cosmic Will (just as Dawkins sees us as the oblivious, deluded puppets of selfish genes), being forced to perform in an endless horror show. Freud later appropriated this view. The Freudian unconscious is virtually identical to the Schopenhaueran Will – an all-powerful force dictating our behaviour. We think we're in charge, but we're not. We are being driven by elements of which we are almost wholly unaware.

Yet once that is understood, once we can consciously apprehend our predicament, things can change. People can choose not to have children, for example. People can opt to become celibate Buddhist or Catholic priests and monks. People can make themselves into suicide bombers. People can kill themselves rather than endure one more moment of life. Clearly, survival and replication are not the central preoccupation of such people.

The more conscious you are, the less animalistic you are. Human beings cease to be controlled by genes and instead find themselves being influenced by *memes*. If Jungian

archetypes are the units of the collective unconscious then memes are the corresponding units of the collective consciousness.

Souls feed on memes. Memes are proof of mind. When genes have delivered biological bodies capable of consciousness then genetics gives way to memetics. Our evolutionary future will take place mentally rather than physically, through memes rather than genes.

Why is Science More Valued than Philosophy?

Philosophy is a wondrous yet undervalued subject. Science wipes the floor with it. Why? It's because science is based on mathematics and can attach numbers to things. Things can be measured. Things can be predicted. With science, we can produce new medicines and technology. Science has immediate utility.

Philosophy's problem is that it can't compete mathematically. That's why it needs to turn to Illuminism which brings numbers into the heart of philosophy. Science is the study of the material world – the arena of all numbers between zero and infinity. Philosophy is therefore the study of the numbers zero and infinity, beyond the reach of science. This is the mental domain, the “noumenal” domain, the domain of subjectivity.

The science-philosophy interface is where matter and mind collide: everywhere where division by zero takes places.

Zero and infinity also define religion (which is just a branch of philosophy). Zero is the number of the Soul. As for the Soul's capacity, it's infinite (so infinity is the second number of the soul). Zero is the number of mind, of deathlessness (it's dimensionless, so cannot be annihilated), of life itself; infinity is the number of eternity, of immortality, of endless energy, endless knowledge, endless power – of GOD.

It's time for science, religion and philosophy to be brought under one roof: mathematics. Now that defined numbers (zero and infinity) have been explicitly attached to the soul/mind, it can be treated as a respectable entity for mathematical study.

It's also important to bear in mind that imaginary numbers are ontologically real and are the basis of time. Negative numbers are ontological too and apply to “anti”-matter, “anti”-time, “anti”-space and negative, “anti”-energy.

Observer and Observed

“Eugene Wigner has suggested that he can insert a very definite division between the observer and the observed, because he invokes the mind as a completely separate entity which is somehow coupled to the world, and he says that it's the entry into the mind of the observer that resolves the paradoxes [of quantum mechanics]. So he's bringing the idea of a non-material mind to play a prominent part in the physical world.” – P.C.W. Davies

In the final analysis, observer and observed are the same thing. They are just different mathematical perspectives. The observer is mathematics as subject. The observed is mathematics as object.

Illuminism agrees with Wigner that mind plays a critical role in the physical world, but it completely disagrees that the mind of a conscious observer is required to account for quantum phenomena. Rather, mind is inherent in the universe at every level and the quantum domain is every bit mental as physical.

Large Hadron Collider

No experiment will *ever* reveal the physical existence of the ultimate particle of existence: the Leibnizian monad. Why? Because the monad isn't physical, it's mental. A monad can never be directly brought into the sensory domain. We can only ever experience it mentally. We

ourselves are ultimately monads. Isn't it the supreme irony? – we can *never* see ourselves as we truly are. We can only attain *rational*, not empirical, understanding of what we are. We can conceive of our true nature mentally but not physically.

Leibniz was insistent that physics must be grounded in and explained by metaphysics. That remains the fundamental position of Illuminism. Only reason, not the senses, takes us to the ultimate truth. The senses are inherently unfit for purpose in relation to the non-physical domain. Reason is our tool for exploring the mental domain. That means that we *must* trust reason. We can't worship the senses and expect them to provide us with answers. Scientific experiments are concerned with the senses. No scientific experiment can help with the mind as it is "in itself".

Only physical effects of mental events can ever enter the scientific domain (if you choose to raise your arm, you convert mental volition into a physical action). You have to ask yourself this – should we ideologically and dogmatically proclaim the senses and experiments the source of absolute truth beyond which we can never go? Or do the senses not go far enough, hence can *never* get to the absolute truth? Science has chosen to make experiment the arbiter of truth. Metaphysics makes reason the final arbiter. Where do *you* stand?

Experiments can *never* reveal the domain of zero. Zero cannot be seen, heard, touched, tasted or smelled. So, will you conclude that zero isn't there because your senses can't detect it, or will you consider your senses defective? Everything about how you view and understand the world revolves around whether you are a rationalist or an empiricist. Scientists are empiricists (our sensory experiences define us); Illuminists are rationalists (reason defines us).

It's absurd that science has made us prisoners of our fallible, unreliable, defective and unexplained senses. No scientist can account for our ability to see red. There is no red "physically" anywhere in the universe. Yet science has put all of its eggs in the basket of something it doesn't comprehend and can't define – sensory experience itself. Science is irrational because it rejects reason as the supreme and most reliable tool of humanity.

Reason, not experiment, is our ultimate authority. If something is logically proved beyond any conceivable challenge then that is TRUTH. Experimental verification is neither here nor there.  $1 + 1 = 2$  is a mathematical truth: true for eternity. It doesn't require any sensory confirmation.

Illuminism is the position that ALL absolute truths are mathematical and there can be no non-mathematical absolute truths. All experiments are false if they contradict rational mathematical truths. Mathematics is the supreme truth. Its truths cannot be contradicted. Anything that is proved mathematically but has no experimental confirmation remains absolutely, incontestably true. The soul belongs to the Platonic domain of mathematical truth that cannot be subjected to any experiment.

You should accept the existence of the soul purely for mathematical reasons and no other. You should never *believe* in the soul's existence. Either it's rationally true or it's rationally false. There's no mid-ground. You should not expect any experimental proof of the soul. It can never be furnished since the soul is outside the physical world. The best you can hope for is a physical effect caused by the soul (just as the movement of our body is caused by our non-physical mind).

In the last resort, the question of existence comes down to this: is the universe a completely mathematical system? If it is, it must have zero as its unshakeable foundation stone, for mathematics without zero is impossible. That means that mathematics is the origin of mind and life. If the universe is *not* mathematical, why does it look so staggeringly mathematical? That must be the most improbable and inexplicable coincidence ever.

If the universe is mathematical but excludes zero (as scientific materialists believe) then what sufficient reason did Nature have for forbidding zero (remember, anything not forbidden is compulsory!), and how can mathematics exist without its keystone, its origin, the most important

number of all that defines everything else.

So, you see, it's really all rather simple. You either accept Leibnizian Illuminism as the absolute truth of existence, or you are irrational and you are committed to nonsensical, logically untenable faith positions. Science is the faith that zero (hence mind, life and free will) does not exist. Abrahamism is the faith that mathematics is not the supreme truth of existence. Eastern religion is the faith that morality is embedded in the fabric of existence (the ideology of karma).

Illuminism is the rational doctrine of existence as living mathematics, as a cosmic self-solving equation, perpetually converting potential into actuality, converting simple forms into complex forms via endless Fourier wave function additions. Illuminism is quintessentially about dialectical evolution, about bare monads being relentlessly converted into "full" monads. And the fullest monad is none other than God. Therefore Illuminism is about zero – as the simplest, most basic unit of existence – finally being transmuted by the Philosopher's Stone (mathematics) into the most complex unit of existence: God. Every monad in existence can become God. The whole universe can be alchemically transformed from base metal into gold.

Imagine it. A cosmos of pure gold, glinting in the transcendent light of eternity. Is that not the ultimate dream, the omega dream, the final destination of *all* our dreams?

### Meaning

Intelligence must be self-generating. The idea of a pre-existing intelligence creating the universe simply begs the question of where its own intelligence came from.

When does consciousness enter the universe? It's when subjective mathematics – instinctual, wilful, emotional, desiring, striving – is able to adopt an objective view of itself. What is intelligence? It's reason, logic, order, organisation. It's OBJECTIVE.

Consciousness exists when sufficient intelligence (objectivity) has been attained and an entity can ask, "What am I? How did I get here? Where did I come from? Where am I going? What is the purpose of my existence?" Those are all objective, philosophical, rational questions. They are the equivalent of looking at yourself from the outside rather than simply experiencing yourself from the inside. You have attained the ability to grasp that you are an enigma to be solved. No animal has any such concept. They simply live. They don't reflect on life. Many human beings are animalistic and barely ponder their own existence. Consciousness and intelligence go together. The more intelligent you are, the more conscious you are. The less intelligent you are, the more you resemble an animal.

Consciousness is, ultimately, when a subjective mathematical entity grasps that it has an objective mathematical character, that it belongs to a vast, cosmic system of mathematics and mathematical relations. As Hegel understood so brilliantly, consciousness (self-consciousness) necessarily involves an awareness of other consciousnesses, knowing that you are you and not them. That, in turn, involves seeing both you and them objectively.

A lion is aware of other lions only subjectively and instinctively. It does not ponder their or its own existence. It is not able to define "lion". It is not able to define "I". It cannot recognise its own reflection in a mirror i.e. it has no objective view of itself. It cannot see itself as an object, so it assumes that its reflection must be another creature. Consciousness is objectivity. It means understanding that one is both subject and object. To "see" yourself is to know that you are an object as well as a subject. Reason is the tool of objectivity, not subjectivity.

Reason is the youngest and most immature quality in the universe. Objectivity was the LAST thing to appear in our repertoire and remains our most alien and vulnerable aspect. Most people are spectacularly subjective and irrational. Sensing and feeling types barely comprehend reason.

Consciousness is when mathematics becomes self aware. It's when a subjective

mathematical being grasps that it's part of an objective mathematical system. It's when mathematics understands itself in the shape of mathematics.

Language is essential to consciousness. Language, usually commencing as simple, repeated signs or organised "grunts", is the first time that reason makes an appearance in the universe. Every animal that has an ordered means of communicating with its neighbours has the first glimmer of consciousness. Once language has become complex with a wide vocabulary, syntax, grammar and so forth, it inevitably generates LOGIC. Logic is the first manifestation of mathematical understanding: humans acquired logic before they had any mathematical knowledge. As soon as you have logic, you can start counting and classifying, ordering and organising, analysing and predicting. And as soon as you can do these things – especially count – you have embarked on mathematics.

We arrive at mathematics through language and logic.

Another feature of language is of course that it's social and highly empathetic (we can work out what people are saying almost before they say it; we can interpret silences, we can prompt with the word we think they're looking for, and so on). Therefore, consciousness, the product of language, can develop only as a social phenomenon. It is IMPOSSIBLE for a "God" on his own to possess language or be conscious or to know anything about logic and mathematics. Consequently, the Abrahamic God is absolutely and permanently refuted. No rational person could ever be an Abrahamist.

It's no surprise that Abrahamists appeal to irrational "faith" and "revelation". These people are estranged from logic and reason. They are enemies of consciousness. They explicitly reject the opportunity of eating from the Tree of Knowledge. They have no knowledge, no intelligence, no authentic spirituality, no free will and they will never attain *gnosis*. You must be fully conscious before that can happen, and you never will be if you subscribe to "faith".

Faith is just another name for ignorance, prejudice, false hope, superstition and self-delusion. Faith is contemptible and all "believers" are a joke. REASON is the route to God, not faith. Faith is the road to bondage. All people of faith are enslaved by their faith. They place their absolute trust in a cosmic tyrant and monster, a torturer and terrorist. The God of Abraham is the most irrational God it's possible to conceive. He never once mentions reason, logic, science, mathematics or philosophy. He is concerned only with control, terror and obedience.

What is the Abrahamic first Commandment?

Is it: behave rationally; obey logic; acquire knowledge; know thyself; be all you can be; do as you would be done by? No, it's none of those. In fact, it's, "*Thou shalt have no other gods before me.*" Have you worked out what the Abrahamic God's sole agenda is yet? **POWER.**

What Are We?

We are all numbers. We are the children of mathematics. We are self-solving equations. Ultimate meaning resides in the answers we ourselves give when we have absolute knowledge at our disposal.

Computer or Organism?

If particles are hardware, the quantum wavefunction is the software. If particles are the body, the quantum wavefunction is the mind.

So, are we computers or organisms? Do you consider yourself a computer? Is the mind a "ghost in the machine"? Or is the machine actually a living organism imbued with mind?

**Dreams**

What are dreams? They are conscious mental activity cut off from objective temporal, spatial and sensory input i.e. from the normal framework of our comprehension. So, they are reflective not of external reality but of our inner, subjective world of will, desire and feeling. When you die and you are removed from space and time, your consciousness switches from objective to subjective mode.

When people talk about near-death experiences, they invariably describe intensely emotional experiences. They don't go to some alternative physical reality. They are firmly in an emotional, mental domain. Dreams are a glimpse of the afterlife, of how our minds function when cut off from spatial, temporal and sensory data. Freud described dreams as the royal road to the unconscious, but, of course, dreams are conscious, not unconscious states – we are fully self-aware in our dreams. While it's true that the unconscious can intrude into dreams (typically via symbols), dreams are actually conscious explorations of the fears, desires, ambitions, feelings, anxieties, and obsessions of which we are fully consciously cognizant. When we have erotic dreams, aren't they about people we consciously lust after? When have you ever had an erotic dream about someone in whom you had no conscious sexual interest, or who doesn't conform to your "type"?

We mentally create scenarios that correspond to the issues preoccupying us in our normal conscious lives. We don't censor anything, as Freud erroneously believed. The whole point is NOT to censor anything – to give full rein to what we fear most (nightmares) or desire most (wish fulfilment). Men can have such powerfully realistic sexual fantasies that they actually ejaculate in their sleep. So, there's nothing being suppressed, disguised or expressed in code, is there? It's all up front, in full Technicolor.

The content of our dreams isn't one or several levels removed from our preoccupations: the content IS our preoccupations. We use stories, metaphors and symbols to explore our preoccupations. How else would we present our emotional states to ourselves? We wouldn't use mathematics, would we? We wouldn't write a mental note to ourselves using a mental pen and paper. Human beings love storytelling (Mythos) because it's the language of the emotions. A superb mathematical proof is only emotionally satisfying to a mathematician. A superb movie or novel will be emotionally satisfying to everyone. We understand our own lives in terms of a narrative, so that's how we think in our dreams – as narrative sequences.

Freudian psychoanalysis ought to be replaced by narrative analysis. The way to get people to reveal the preoccupations troubling them is to get them to tell stories. Every story, no matter how clumsily expressed, reveals an intention, an emotion, a psychic element. Why *this* story rather than *that* story? The particular details of the story and how it is told are crucial.

All psychiatrists and psychologists treating disturbed patients should study the many excellent books about screenplay and story structure, about characterization, plotting, dramatization, the basic stories that feature over and over again in the human telling, heroes and villains, climaxes, crises, denouements and so forth.

Everyone in the world should be taught narrative as the proper language of emotional, subjective expression (Mythos), while mathematics is the archetypal language of our analytical, objective aspect (Logos).

We must all be literate in terms of both Logos and Mythos if we are to be fully actualised human beings.

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Question. “Mike Hockney wrote, ‘There’s an infinite number of zeros/souls.’ Also, ‘The God of Gods commits divine suicide when all zeros have become God; have reached absolute gnosis.’ How can this be? The ‘God of Gods’ can ONLY happen with a FINITE amount of zeros. With an infinite amount of zeros there is no omega point.”

The maximum possible actualization of reality would be for every monad to progress from total potential to total actualization i.e. for every monad to become God. Now think of a black hole. If a dying star is sufficiently big, it reaches a point of IRREVERSIBLE collapse and the whole star vanishes into a singularity. For a nuclear bomb to work, you must create a *critical mass* of nuclear material in order to generate the explosive chain reaction. Another useful concept is that of a *phase change*. At 0 degrees Celsius, liquid water changes phase to ice and at 100 degrees it changes phase to vapour. The same sorts of ideas apply to the God universe. Once you reach a critical – FINITE – number of God-monads, you trigger an unstoppable chain reaction across the universe. The universe undergoes an irreversible transformation and changes phase to pure mind, pure divinity (to the God of Gods – meaning that the whole universe of Gods operates as one God). So, an omega point will definitely occur in an infinite system, though only a finite trigger is required. (The reason is that the creation of Gods already bridges the gap between the finite and infinite since humans are finite and Gods are infinite.)

#### The Problem of Existence

“When one considers how great and how close to us the problem of existence is,— this equivocal, tormented, fleeting, dream-like existence — so great and so close that as soon as one perceives it, it overshadows and conceals all other problems and aims;— and when one sees how all men — with a few and rare exceptions — are not clearly conscious of the problem, nay, do not even seem to see it, but trouble themselves about everything else rather than this, and live on taking thought only for the present day and the scarcely longer span of their own personal future, while they either expressly give the problem up or are ready to agree with it, by the aid of some system of popular metaphysics, and are satisfied with this;— when one, I say, reflects upon this, so may one be of the opinion that man is a thinking being only in a very remote sense, and not feel any special surprise at any trait of thoughtlessness or folly; but know, rather, that the intellectual outlook of the normal man indeed surpasses that of the brute,— whose whole existence resembles a continual present without any consciousness of the future or the past — but, however, not to such an extent as one is wont to suppose. And corresponding to this, we find in the conversation of most men that their thoughts are cut up as small as chaff, making it impossible for them to spin out the thread of their discourse to any length. If this world were peopled by really thinking beings, noise of every kind would not be so universally tolerated, as indeed the most horrible and aimless form of it is. If Nature had intended man to think she would not have given him ears, or, at any rate, she would have furnished them with airtight flaps like the bat, which for this reason is to be envied. But, in truth, man is like the rest, a poor animal, whose powers are calculated only to maintain him during his existence; therefore he requires to have his ears always open to announce of themselves, by night as by day, the approach of the pursuer.” -- Schopenhauer

#### Plant People?

Just as we and the apes once shared a common ancestor, so animals and plants once had a common ancestor! Isn't that remarkable? Once upon a time, there was a cellular Adam (or Eve) and from it came two branches – plants and animals. What astounding difference was it that gave rise to animal rather than plant life? Are the secrets of life contained in a single genetic mutation? And was it a single genetic mutation that gave rise to human consciousness rather than animal

unconsciousness?

## The Fourth Dimension

It is often stated that time is the “fourth dimension”, as if it were just another spatial dimension, but of course this raises the issue of why we can’t move backwards and forwards as we can in spatial dimensions. Time seems to be a strict one-way street. No reversing is permitted. Why should that be? Well, it becomes obvious as soon as the time dimension’s mathematical role in the equations of Einstein’s special theory of relativity is properly analysed.

Time enters these equations functionally equivalent to an *imaginary*, not a real dimension. In other words, it’s absurd to talk about four dimensions as if they were all somehow the same. The problem would be obvious if time were explicitly referred to as an imaginary spatial dimension. Everyone would understand the radically different nature of time and would then ponder what it means to travel backwards in an imaginary dimension. Backwards to where? To an imaginary location? You can easily travel back from a real location at which you’ve just arrived to a real location from which you’ve just come. But how do you go back to somewhere *imaginary*? What does it *mean*? As soon as that enigma is confronted, people can begin to think properly about time, and abandon the simplistic notion that time is more or less the same as space.

Ontologically, real and imaginary dimensions are fundamentally different. Time is *irreversible* because imaginary numbers can only ever exist ontologically in a very specific way with respect to real numbers. They can only exist NOW i.e. “now”, the present instant. “Now” is one of the most mysterious things in existence. Arguably, it is the most elusive thing of all, something we can never hope to capture. It is the ever-moving interface between real and imaginary numbers. The mystery of “now” is the mystery of imaginary numbers and how they relate to real numbers. Imaginary numbers don’t exist in the past in relation to the real world. They exist only “now” (and “now” + an infinitesimal – so that the present can be selected from the immediate set of future possibilities).

The so-called collapse of the wavefunction in quantum mechanics is actually caused by the immiscible nature of real and imaginary numbers. “Now” is when reality is plucked from the imaginary. Once it has been plucked and become “the past”, there’s no way back. Wavefunction collapse is irreversible – exactly like “now” because the wavefunction collapse IS “now”.

### The Heisenberg Uncertainty Relation and the Past

A point that is given insufficient philosophical attention is that the Heisenberg Uncertainty Principle does not apply to the past. In relation to the past, Heisenberg admitted that position and momentum could be known exactly. In 1930, he wrote, “If the velocity of the electron is at first known, and the position then exactly measured, the position of the electron for times previous to the position measurement may be calculated. For these past times,  $\delta p \delta q$  is smaller than the usual bound.” More emphatically, he announced, “The uncertainty relation does not hold for the past.” The “uncertainty” in the Uncertainty Principle relates to what we can say *beforehand*, not in retrospect. This has rather startling consequences for the picture conventionally presented by quantum mechanics. We are normally told about irreducible quantum “fuzziness” and we are led to believe that the quantum domain is somehow ghostly. Yet if there’s no uncertainty in the past then that means that the past isn’t fuzzy and ghostly at all – it’s precise, solid, unshakeable, leaving no room at all for doubt or uncertainty.

How can we make sense of this astonishing paradox? While the world of “now + an infinitesimal” is utterly vague, the world of “then” has no vagueness at all. What does that remind of us? Isn’t it suggestive of time itself? The past is the arena of unalterable facts, of absolute

certainty. The future, however, is uncertain, vague. There are no indisputable facts. “Now” is when the vagueness of the future is brought into focus – and then immediately converted into a hard, past fact. “Now” is none other than the collapse of the “time wavefunction”.

The Heisenberg Uncertainty Principle is offering us a profound mathematical insight into the deep nature of time and reality.

“In the sequence of measurements we have considered above, the uncertainty in the momentum after the measurement of position has occurred, refers to the idea that the value of the momentum is not fixed just *before* the final momentum measurement takes place. Once this measurement is performed, and reveals a value *pf*, the uncertainty relation no longer holds; these values then belong to the past. Clearly, then, Heisenberg is concerned with *unpredictability*: the point is not that the momentum of a particle changes, due to a position measurement, but rather that it changes by an unpredictable amount. It is, however always possible to measure, and hence define, the size of this change in a subsequent measurement of the final momentum with arbitrary precision. Although Heisenberg admits that we can consistently attribute values of momentum and position to an electron in the past, he sees little merit in such talk. He points out that these values can never be used as initial conditions in a prediction about the future behaviour of the electron, or subjected to experimental verification. Whether or not we grant them physical reality is, as he puts it, a matter of personal taste. Heisenberg’s own taste is, of course, to deny their physical reality. For example, he writes, ‘I believe that one can formulate the emergence of the classical “path” of a particle pregnantly as follows: *the “path” comes into being only because we observe it.*’ (Heisenberg, 1927, p. 185) Apparently, in his view, a measurement does not only serve to give meaning to a quantity, it *creates* a particular value for this quantity. This may be called the ‘measurement=creation’ principle. It is an ontological principle, for it states what is physically real. ... The question is then what status we shall assign to the momentum of the electron just before its final measurement. Is it real? According to Heisenberg it is not. Before the final measurement, the best we can attribute to the electron is some unsharp, or fuzzy momentum. These terms are meant here in an ontological sense, characterizing a real attribute of the electron.” -- <http://plato.stanford.edu/entries/qt-uncertainty/>

Can we provide an example that refutes Heisenberg’s view? In fact, we ourselves – human beings – are the refutation of Heisenberg’s view. If you think about it, our own behaviour is always “fuzzy” just before we do something. No one observing us could predict exactly what we are going to do at any instant. We are in a cloud of probability. A haze of potentiality surrounds us. Yet we are continually emerging from this haze with every “now” that passes and we actualise one of the choices facing us. But of course as each now happens, a new future haze is produced, and so on. We know exactly what we did if we look at a video of ourselves, but there is no video that could predict exactly what we are going to do. It can only ever record what we have actually done. Similarly, quantum mechanics cannot say for sure what a particle is going to do, but once it has been done then there is no longer any uncertainty attaching to the particle. Its behaviour has become a matter of historical fact and certainty.

Particles are always certain in the past, but uncertain regarding the future – exactly like human beings. In other words, Heisenberg’s uncertainty relation is showing us that particles are no different from us. They have minds and thus choices, and thus their future movements cannot be predicted with certainty any more than ours can.

Many scientists have pondered how human beings can be made of fuzzy particles. In fact, the fuzziness refers to what’s just about to happen (i.e. the future). The present selects one of the possibilities and actualises it, but as soon as it does so, the possibility selected becomes a solid, certain, historical fact. Particles aren’t fuzzy at all. It’s their *future* that’s fuzzy, just as our future is fuzzy and undetermined.

We are solid because we exist in the “now” – which is the instant when the potential future is actualised, when the wavefunction collapses (but of course the wavefunction is always being instantly reformed, and new future possibilities are generated, hence uncertainty is generated because no one knows what possibility will be actualised).

The baffling nature of time is completely captured by the Heisenberg relation. It’s really a description of the same phenomenon.

Neither particles nor we are fuzzy. What is fuzzy is what we are about to do – but that belongs to the future, and the future is something that we never actually encounter. We always stay in the NOW. We are permanently in the present, and the present keeps advancing into the future and actualising one of the future possibilities. We have a certain notion of the future because we are aware of possibilities, but all we ever actually experience at any instant is the actualisation of one of the possibilities open to us. The same is true of particles. They are *never* fuzzy. They are always real, solid and certain. The fuzziness is always in their future, ensuring that we can never know for sure what they are going to do.

If the future weren’t fuzzy for all things, including us, then we would be entirely deterministic, clockwork automata. What saves us from determinism is quantum indeterminism, which is all about the impossibility of knowing the future for certain. Many choices are possible at each instant, but only one will be actualised at each instant.

The past is completely determined – it’s historical fact. The present is the process of actualising one of a range of future possibilities and instantly turning it into a past fact. There is never any fuzziness in the present moment. It’s as solid and certain as the past (which it immediately becomes). Only the future is fuzzy and we never actually reach it or experience it – we are eternally shielded from the future by the present moment!

Do you *see*? Nothing in the universe exists in the past or the future. Neither genuinely exists. The only thing that does exist is NOW, and it’s gone the instant it happens. That is the fundamental nature of existence. We live in a constantly moving “now”. We are constantly becoming. There is no such thing as “being” because that would represent stasis, a timeless universe where “now” does not keep marching relentlessly forward. As long as “now” is always advancing, we are always becoming. And “now” never stops in the physical world.

The conventional interpretation of quantum mechanics is radically false. Quantum “fuzziness” never applies to the present moment. There is never any fuzziness “now”. The fuzziness relates to the impossibility of knowing what path the quantum particle will take.

Without quantum indeterminacy there could be no free will. Quantum indeterminacy is the basis of free will – and is also connected with Gödel’s Incompleteness Theorem.

At a very deep level, the future, the Heisenberg uncertainty relation, Gödel’s Incompleteness theorem and free will are all exactly the same thing. They are all about the impossibility of determining the future, of viewing the universe as a Newtonian clockwork mechanism. No, the universe is a living organism and the future of life is based on choice and can *never* be determined absolutely.

Choice is most obvious in two places: conscious human beings and individual quantum particles.

Exceptionally large collections of particles (countless trillions, as in planets and stars) behave with high predictability, just as large groups of people are usually extremely conformist and show much more predictability than individuals (idiosyncrasies are averaged out).

The quantum world is exactly like the human world, and if scientists had realised that, they would have discovered quantum uncertainty straight away. They didn’t because they all subscribed to the Newtonian notion of a clockwork, determined universe. Even now, scientists still fundamentally believe in Newtonian mechanistic theory, and hence continue to be baffled

and amazed by quantum mechanics.

They just can't grasp that quantum particles are as alive as we are. They're organisms, not mechanisms, and they have choices, just as we do. They mostly behave very predictably – just as we do!

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“Heisenberg’s discussions moved rather freely and quickly from talk about experimental inaccuracies to epistemological or ontological issues and back again. However, ontological questions seemed to be of somewhat less interest to him. For example, there is a passage (Heisenberg, 1927, p. 197), where he discusses the idea that, behind our observational data, there might still exist a hidden reality in which quantum systems have definite values for position and momentum, unaffected by the uncertainty relations. He emphatically dismisses this conception as an unfruitful and meaningless speculation, because, as he says, the aim of physics is only to describe observable data. Similarly, in the Chicago Lectures (Heisenberg 1930, p. 11), he warns against the fact that the human language permits the utterance of statements which have no empirical content at all, but nevertheless produce a picture in our imagination. He notes, ‘One should be especially careful in using the words “reality”, “actually”, etc., since these words very often lead to statements of the type just mentioned.’ So, Heisenberg also endorsed an interpretation of his relations as rejecting a reality in which particles have simultaneous definite values for position and momentum.” -- <http://plato.stanford.edu/entries/qt-uncertainty/>

Note that Heisenberg is adopting a strict logical positivist, empiricist, scientific materialist stance, but this is simply his taste (and the prevailing taste of scientists in general). He has not in any way refuted an entirely different interpretation where particles *always* have a definite position and momentum (the world is not “fuzzy” at all), but that this information always belongs in the factual past because it can never be determined in the present instant. We don’t know the precise position and momentum of a particle “now” (and there is no measurement we can perform to ascertain them simultaneously), but “now” immediately passes into “then” where they do have a precise location and momentum (though this information is no longer accessible because it’s in the past).

We can see that Heisenberg’s relation is all about the meaning of “now”. How do we differentiate “now” from the past given that now instantly turns into the past? Information not available “now” immediately becomes available an infinitesimal time later as certain, historical fact. We can’t determine the information relating to “now” because “now” is the instantaneous process of “collapsing the wavefunction” and thereby selecting precise values of position and momentum. As soon as they are selected (the wavefunction has collapsed), they belong to the *past* – where they are inaccessible. We can never beat “now” since it’s an infinitesimal, hence we can never, practically, measure a particle’s position and momentum simultaneously.

Astoundingly, Heisenberg concludes that a definite position and momentum therefore don’t exist (because he defines measurement as critical to reality: anything unmeasured and unobserved does not exist in his extreme logical positivist ideology). He thereby throws an impenetrable cloak of fuzziness over reality for purely ideological reasons. But there is no fuzziness. Particles *do* have definite positions and momentums, but they are not available for our simultaneous measurement. That is an entirely different picture of reality and *nothing* Heisenberg says contradicts it.

### Chicken and Egg

A particle is a classic example of a chicken and egg situation. Its position in a force field determines what forces are acting on it, and these forces determine its momentum, which

determines its position, which determines its momentum, which determine its position and round and round we go. We can never perfectly isolate any quantum particle. Momentum and position will always be dynamically coupled (they are dependent on each other). Since they are not independent, we cannot measure them simultaneously. Even as we measure one, the other is changing, and, moreover, has to factor in the changes caused by any measuring process.

If we think of dynamically coupled properties as “feedback” systems, each feeding back to the other and causing it to change, we can understand that such properties are “non-commutative” i.e. the order in which we perform the calculation determines the outcome (because the order is related to where we enter the feedback process: position first and momentum second, or vice versa).

### The Heisenberg Uncertainty Principle

The following astute observations are by Jan Hilgevoord, Stanford Encyclopaedia of Philosophy:

<http://plato.stanford.edu/entries/qt-uncertainty/>

“Roughly speaking, the uncertainty principle (for position and momentum) states that one cannot assign exact simultaneous values to the position and momentum of a physical system. Rather, these quantities can only be determined with some characteristic ‘uncertainties’ that cannot become arbitrarily small simultaneously.”

“One striking aspect of the difference between classical and quantum physics is that whereas classical mechanics presupposes that exact simultaneous values can be assigned to all physical quantities, quantum mechanics denies this possibility, the prime example being the position and momentum of a particle. According to quantum mechanics, the more precisely the position (momentum) of a particle is given, the less precisely can one say what its momentum (position) is. This is (a simplistic and preliminary formulation of) the quantum mechanical uncertainty principle for position and momentum.”

“The uncertainty principle is certainly one of the most famous and important aspects of quantum mechanics. It has often been regarded as the most distinctive feature in which quantum mechanics differs from classical theories of the physical world. Roughly speaking, the uncertainty principle (for position and momentum) states that one cannot assign exact simultaneous values to the position and momentum of a physical system. Rather, these quantities can only be determined with some characteristic ‘uncertainties’ that cannot become arbitrarily small simultaneously.”

“In 1925 Heisenberg had developed the first coherent mathematical formalism for quantum theory. His leading idea was that only those quantities that are in principle observable should play a role in the theory, and that all attempts to form a picture of what goes on inside the atom should be avoided.”

“‘The more I [Heisenberg] think about the physical part of Schrödinger’s theory, the more disgusting I find it’, and: ‘What Schrödinger writes about the *Anschaulichkeit* of his theory, ... I consider *Mist*’. Again, this last German term is translated differently by various commentators: as ‘junk’, ‘rubbish’, ‘crap’, and perhaps more literally, as ‘bullshit’.

“The second observation is that although for Heisenberg experimental, informational, epistemological and ontological formulations of his relations were, so to say, just different sides of the same coin, this is not so for those who do not share his operational principles or his view on the task of physics. Alternative points of view, in which e.g. the ontological reading of the uncertainty relations is denied, are therefore still viable. The statement, often found in the literature of the thirties, that Heisenberg had proved the impossibility of associating a definite position and momentum to a particle is certainly wrong. But the precise meaning one can

coherently attach to Heisenberg's relations depends rather heavily on the interpretation one favours for quantum mechanics as a whole. And because no agreement has been reached on this latter issue, one cannot expect agreement on the meaning of the uncertainty relations either."

"His long struggle with wave-particle duality had prepared him for a radical step when the dispute between matrix and wave mechanics broke out in 1926-27. For the main contestants, Heisenberg and Schrödinger, the issue at stake was which view could claim to provide a single coherent and universal framework for the description of the observational data. The choice was, essentially between a description in terms of continuously evolving waves, or else one of particles undergoing discontinuous quantum jumps. By contrast, Bohr insisted that elements from both views were equally valid and equally needed for an exhaustive description of the data. His way out of the contradiction was to renounce the idea that the pictures refer, in a literal one-to-one correspondence, to physical reality. Instead, the applicability of these pictures was to become dependent on the experimental context. This is the gist of the viewpoint he called 'complementarity'."

"On the other hand, he criticized Heisenberg severely for his suggestion that these relations were due to discontinuous changes occurring during a measurement process. Rather, Bohr argued, their proper derivation should start from the indispensability of both particle and wave concepts. He pointed out that the uncertainties in the experiment did not exclusively arise from the discontinuities but also from the fact that in the experiment we need to take into account both the particle theory and the wave theory. It is not so much the unknown disturbance which renders the momentum of the electron uncertain but rather the fact that the position and the momentum of the electron cannot be simultaneously defined in this experiment."

#### Einstein Podolsky Rosen Paradox

Two correlated particles can influence each other instantaneously even when infinitely separated. This, on the face of it, appears to violate Einsteinian relativity theory prohibiting interactions faster than the speed of light.

In fact, there is no violation at all. The two linked particles are part of a common mathematical function that exists in the dimensionless, mental singularity, where it does not experience space and time. Information is passed from one part of the mathematical function to another at the speed of light, as usual, but since this is taking place in the singularity (outside space and time) rather in space and time, it is observed to happen instantaneously. There is no paradox at all. The confusion arises from the fact that scientists do not acknowledge the existence of the singularity – the mathematical cosmic mind – that mentally connects all things. All things are on the one hand physically separated in space and time, and on the other hand mentally connected in the mathematical singularity outside space and time.

Science is geared up to study the physical aspect, and has systematically ignored the mental aspect, insisting that the mental is merely a disguised version of the physical. Most material phenomena that we encounter in the classical world of our experience occur via time and space (obeying conventional Einsteinian rules). The quantum world, however, is more mental than physical and we do not directly materially experience it, hence phenomena that seem to violate Einstein's rules are typically not observed by us.

In reality, our whole world is controlled by a mental singularity, but, thanks to science, we imagine that it's controlled in terms of physical space and time. All of science's successes relate to making sense of space and time.

#### The Past that is Always Present

"The most radical consequence of Minkowski's four-dimensional viewpoint is that the

past still exists (and so does the future). Minkowskian space-time is a kind of frozen snapshot of eternity. The predictive success associated with this peculiar space-time viewpoint is a strong motivation for believing in the possibility of time travel. If the past in some sense still exists, then one can seriously consider schemes for paying it a visit.” – Nick Herbert, *Faster than Light*

This is where Minkowski’s interpretation becomes absurd. The fundamental error is that Minkowski is treating imaginary numbers (effectively the fourth dimension in his scheme) as if they were real numbers (the other three dimensions).

Just as the coordinates of Manhattan’s spatial location can be given, Minkowski thinks Manhattan’s time coordinates can be given also. So, just as Manhattan exists right now in America, so do all of its past states and indeed all of its future states. Manhattan’s future fate has already been written. Everything that will happen one hour from now in Manhattan (and indeed the whole universe) already exists as a fact. Therefore no one in Manhattan has any free will. In fact, none of us has free will. We are pointless, programmed automata suffering from an extremely peculiar delusion that we can freely choose what we will do in the next hour.

Minkowski’s interpretation fundamentally contradicts quantum mechanics, hence is completely refuted by quantum mechanics. Heisenberg’s uncertainty principle makes the future inherently unknowable. Because of this uncertainty built into the fabric of the universe, no one can know anything at all about the future other than as a set of probabilities. Minkowski is saying that there’s no such thing as Heisenberg’s uncertainty principle, and, given that he died in 1909, years before the Heisenberg uncertainty principle was discovered, he has an excuse for his error. However, it’s ridiculous that physicists in the 21st century continue to talk about Minkowski’s “block time” as if it were a serious possibility. It’s utter nonsense!

The past can be shown to be radically different from the future thanks to Heisenberg’s uncertainty principle alone. This uncertainty principle *does not* apply to the past, hence the principle inherently acts as the true “arrow of time”.

The past has happened. It’s known. It’s fact. The uncertainty principle only applies to the immediate future. “Now” is the instant when the future becomes the present and the Heisenberg uncertainty is “collapsed” and loses its uncertainty (although, of course, it never ceases to apply to the future i.e. the uncertainty instantly reforms itself).

We can define the future as “that time to which the Heisenberg uncertainty principle applies”, and the past as “that time to which the Heisenberg uncertainty principle has ceased to apply.” As for “now”, that is the continually moving interface between future and past, where Heisenberg future uncertainty is converted into past certainty.

Quantum mechanical wavefunctions DO NOT apply to the past (there is no superposition of past states awaiting “collapse of the wavefunction”, so if someone travels “back in time” what happens to their personal wavefunction? It must reflect the future and yet the person is now in the past, so they have taken the future into the past where it cannot possibly be since the past is that which is NOT the present or the future. Time travel is riddled with incoherent ideas. It’s false in every regard. It can never happen under any circumstances. It is forbidden by the laws of the universe, and above all by Heisenberg’s uncertainty principle.

What do people even mean when they talk about going into the past? Do they mean travelling back as the person they are now? Imagine they went back to an event in their own past. So, who would the real “I” be? – the “I” of then or the “I” of now? How could two “I’s” exist? What does that imply about consciousness? What if the past “I” saw the future “I”? Well, surely the past “I” would remember this momentous and earth-shattering event ... so do all time travellers have to avoid meeting themselves in the past?

In terms of going back in time, do we mean rewinding everything that has happened (running the world in reverse, so that everything literally goes back to what it was before), or do

we mean that our *present* self goes back to a *previous* time in which it did not exist? That, of course, is logically impossible.

In quantum mechanics, there are no *reversible* processes: everything is irreversible thanks to the uncertainty principle and its time asymmetry. In classical mechanics, however, we can easily imagine reversing a process. The film of a game of snooker or pool, for example, could easily be played backwards and the reversed game would seem, on the surface at least, to violate no physical laws. This is described as “time reversal invariance” i.e. the direction of time seems to make no difference to the laws of physics. But think of a black hole. In what way is it “time reversal invariant”? We could certainly replay a video of black hole formation in reverse, but we could never *actually* make a black hole go into reverse and create a dying star and then a living star. “Time reversal invariance” is yet another fundamental area where philosophical illiteracy makes scientists say the most ridiculous things.

In the past moment, each of us had a personal wavefunction that was *about* to collapse in a certain way. For all of us, these wavefunctions have now irreversibly collapsed and can *never* be reconstructed. That last moment was unique and has gone forever. If you went back into the past, you would not be able to interact with anyone or anything because their wavefunctions have already collapsed and didn’t take you into account because you weren’t there. You can’t now cause their collapsed wavefunctions to reform to take you into account. If you could, you would no longer be in the actual past but in a different, parallel past that might actually be defined as the present, and not the past at all.

#### Mathematics – Unreasonably Effective?

“Maxwell’s prediction from theory alone of the electromagnetic nature of light is an example of what Nobel laureate Eugene Wigner has called ‘the unreasonable effectiveness of mathematics in the natural sciences.’ None of the experiments on which Maxwell based his equations had anything to do with waves or with exceedingly rapid velocities; all of them could be done on a laboratory bench with batteries, coils of wire, and static electricity machines. But the equations Maxwell deduced from these experiments express more general truths than the facts embodied in the experiments themselves. When a science has reached the stage of mathematization it is often the case that you can get immensely more out of the equations than you put into them.” – Nick Herbert, *Faster than Light*

Hasn’t the penny dropped yet? Mathematics is not “unreasonably effective.” Rather, it is unreasonable not to assign mathematics the primary role in existence itself. Mathematics, not science, is the truth. Science is true only when it reflects mathematics. The longer we continue to think that mathematics is an abstract tool and science is some sort of mirror of reality, the longer we will fail to grasp reality. The relationship has to be precisely reversed. Mathematics is reality, and science is a tool that helps us to reveal it. Science is entirely subservient to mathematics and has no meaning by itself.

Consider Paul Dirac’s discovery of antimatter. This came about because Dirac took seriously two mirror image solutions of the equation he derived. No one talks about it much, but science frequently throws up two answers to a problem, one of which is regarded as “real” and the other as spurious and having no applicability to the real world. Usually this is because it involves a negative number e.g.  $\sqrt{25} = +5$  OR  $-5$ ; this second number is normally ignored because  $-5$  doesn’t appear to apply to the real world. Similarly,  $5i^2$  and  $5^2$  equal  $-25$  and  $25$ , respectively. Scientists won’t even bother thinking about the imaginary counterpart of a “real” equation.

Yet Dirac’s antimatter was all about delving into the domain of negative and imaginary numbers – the taboo zones for almost all scientists – and what emerged was the mysterious mirror image of our reality: the anti-universe, so to speak. Dirac’s lesson still hasn’t been learned.

Scientists *still* regard negative and imaginary numbers as ontologically unreal. They still flee in horror from zero and, above all, from division by zero which generates the dreaded infinity. Science cannot reach its ultimate conclusion until it acknowledges mathematics as its absolute master and until it assigns ontological significance to negative and imaginary numbers, and to zero and infinity.

There are enormous numbers of discarded mathematical solutions and ideas in science that need to be resurrected and re-examined to reveal higher truths such as the existence of antimatter.

“Like Dirac’s equation, Maxwell’s wave equation for light has two solutions, the so-called ‘retarded solution’ that describes a wave travelling forward in time and the ‘advanced solution’ that describes a light wave travelling backward in time. Both of these waves travel at the same speed – the speed of light in a vacuum – but in opposite temporal directions. The retarded wave travels in the normal direction – from past to future – while the advanced wave goes the other way – from the future into the past. ... Although advanced waves are permitted by Maxwell’s equations, no advanced waves have ever shown up in any experiment. All light waves that we know about seem to be of the retarded variety. “ -- Nick Herbert, *Faster than Light*

You can be absolutely certain that there is a domain of applicability of advanced waves – in the antimatter universe, for example – that is simply ignored by scientists because they reject any solution for which they can’t find experimental evidence, or which seems “unreal” (in terms of how they define reality). Antimatter would never have been discovered if Dirac had followed the usual habits of scientists. How much else remains undiscovered because of these same blinkered habits?

Science places experiment above theory. In fact, mathematical theory should be placed above experiment, with experiment acting as a verification tool. In science, it is all too often concluded that absence of evidence is evidence of absence and that anything that cannot be experimentally observed cannot exist. This is what happens when experiment, empiricism and our senses are elevated above our rational minds. Rationalism, not empiricism, should be our guide, with experiment being used as much as possible to verify as many of our theories as possible, but not acting as a veto over our rational theories. Our senses are NOT more reliable than our reason and logic, at least as far as mathematics goes. Mathematics is truth and mathematics has nothing at all to do with experiment, empiricism and our senses. Science couldn’t exist without mathematics. Shouldn’t science grasp what that really means? That is, that mathematics is the truth of existence.

It is often said that the basic laws of physics do not favour a particular direction in time (“time reversal invariance”). This is absolutely false. The whole architecture of quantum mechanics is based on Heisenberg’s uncertainty principle applying to the future, but not to the past. Wavefunction collapse is a temporally irreversible process. The wavefunction can’t be “reinflated” (uncollapsed) and run backwards, any more than a black hole can. The Heisenberg uncertainty principle and wavefunction collapse provide a one-way street in time. Nothing can go back in time.

What scientists should be saying is that the equations of reality have negative or imaginary solutions that are every bit as valid as those of positive, real solutions. This is a radically different statement from saying that reality is indifferent to the direction of time. The latter is just an interpretation based on the false assumption that reality is based exclusively on real numbers greater than zero and less than infinity. So-called “time reversal invariance” – meaning that the laws of Nature are indifferent to the past and future directions of time – is wrong, even though most scientists take it as a fundamental axiom of physics.

Consider this thought experiment. You decide to walk forward a few steps, and someone

is filming you. After you've finished walking, the film is played backwards. Is the replay time reversal invariant? It is said that the reversed movie displays a process allowed by the laws of physics. Well, of course it does because the movie going forward was consistent with the laws of physics. Does someone expect different laws of physics to apply to the past, to events that have already happened in accordance with the laws of physics? Showing a movie backwards isn't going to contradict the laws of physics in any way. But does that make reality time reversal invariant?

In our thought experiment, we took a decision to walk forward a few steps. Our decision was temporal – it took place in time – and it caused our actions. Our decision collapsed the wavefunction of possibilities open to us. Now, when we replay the movie backwards, do we replay our decision to walk forward? No, we don't. That decision was an irreversible past event. It will never be repeated. Whatever the movie being shown backwards is doing, it certainly *isn't* indifferent to the direction of time. All information pertaining to the arrow of time, to Heisenberg's uncertainty principle, to wavefunction collapse, is lost in the reverse direction. Hence, it has destroyed the meaningful time information and left only a backwards replay of historical events – events very firmly in the past. The moment we choose to walk forward was a unique instant in time that can never be recreated. That moment was intimately connected with the future and the present, not with the past. The replay is intimately connected with the past and not with the future and present. Therefore it is radically different in terms of time. It is not at all time reversal invariant. The past is completely different from the present and the future.

“For some unexplained reason, these time-symmetric laws have not resulted in a time-symmetric world, but have generated instead a world containing an ‘arrow of time’ that makes one time ‘direction’ different from the other.” – Nick Herbert, *Faster than Light*

That's because the laws are *not* time-symmetric and they *inherently* contain a one-way arrow of time. If scientists were philosophically competent, they wouldn't commit these horrendous logical blunders. Moreover, philosophers aren't sufficiently scientifically literate to correct the myriad errors of the scientists.

So, scientists make up nonsense and no one is in a position to contradict them. Is that not frightening? Science is full of logical howlers. Many central doctrines of science are almost comically false and yet they are treated as holy writ, as sacred as the preposterous texts of Abrahamism (which are equally shot through with endless logical and philosophical errors).

The world badly needs generalists – those who are philosophically, scientifically and mathematically literate – who can keep all of the specialists “honest” and stop them straying off into positions of dogmatic, ideological and logical nonsense.

Time asymmetry is one of the most important features of existence. It's time (!) that time was treated properly by scientists. All of the nonsense about time symmetry has to be abandoned. Scientists simply have to ask themselves whether Heisenberg's uncertainty principle and wavefunction collapse are time asymmetric or time symmetric. The answer is obvious.

In *The Once and Future King* by T. H. White, Merlin remembered the future but not the past. In Greek myth, the Trojan princess Cassandra, as punishment for spurning Apollo's advances, was condemned to prophesy the future perfectly, but never to be believed. What shall we say about scientists and their relationship with time? Do all of their watches show the time in Cloud Cuckoo Land?

There is only one true way to time travel – *memory* – and that's about the least reliable time machine ever devised, as false memories demonstrate.

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“Unlike the classical world, which was described in only one way whether it was

observed or not, the quantum world is described in two ways: The unobserved world takes the form of probabilities and the observed world is made up of facts. During the act of observation itself many probabilities change suddenly into one fact, the result of a still incompletely understood quantum process called the ‘wave function collapse.’ This process, in which many past probabilities turn into one future fact – never the other way around – establishes preferred temporal direction called the quantum mechanical arrow of time.” – Nick Herbert, *Faster than Light*

In fact, many future possibilities collapse into one present fact, which then becomes part of a fixed past. The “unobserved” world is the mental world (the domain of what might happen), and the “observed” world is the material world, the domain of matters of fact, of what has actually happened.

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In the block time conception of the universe, everyone from history is in a sense still alive right now. Hitler is not dead. The Holocaust victims are forever being murdered. We are in the ultimate eternal recurrence nightmare. Every second goes on forever. The moment of everyone’s death exists for all time.

Everything is eternally present. There is no past. It’s still accessible forever. It’s not gone. It’s not over. Nothing is over.

There is no reincarnation and no resurrection, just eternal recurrence.

#### The Search for Perfection

Existence is a cosmic equation permanently solving itself. It can give a final answer to itself – it can create meaning – only when it becomes conscious of itself. Human beings – smart, rational ones, at least – are dimly conscious of mathematical reality, but full consciousness becomes possible only when a mind attains gnosis and achieves “God consciousness”. God – perfection – is the meaning of the eternal mathematical equation. And it is God who decides to restart the equation and begin the search for perfection all over again in the process known as “divine suicide”.

Existence consists of infinite cycles of moving from total potential to total actualisation (perfection). That’s all it can ever do. It is a perfection generator, yet perfection is fleeting. It soon becomes boring and hence imperfect, so must destroy itself.

#### The Most Important Law of All

A contender for the greatest idea of all time is Leibniz’s principle of sufficient reason: for every fact there must be a reason why it is so and not otherwise. Nothing at all can exist without a sufficient reason. Nothing at all can be taken seriously if no sufficient reason is furnished to justify it. For example, what is the sufficient reason put forward by Abrahamists to defend their notion of an eternal, conscious Creator God? No such reason exists. They just assume it. They are claiming that a universe cannot exist without a Creator. Yet evolution provides an alternative and infinitely more convincing scenario of a universe that makes itself out of its own raw ingredients.

The principle of sufficient reason states that the universe must be self-contained; it must contain all there is. This follows simply from the definition of “universe” – everything that exists. If we entertain the notion that the universe was created from nothing then there was no sufficient reason for its existence: why didn’t it remain as nothing forever? Abrahamists might argue that the sufficient reason was their God. But, in that case, what sufficient reason compelled God to make the universe, (assuming that making a universe from nothing was technically possible)? By definition, God cannot be compelled. In the Creationist scenario, the universe is never anything

more than an arbitrary entity, a whim on God's part, that need never have been. There's no sufficient reason for its existence in this view. It could easily have remained uncreated. Mere caprice or randomness is not a sufficient reason.

And even if we granted the existence of a Creator God, we would then be faced with the challenge of providing the sufficient reason for *his* existence. Why must such a creature exist, entirely alone, with all of the improbable attributes commonly assigned to him: omniscience, omnipotence, immortality, moral perfection, impossibility of error and so forth? What sufficient reason prevents other Gods from existing, or prevents this God from having different properties than those imputed to him? The logical problems multiply endlessly.

The universe can come about in only ONE way. By definition, there is only ONE scenario and one universe that is compatible with the principle of sufficient reason. All of the sufficient reasons for every conceivable thing that can ever happen in the universe must be present from the beginning in the fundamental constituents of the universe since they can't magically appear out of thin air later on.

There must be a sufficient reason for existence itself, and there must be a sufficient reason why the universe has unfolded as it has. Nothing ever happens arbitrarily. There are no "magical" forces.

The universe cannot be configured in any other way than mathematically. All rival scenarios are full of arbitrary assumptions and "magic" ingredients.

The principle of sufficient reason can be recast to accommodate Nobel Prize winner Murray Gell Mann's observation, "Anything not forbidden is compulsory." The new version is this: anything for which there is no sufficient reason to prevent it, *must* happen, providing there is a sufficient reason for it. This is the driver of the universe. This automatically leads to a dynamic universe which explores all possible options for which there is a sufficient reason. Anything that can happen will happen. That is the law of existence. It goes hand in hand with teleology. The universe will explore everything until it arrives at its omega point, the actualisation of all of the universe's potential, the state at which it has become perfect. It will keep going until it has become God! And exactly the same is true for each and every one of us.

### Endings

Human beings are hard-wired for endings. There are very few stories that don't have proper endings, and those that terminate abruptly often provoke outrage. They are simply not satisfying. Why are we so fixated on endings? It's because it's only with the ending that there comes any possibility of final understanding. Until the end comes, everything is provisional. Indeed the ending could change everything that we had hitherto believed beforehand, as in a "twist" ending, which reshapes the narrative at the last moment.

Imagine that the Second Coming – the end of the Christian story – took place, and Jesus Christ finally admitted that he was actually the Antichrist. Only then would the diabolical nature of Christianity be exposed and its believers forced to confront the reality that they were Devil worshippers rather than people on the side of good. That ending would change everything that had gone before.

The ending defines *everything*.

The meaning of the universe is provided only at its end. That end can be only one thing – the attainment of perfection, and the decision to start again, to give birth to a new universe, and new possibilities. The divine suicide is the end of one cycle and the beginning of a new one.

Humanity is always striving for the end – for perfection. What pleases us most? The story with the perfect ending.

"And they all lived happily ever after."

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Scientists don't believe in the Immaculate Conception but rather the immaculate perception: the idea that our senses are infallible and provide our route to absolute truth. For scientists, reason is viewed with suspicion. A perfect theory is regarded as metaphysical and speculative until perceptions (observations/ measurements based on observations) have vindicated it. Yet who in their right mind would trust the senses over reason?

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Antiparticles are represented, in theory at least, as ordinary matter with negative energy, travelling back in time. However, they can be reinterpreted as ordinary matter with positive energy going forward in time, but with the opposite charge to their matter counterpart. A positron is the antimatter equivalent of an electron except it has a positive rather than negative charge. If a positron meets an electron, they annihilate each other.

It's clear that an enormous amount of work remains to be done in respect of the relationships between real (matter) and "negative real" (antimatter) particles, between imaginary (time), and negative imaginary (anti-time) particles.

Moreover, if an electron with negative energy going back in time is functionally equivalent to a positively charged electron (positron) with positive energy going forward in time then we can start to wonder about the relationship of charge to the sign of energy (positive or negative) and time (backwards or forwards).

People talk about "charge" as if they know what it is. But what, fundamentally, *is* charge? At some much deeper level, is an atom with a positively charged nucleus and negatively charged electron cloud actually an astonishing balancing act between positive and negative real energy (matter/antimatter energy) and positive and negative imaginary energy (time/antitime energy)? Perhaps, if viewed from the right perspective, ALL atoms have a total energy of ZERO in terms of matter and time. From our perspective in space and time, we see atoms as having positive energy (mass) and being in time, but from the point of view of something not inside space and time (a mind), perhaps atoms are not seen as entities in space and time at all.

A new science is needed, one that asks the question of what an atom is when viewed from different perspectives, and most especially from the perspective outside space and time.

Another key question is what happens as the speed of the atom increases, and Einsteinian relativistic effects become more and more important. If an atom could be accelerated to light speed, it would join the photonic domain outside space and time! How is that possible? What does it say about the electrons, protons, neutrons and quarks in the atom? Are they all converted into photons?

Consider a black hole – all particles are squashed down into a dimensionless singularity outside space and time. Consider the Big Bang where the black hole process takes place in reverse and endless particles flood out of a dimensionless point. The current scientific paradigm collapses at singularities, yet these are the most vital entities of all. They define everything else.

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"The greatest unsolved problem in quantum theory is: What is a measurement? What is there about an 'observation' that enables it to turn a wavelike possibility into a particlelike actuality? After more than half a century of speculation we simply do not have a good answer to this fundamental question." – Nick Herbert, *Faster than Light*.

If there is such a thing as objective reality – if the *Reality Principle* is our surest keystone – we can be certain that the world is not waiting on any observer to perform a measurement. In

Illuminism, there is no mystery about measurement. The universe is in a perpetual process of actualising “now” – reality itself – from the myriad possibilities available immediately ahead of “now” (i.e. “now” plus an infinitesimal period). These endless possibilities are continually collapsing into “those things which were selected/actualised” and continually reforming to provide a new set of possibilities from which new selections will be made ... and so on forever.

The idea that the universe goes into some bizarre suspended animation of possibilities until a measurement is explicitly made is the uttermost nonsense. Rather, the universe is continually measuring – actualising itself – with every passing instant. (The modern notion of quantum “decoherence” is starting to reflect the right sort of idea.)

The cat in Schrodinger’s box is never in any twilight state. The most interesting thing about that thought experiment is what it reveals about the philosophical illiteracy of scientists. They are willing to destroy the reality principle in order to defend the primacy of empirical observations. They are willing to go back to Bishop Berkeley’s assertion that to be is to be perceived. But Berkeley was a fanatical idealist – the most extreme ever – who didn’t believe in a material world at all. When scientific materialists start endorsing key statements of idealism you know something has gone horribly wrong with their entire paradigm. To put it bluntly, it has collapsed.

When a paradigm falls, science must enter a new phase of “revolutionary science”, to use Thomas Kuhn’s term. The prevailing establishment must be overthrown if new ideas are to flourish.

Let the revolution begin!

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“A laser is an extremely intense source of light, which operates on the principle of ‘stimulated emission’, an effect discovered by Einstein in 1917. When a photon enters a material full of excited atoms, such as an electrified gas, the photon’s presence causes the atoms to want to emit light (stimulated emission) more intensely than they normally do (spontaneous emission). Unlike spontaneous light, which goes off in random directions with random polarization, stimulated light is emitted in the precise direction of the trigger photon and possesses exactly the same polarization. Stimulated emission is a kind of photon-cloning process. These cloned photons in turn produce copies of themselves, causing an increasingly strong beam of identical photons to build up. In a laser, a pair of parallel mirrors reflects this amplified light back and forth through the excited gas. The repeated passage of identical photons through the gas takes further advantage of the medium’s tendency to sprout identical photons in the presence trigger light. This photon-cloning process is responsible for the high degree of spectral purity, the precise directionality, and the high intensity of the laser light source.” – Nick Herbert, *Faster than Light*

Photons are of course bosons, hence why they can all occupy the same state in a laser beam.

It’s valuable to think of human beings in terms of lasers and photons, bosons and fermions. Mohammed was a “laser” prophet. He was the trigger “photon” that stimulated other “photons” into occupying the same estate. Soon, he had created an extremely intense, focused beam – Islam – ready to cut its way through the world.

Muslims are bosons. They can all occupy the same state. The same is true of Jews and Christians. These people are all “tradition-directed”, bound by the past.

With “other-directed” people, the trigger photon is a celebrity or fashion icon. Immediately, all of the other-directed photons feel compelled to enter the same state (i.e. to copy them).

“Inner-directed” and “autonomous” people are like fermions. No two fermions can enter

the same state. They are unique individuals whereas the bosonic tradition- and other-directed people are like clones. They're not truly individual. They are part of the collective, like the Borg from *Star Trek*.

Aren't Muslims identical to the Borg? "Resistance is futile. Assimilate or die." If the Borg had a God, it would be Allah, and they would all engage in synchronised bowing, just like real Muslims. For no other reason than the absolute offensiveness of the collective obsequiousness of Muslims at prayer, no *individual* could ever tolerate being a Muslim.

Beware of "laser" prophets. Beware of laser politicians, laser celebrities, laser fashionistas.

### Grand Unified Theory

Any plausible Grand Unified Theory of Everything must define what the fundamental constituents of existence are and must rationally show how the universe is born and constructed from these, and where consciousness originates within this scheme. Illuminism does precisely this.

Illuminism is based on Pythagorean and Platonic eternal, static truths, coupled to the dialectical, dynamic truths of Heraclitus and Hegel, and laid over a complete and perfect mathematical system devised by Leibniz that resolved the problems inherent in Cartesian dualism and showed exactly how mind and matter interact.

Scientists talk of four fundamental forces that were once all unified at the beginning of the Big Bang but separated out as the universe expanded and cooled down. The four forces are the strong and weak nuclear forces, electromagnetism and gravity. It's useful to think of a fifth and final force being added to these four – *mind*. The strong and weak nuclear forces are concerned with the binding of the atomic nucleus, the electromagnetic force with the binding of atoms, gravity with the binding of large, separated aggregations of atoms. In these four forces, there is another unseen ingredient at play: the unconscious mind binding with matter. This force is an evolutionary force that achieves its fullest expression in consciousness – the means whereby the mind explicitly makes matter do its bidding. At the maximum expression of consciousness – "God consciousness" – the mind enjoys complete control over matter.

"Mind" really means the unconscious. Consciousness might usefully be called "supermind".

"If the Universe is a product of mind ... then it will ultimately illustrate mind's axiom." – J. W. Dunne

Consciousness is the ultimate illustration of mind's axiom. With consciousness, mind becomes supermind. The universe's purpose is to travel from unconscious mind to conscious supermind, and it is this supermind that then determines the universe's fate.

In *The Matrix* trilogy, the hero, Neo, becomes the supermind deciding the fate of the world. Ultimately, all worlds (and finally the universe itself) are subject to the will of superminds.

## The Holographic Universe

A hologram is created from the interference of a beam of laser light (the object beam) reflected off an object, with another laser beam (the reference beam) that never "sees" the object. We can think of the material universe as being formed from an interference pattern (a cosmic wavefunction) of countless mind "beams". At every instant, this wavefunction is collapsing and reforming in seamless succession and what it is creating in this infinite series is the material

universe, experienced as “now” (the endlessly advancing point of wavefunction collapse; the wavefunction is perpetually reforming even as it collapses). The physical universe is thus the dynamic crystallisation of an ever-changing mental hologram. In this sense, we live inside a dynamic hologram!

In a regular photograph, there is no reference beam, hence no interference pattern. A hologram is all about interference. Its most astonishing feature is that the whole object is contained in each of its parts, seen from each part’s unique perspective. Imagine blacking out a window apart from a small square. If you look through this small square, you will see the view normally afforded by the window. Now move the small square around the window. You will continue to see the usual view, but from a slightly different angle each time. A fragmented hologram works in much the same way.

Holographic theory, when applied to Leibniz’s monadic conception of mind, suggests that each of us has access to the whole universe – hence, truly, each of us can become God because we can gain knowledge of the whole universe from our particular perspective.

If each individual “divine monad” (i.e. one that has achieved gnosis and become God) is guided by objective reason, it will be extremely similar to all other divine monads also ruled by reason. So, in a sense, all of the disparate monads come together to create a single, supreme rational God – Abraxas, as he was called by the ancient Illuminati, or the Absolute as Hegel called him in more recent times. God is both one and many and there is no contradiction in this.

What allows Abraxas to act as one despite being composed of many is the fact that reason unites all things. Whereas Will divides all creatures, Reason unifies them. There are infinite Wilful ways of doing things but there are few rational ways, and when reason is perfect – as it is with God – then there is only ONE way. If many pursue a single path then they are as one.

In the human body, the whole is contained in each part (i.e. each cell with its full copy of the DNA code that defines us). Why shouldn’t it be the same for the universe? The whole is contained in each mental cell (each monad, which comes with a complete set of mathematical instructions for understanding the world).

Just as the DNA in each cell has no conscious idea of what it is, what it does and what it gives rise to, the same is true of monads. They start with all of the correct information, but absolutely no consciousness of that information. By the end of a monad’s cosmic journey to divinity, it has attained conscious knowledge of all the information with which it began.

In the so-called “phantom leaf effect” associated with Kirlian photography, even when part of a leaf is cut off, it continues to be visible, albeit attenuated. When human beings have limbs amputated, many continue to experience a “phantom limb effect” as though the limb is still there.

In homoeopathy, it seems that the active ingredient is still present in some sense even when it has technically been diluted out of the solution. It’s as if there’s a “phantom active ingredient effect”.

German embryologist Hans Driesch observed that when part of an embryo is removed, the remainder is usually able to generate a normal adult organism i.e. it can replace what was taken away. He took this as evidence that living systems cannot be regarded as mechanisms since no machine can function if critical parts have been removed, and can’t replace them by itself. He claimed that the embryo’s form is somehow encoded throughout it. The whole can be constructed from any part. He used the old Aristotelian term “entelechy” to describe this situation. It denotes a vital principle present in living organisms but not in machines that allows them to achieve an inbuilt goal or end. They are subject to an inherent formative principle that is determined to actualize itself and cannot be physically removed (implying that is mental).

Some people can continue to function normally even with huge amounts of brain material

missing.

Memory is often thought to be distributed in a holographic way and, in experiments on rats, it has proved remarkably difficult to destroy the memory of tasks the rats have been trained to perform, even when all of the brain is removed bar the survival functions. So where is the memory actually stored?

These phantom effects are reminiscent of the famous Cheshire cat of *Alice in Wonderland*. Even when it has gone, its grin remains.

In fiction, there's a concept known as the "absent presence". A character that might never "physically" appear in the book can dominate the whole thing. In Daphne du Maurier's *Rebecca*, a dead character is the dominant figure, and the name of the living heroine is never revealed (thus showing how overshadowed she is by Rebecca, the "ghost of Manderley"; Manderley being the luxury mansion in which the novel is set).

In the paradox of Schrödinger's cat, states that never actually happen are nevertheless said to define the cat's wavefunction.

In all of these cases, we see that "phantom effects" are defiantly present in nature. They are inexplicable in terms of conventional physical theory, but they can all be understood as mental, informational phenomena.

We can draw a clear distinction between living organisms and machines. Living organisms are holistic while machines are reductive. Somehow, all of life is encoded throughout life, while all of a machine is not encoded throughout a machine. Each part is distinct and tells us nothing about the whole. In living organisms, every part is interconnected: no part is distinct and independent.

Life obeys a holographic principle – the whole is in each part. Machines obey no such principle. In terms of artificial intelligences, this holographic principle would need to be reflected in any artificial intelligence that sought to emulate a human being.

Mind is inherently holographic while matter is disconnected and disparate. The more we emphasize something's material aspect, the more we reduce it to the sort of reductive machine beloved of scientific materialists. The more we emphasize its mental aspect, the more we highlight its interconnectedness – to the horror of scientific materialists.

Quantum mechanics is so profoundly shocking and incomprehensible to scientists because it is actually a mental phenomenon. Quantum mechanics would be considered as ridiculous as homoeopathy if it weren't underpinned by the magic of mathematics. Homoeopathy has no mathematics formally associated with it, so is regarded as voodoo mumbo jumbo and mere placebo effect. Yet what is the placebo effect if not an amazing mental phenomenon that gives us power over matter through thought and belief alone? Is the placebo effect a holographic phenomenon? – it improves our whole being across every part of us. It therefore enjoys an enormous "multiplier effect". Any information that appears in one place is instantly transmitted to the whole. This never happens with machines.

Isn't it time we started applying holographic Fourier mathematics to phenomena such as homoeopathy and made them "respectable" at long last? Interference patterns allow information to be distributed rather than localised, and the destruction of a local feature does NOT eliminate all trace of it from the interference pattern. Nothing is truly lost when the holographic principle applies. It just becomes dimmer and fuzzier. It loses sharpness and definition, but it's still there, albeit attenuated.

As Above, So Below

In his book *Cosmic Superimposition*, Wilhelm Reich drew attention to the remarkable similarity between the structure of a hurricane and that of a spiral galaxy. The eye of a hurricane

is a calm place. What about the eye of a spiral galaxy? Is it the perfect place for a supermassive black hole?

Physicists have discovered that the structure of the brain, in terms of how the brain's neurons interconnect, is remarkably similar to that of the entire universe in terms of galaxies and stars.

There is no reason why the microcosm should do anything other than reflect the macrocosm. The laws of mathematics are the same at all scales. Think of a fractal. No matter at what scale you study it, the pattern is the same.

What is truly wonderful about "above" being the same as "below" is that we can determine the laws of the universe simply by studying our planet, our solar system and ourselves. Know all of that in detail and you know everything about the entire universe.

We can never grasp the whole universe per se – it's infinitely large – but nevertheless we can fully understand it because it's the same pattern repeated over and over again, like the fractal example. Once you've established the basic pattern, you know how the whole thing operates, no matter how large.

Mathematics doesn't suddenly change when it reaches a certain point. There are no such things as "big" mathematics and "small" mathematics. Quantum mechanics is often presented as if it were radically different from the classical world, but it's not. The difference, such as it is, is not between the small and the large, but between particles being treated in isolation or as part of vast assemblies (trillions upon trillions) of particles. Again, the same mathematical laws apply, but the statistics of enormous collections are, by definition, far more consistent, with all idiosyncrasies being smoothed out.

Think of a person tossing a coin. He will get either a head or a tail. It will be 100% of one or the other. Yet if a million people toss a coin, they'll produce, more or less, 500,000 heads and 500,000 tails. We clearly see that there's a 50-50 chance of getting a head or a tail. So, with a million coin tosses we get an exact balance between heads and tails. With one coin toss we get 100% of one and zero of the other i.e. complete imbalance. That's how the world works. Individual instances can produce very odd behaviour – it's statistically guaranteed – but an enormous collection of instances will smooth out all of the oddities. The "classical" world is merely the world where all of the quantum oddities are converted into something sensible and predictable. All of the oddities are still there, but none can make a radical difference.

In terms of the "wisdom of crowds", when people are asked to guess the number of small coins in a large jar, or the weight of a large cake, there is an extremely wide range of guesses. Many of them are preposterous, but when the average of all the guesses is taken, the "crowd" usually gets the answer spot on. Each individual guess resembles the quantum view, while the crowd view resembles the classical view.

#### Photons, Gluons, Gravitons, Z and W Bosons

Bosons are force-carrying particles. In many ways, they are extremely mysterious. Scientists are perfectly willing to contemplate massless, dimensionless "gluons" that bind an atomic nucleus but they won't contemplate a massless, dimensionless "soul" that binds ALL of the atoms of a human being and turns it into an individual living creature with a unique identity. Gluons are deemed fine because – although they are downright strange and cannot be directly observed – they fit into a nice theory (the "standard model" of particle physics). "Souls" don't fit into the standard model, so are ignored. Of course, mind and life don't fit into the standard model either but we nevertheless all believe we have minds and are alive!

Time Flow

Why does time *flow*? In general relativity, there's nothing that suggests it should. Time was in a sense removed by making it a special kind of space.

Philosopher Thomas Hobbes reduced everything to motion and matter. Leibniz reduced it all to motion and mind.

*Duration* is defined as the inner, subjective experience of time. Duration is irregular, psychological time flow.

Clock time is the outer, objective experience of time. It is regular, even, steady, reliable and predictable.

In fact, time does not flow, and time is indeed a special type of space: IMAGINARY SPACE, based on imaginary numbers.

Motion is something different from space and time. Motion is an intrinsic quality of all things, and we can in fact directly equate energy and motion. Energetic things *move*. They are permanently in *motion*. All energetic systems are perpetual motion machines. Energy itself just IS perpetual motion. And given that everything in the universe is energy then everything is in perpetual motion.

Motion can be divided into two categories:

Motion in the dimensionless domain – which is THINKING!

Motion in the dimensional domain – which is the physical motion studied by science.

Next, motion can take place in two complementary ways:

Motion through SPACE (based on real numbers). This space can be dimensionless or dimensional.

Motion through IMAGINARY SPACE (based on imaginary numbers). This imaginary space is also dimensionless or dimensional.

When people talk of the “flow of time”, what they really mean is the movement of energy through imaginary space.

Movement, being energy, is always conserved. If something is not moving through space, it will be moving through time. In our world, movement through time is the default mode. We have to put effort into moving through space, and, as we do so, we reduce our speed through time.

For photons, their mode of motion is purely through space and, from their perspective, they have no movement through time at all. From *our* point of view – in time – we *do* talk of photons moving from *here* to *there* in a certain time. If we could talk to a photon about time, it would have no idea of the concept to which we were referring since it doesn't encounter it at all.

This is a key point. Because we are IN time, we have to interpret everything as being in time. We have to give everything temporal characteristics. We even have to give them to photons even though they are not in time at all. It's as if we are wearing special Kantian spectacles that impose a time framework on everything, including those things that are formally *outside* time. Is that not remarkable?

Our understanding of photons is entirely different from photons' understanding of themselves. Our experience of photons and the world is entirely different from photons' experience of the world and us. It's as if photons are wearing Kantian spectacles that REMOVE all time information. Moreover, because photons are ipso facto everywhere at once, they experience the distance between all things as ZERO. In other words, all of the photons in existence belong to a PHOTONIC SINGULARITY – they are all occupying the same state. Massless and dimensionless, we might fancifully think of them as all heaped one on top of another (without taking up any space at all).

We can equally think of all souls occupying a singularity – the SOUL SINGULARITY.

Why is it that scientists never explore the incredible domain of photons, and never

consider the photon's-eye view of the world? Is it because they might then start to contemplate the massless, dimensionless soul and compare and contrast it with the photon?!!!

## The Dream Mind

It is sometimes said that there are dreams that don't enter consciousness. But how could such a thing be called a dream if it didn't? We wouldn't know anything about it. We wouldn't know it was a dream. It's certainly true that most dreams aren't consciously remembered, but that's because of the problem of how memory and dreams interact. If our mechanisms for laying down conscious memories are typically suspended during dreams, it's no wonder we struggle to remember them. (If we DID have perfect recall of our dreams, how would we be able to distinguish between waking memories and dream memories? – the two would become catastrophically fused and we would think our fantasies had actually happened.)

A potent suggestion is that in dreams our Jungian ego and shadow try to integrate. We might go further and say that our Jungian ego and Self attempt to bridge the gap between them.

Jung said, "In physics, we speak of energy and its various manifestations, such as electricity, light, heat etc. The situation in psychology is precisely the same. Here, too, we are dealing primarily with energy ... with measures of intensity, with greater or lesser quantities. It can appear in various guises ... As I worked with my fantasies, I became aware that the unconscious undergoes or produces change. Only after I had familiarized myself with alchemy did I realize that the unconscious is a process, and that the psyche is transformed or developed by the relationship of the ego to the contents of the unconscious. In individual cases, that transformation can be read from dreams and fantasies. In collective life it has left its deposit principally in the various religious systems and their changing symbols."

In Jung's view, there is a collective unconscious – a universal mind, we might say, or a *species unconscious* – from which all individual conscious minds (egos) emerge. Each ego remains connected to the species unconscious, and through that – at a profound level – all human minds are connected.

We thus all have an individual psyche, and we all share a collective psyche, exactly as ancient Neoplatonism contended. Theoretically, we could all have psychic powers and be able to read each other's minds. Perhaps psychic abilities were once reasonably common amongst humanity but were deemed "demonic" by the majority that didn't possess them. Perhaps the psychic individuals were then killed off, but left a few "psychic genes" in the gene pool, which occasionally surface in the case of authentically gifted psychics (rather than mere charlatans).

The Neoplatonic-Jungian depiction of the psyche is holographic. The whole is contained in each part, and each part is in the whole.

What must be consistently emphasized is that the unconscious mind *thinks*. Not in the same way as the conscious mind, to be sure, but it thinks all the same. A sleepwalker is an example of an autopilot unconscious mind in operation, thinking its way through quite complex problems, without any conscious direction.

The Freudian superego and id can be considered as thinking elements, offering their "thoughts" to the ego, which must mediate between them.

The unconscious mind thinks in images and symbols, and invokes instinct and intuition. It does not follow any conscious path of reason and logic. It is not constrained by space and time. The written word is almost wholly absent from the unconscious, and also from dream consciousness. In a dream, no one spends any time reading. If, in a dream, you catch a glimpse of a newspaper or book, you will almost certainly find yourself unable to read it. A word or two will

be all you will get at best. (Because the brain would have to go to a lot of trouble to construct content for books – if it could do this, we could literally write books in our sleep!) Equally, no one does complex mathematics or science in their dreams. They might experience inspired intuitions that help them to solve complex problems, but they will have to do the spadework themselves. Equations don't write themselves in dreams. Nothing complex happens in the dreamscape. It's nearly all emotional and wilful.

The written word is closely associated with consciousness, as are complex mathematical and scientific operations. Reason and logic are the essence of true consciousness. Much of what *passes* as consciousness is really just “narratised sentience” i.e. a lower type of consciousness intermediate between the “consciousness” of an animal and that of a rational human being.

The left hemisphere (consciousness) is dominant when we are awake and mostly generates its own activity, with some input from the unconscious. The right hemisphere (the unconscious) is dominant during sleep and generates the material which dream consciousness experiences. During waking hours, consciousness is active and the unconscious somewhat passive; during sleep, it's the other way around.

Consciousness, exactly like wavefunction collapse, only occurs “now”. We cannot experience “future consciousness” nor “past consciousness” (except, perhaps, as a memory summoned into the present). Consciousness is always in the now, in the present moment. Consciousness is none other than the collapse of our own mental wavefunction that we ourselves initiate. Consciousness, like the Heisenberg uncertainty principle and time itself, is irreversible. It can never go back. We can *never* recover our conscious state of even a second ago. Our memories of conscious states never have exactly the same qualities as the conscious states themselves. Memories are not replays, and can in fact be manipulated, restructured and even invented (false memory syndrome).

## **The Binary Brain**

The binary system consists of only two numbers: 1 and 0. A binary system can be replicated by a computer system of switches that are either on (1) or off (0), allowing current to flow, or not, as the case may be. Neurons in the brain either fire or they don't, hence also constitute a binary system. Leibniz was one of the pivotal figures in the development of the binary system.

If we think of “being” as 1 and “nothingness” as 0 then the flow of energy through a cosmic system of binary switches can be thought of as “becoming”: the Hegelian synthesis of being and nothingness. If every switch is turned off, nothing happens in the universe. If every switch is on, energy is flowing everywhere and there is no discrimination.

The universe *needs* zero and one, just as it needs all binary systems: love and hate, good and evil, yes and no, yin and yang and so on. The universe operates according to dialectic progression of binary opposites.

## **The Right Voices**

The ancient Greeks were once a right-brain culture – hence the reverence shown towards the Delphic Oracle, an archetypally bicameral phenomenon. The rise of philosophy in the sixth century introduced the gifts of the left brain to the world. Sadly, most of the world remained in the grip of right brain bicameralism. Judaism, Christianity and Islam are entirely bicameral. They

are all about prophets hearing voices.

Many advocates of “New Age” philosophy promote an irrationalist bicameral tendency.

The Illuminati are firm proponents of left brain dominance, while seeking innovative ways to increase left brain/right brain interactivity and optimization. We do not endorse any return to right brain bicameral dominance – that’s the whole problem with our world. But we do want to unlock the secrets of the right brain.

## **Group Unconsciousness**

According to Jung, we have a personal unconscious, below which is a collective unconscious for the whole of humanity. But can we imagine “group unconsciousnesses” located between the personal unconscious and the collective unconscious – unconscious groupthink, so to speak? It’s easy to imagine Muslims having a group unconscious, and Jews and Christians for that matter. Members of political parties, members of secret societies, employees of companies – they may all have a group unconscious. They tune into each other unconsciously. They are on the same wavelength. The “Mob Mentality” – is that not when the group unconscious takes over?

Groups of young women often synchronise their periods – sign of a group unconsciousness? Friends may develop a group unconscious. Lovers are highly likely to synchronise their unconscious elements. Identical twins are of course those most likely to have a shared unconscious.

If humanity has a collective unconscious, why shouldn’t every other species, and why shouldn’t the whole universe? Rupert Sheldrake’s hypothesis of morphic resonance would most logically operate via the collective unconscious.

The human mind is programmed to find meaning. Even when we look at random clouds, we start forming them into recognizable shapes. We try to organize and shape everything that enters our experience. We can’t help ourselves, and it would be very odd if we didn’t. If we could happily settle for meaninglessness, for chaos, for patternless things, how could we ever make any progress in life?

Yet if our conscious minds are attuned to meaning and pattern, why shouldn’t the same be true for the unconscious and the collective unconscious? And that means, by inference, that the whole universe is programmed to find meaning and pattern – impossible according to scientific materialism.

Jung coined the term *synchronicity* to describe the phenomenon of meaningful coincidence. Scientific materialism can offer no explanation for synchronicity and dismisses it as pure, random coincidence, but it’s something that would happen naturally in a universe actively looking for meaning and patterns.

Jung emphasized the acausality of synchronicity, but in fact synchronicity must be entirely *causal*. Whenever the universe gets the opportunity, it maximizes meaning. It collapses the wavefunction to ensure optimisation of meaning. That’s one of the core processes of the universe. At all times, it is engaged in pattern recognition. Evolution is massively accelerated by the inherent search for pattern, meaning, form, complexity.

## **The Unity of Consciousness**

The easiest way to explain why we have a sense of self is simply to invoke a soul. The concept of an imperishable, immortal, unique source and centre of individual experience provides

the most natural account of selfhood. Everything, in the end, comes back to the soul, even if that route may be considerably more convoluted than most people believe.

If no soul is invoked, where does our sense of self come from? If we have a conscious “I” and an unconscious “I” (and even several levels of unconscious “I”), an id, a persona, a superego, a thinking self, a sensing self, a feeling self, an intuitive self, an extravert self, an introvert self, an inner-directed self, an other-directed self, a tradition-directed self, a religious self, a secular self, a self informed by an anima/animus, shadow and mana personalities – how does this all come together as a single, reasonably coherent self? Bear in mind that according to scientific materialism there is nothing going on in our brains other than the firing of neurons. How does neuronal firing across countless neurons create a self?

Why do we even need to be “selves” in the scientific view? Why can’t we just be zombies, or machines that calculate the best response to whatever situation we are in? Why do people have “sacred values” and core beliefs – especially if these can produce non-optimal ways of responding in certain situations (wouldn’t it be better to ditch a core belief if by defending it you get yourself killed by those with different core beliefs)?

How do mere bundles of experience – as David Hume characterised the human condition – generate an “I” if there is in fact no intrinsic “I” there? There is no sufficient reason for such an improbable phenomenon. How, in the scientific view, is the *illusion* of self created? What does this illusion have to do with the endless and unbreakable chain of cause and effect of the interactions of lifeless, mindless and selfless atoms? Why is any illusion necessary and how does it come about?

Science can offer no account at all, yet it demands that we reject the “soul” as unscientific while putting nothing at all in its place.

### Complex Brains

Intelligent people have more complex brains than stupid people. The more you learn, the more connections are created in your brain. The more complex your brain is, the better able it is to learn new things. Just as “money goes to money”, so do “brains go to brains”. Smarter people keep getting smarter. The gulf between them and the stupid keeps growing.

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When we are conscious, our dominant Jungian functions hold sway. When we dream, our inferior functions take over. That is, if we are thinking and intuitive during the day, we will become feeling and sensing in our dreams. Our “other side” is explored, our shadow. If we are strongly rational during the day, we may experience exaggerated emotionalism in our dreams. A profoundly feeling person, on the other hand, may be more rational in their dreams than they are normally.

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If language is strongly associated with consciousness then the more fluent you are in language, the more conscious you are. People with poor vocabulary and grammar are literally less conscious. Such people cannot create properly formed thoughts. They can’t construct logical statements. They are ipso facto highly animalistic. The less skilled you are with language, the more you resemble a beast of the field. That’s a fact.

To become more conscious, we all have to become better at language, including better at languages such as mathematics, science and logic. The more you think clearly, the clearer your thinking becomes and the smarter you become. The State must be absolutely committed to providing an education system that optimises language fluency in every person. Illiteracy and

innumeracy are simply unacceptable.

### Closure

The brain-mind complex is wholly concerned with taking decisions. This has radical implications for the way the brain-mind complex works. It means, above all, that the complex hates ambiguity. It wants closure. Why? Because ambiguity represents conflicting information or a lack of information, hence makes decision making much harder.

Closure – the assignment of a definite meaning and significance to something – allows rapid decision-making. However, it also plays into the hands of prejudice, bigotry, knee-jerk reactions, illusion, self-delusion, optical illusion. We don't "see" the world, we interpret it. We seek closure as rapidly as possible to seal the deal of our interpretation and allow us to make our decision. Speed, not accuracy, is most important. The world doesn't wait for those suffering from "analysis paralysis". We frequently get things wrong because of the need for speed, and we are reluctant to admit our errors, which would bring our judgment into question.

In fact, our minds aren't just interpreters, they're also *misinterpreters*. In some people, the misinterpretations massively outweigh the valid interpretations. Just as we have no "organ of truth", we have no organ of accuracy and no organ of correct interpretation. Just think of magic and showmanship – the performers do nothing but exploit our ability to be misdirected, to see things that aren't there, to misinterpret sensory cues. And we keep falling for it.

Most of the assumptions that most people rely on are actually false. But if your rivals are as misguided and wrong as you are then it doesn't really matter! What does matter is when one group becomes phenomenally accurate and starts evolving into a species of Gods, with whom no one else can compete.

It's time for the Logos species to break away from the Mythos masses and become the Gods they are capable of being.

### Objectivity versus Subjectivity

In epistemology and metaphysics, "primary" qualities are properties of objects that are independent of observers. They are such things as solidity, extension, motion, number and figure. They are concerned with objective facts. They belong to the thing itself and can be determined with certainty. They do not rely on subjective judgments.

Secondary qualities are those that produce sensations in observers. They are such things as colour, taste, smell, and sound. They are not so much in the thing itself as in the observer. They do not provide objective facts about things.

Primary qualities are taken to be measurable, objective aspects of physical reality while secondary qualities are subjective.

The Atomist Democritus showed his appreciation of the problem when he said, "By convention there are sweet and bitter, hot and cold, by convention there is colour; but in truth there are atoms and the void." In other words, objective reality consists of atoms and void alone, and subjective reality is all about the senses.

Galileo addressed the problem even more directly when he said, "I think that tastes, odours, colours, and so on are no more than mere names so far as the objects in which we locate them are concerned, and that they reside only in consciousness. If living creatures were removed, all these qualities would be wiped out and annihilated."

Newton tackled the notorious problem of colour: "For the rays, to speak properly, are not coloured. In them there is nothing else than a certain power and disposition to stir up a sensation of this or that colour."

Once again, we see that there is no colour at all in the universe. Colour exists purely in

our consciousness. Think of what that means. If there were no observers with eyes and sentience, the universe would be INVISIBLE. In fact, it would be completely black.

Bishop Berkeley was aware of this when he adopted the position that the ideas created by sensations are all that people can know for sure. “Reality” is merely that which is perceived, and consists only of ideas in the mind. Without secondary qualities, is an object comprehensible to us or does it vanish into darkness and invisibility? Try to imagine a world without colour, without responsiveness to light, without smell, taste, sound and which produces no tactile sensations. What’s left? Can we give any content to anything without light and touch and sound, taste and smell? Without sensory data, the universe becomes contentless. It’s impossible to give any form to it. It exists purely as a mathematical object for rational, non-sensory contemplation.

You can grasp the mathematical nature of existence only when you imagine the Big Bang in the absence of any colour, smell, taste, sound or texture. There was no *son et lumière*. Nothing banged. There was no explosion, no fire, no sound, no light – because there were no sensory entities to give meaning and significance to any signals generated by the Big Bang. The whole thing took place soundlessly in complete darkness. It was just the unfolding of a mathematical equation. The universe is an evolving mathematical wave.

The Big Bang ought to be renamed the Big Non-Bang!

Reflecting Reality or Constructing Reality?

Our senses absorb data from the environment, but they do not do so passively. Our sensory organs are the products of evolution and are configured to produce certain results that have proved successful in terms of natural selection. They could easily have had different configurations that would alter how we interpret the world; for example, our eyes might have evolved to see the entire electromagnetic spectrum rather than just visible light; our ears might have been able to hear ultrasounds; our smell might have been so acute we could detect scents of things miles away, and so on.

Not only are our sensory organs particular constructs configured in certain ways to filter the information we receive from the environment, but our brains then perform further processing on the information. Particular parts of our brain process visual information, or auditory, or smell, taste or touch. Once all of this processing is complete, we project the filtered and processed information back out into the external world, and it’s this altered reality then we then take to be reality itself. This cannot be stressed enough. We absolutely *never* see the “real” world, the raw, unprocessed world, the noumenal world, the world as it is in itself. It is impossible for us to see *true* reality. We only ever see our interpretation of reality, our processed construct, our *version*.

This fact has allowed some philosophers, such as Bishop Berkeley, to argue that there is no external world at all, and we simply construct a reality that has no relationship at all with anything outside and beyond us: in fact, there is nothing outside and beyond us in this view of “reality”. We are all the subjects of a fantastically powerful illusion. Although we are absolutely convinced we are seeing and hearing the world as it really is, or something very close to how it really is, there is no valid reason to imagine it is anything like how we experience it. We have evolved a way of experiencing it that is highly useful for our survival and reproduction, but there is no guarantee the world is anything like it. We unquestionably *construct* our experience of reality. The world as it is in itself could be radically different.

A camera, we imagine, takes an unbiased picture of “reality” (although any information accurately captured by a camera is then processed by our biased senses and reconstructed into the familiar way we experience things, so all of the camera’s accuracy is lost; we automatically corrupt its data with our sensory prejudices). Now imagine an intelligent camera that adjusts itself and manipulates the data to produce images that it likes and finds useful. It continually air

brushes reality, omits things it doesn't like, focuses on things of interest to it, while ignoring things to which it is indifferent, and so on. The pictures from such cameras would have no resemblance to reality, and nor do the "pictures" our brains and minds take. They are systematically and relentlessly distorted.

Why are we so prone to optical and other types of illusions? It's because our senses are making up reality as they go along, reaching false conclusions, and making bogus interpretations. Our senses do NOT reflect reality, they construct it and present it to us as if it were reality. They do it so skilfully that almost none of us seriously consider that what we take as reality is and can be nothing like that. Reality is wholly different from how we believe it to be, but we will never discover the truth while we are trapped inside human brains and minds.

We take data from the external world and then we set about filtering and processing it and presenting it in a particular way. This data manipulation is taking place inside our brain/mind complex. Once we have finished constructing the data in the desired way, we then pretend that the constructed data is the same as the original data, so we fool ourselves into thinking that we have done no processing at all and that we are merely reflecting, with complete accuracy, the data pertaining to the external world. It's a stunning, fabulous and ingenious trick.

If we look at a mountain, its image is brought (inverted thanks to the way the lenses of our eyes work) inside our head where it is suitably processed, but at no stage do we become aware of any internal processing, of anything going on inside our head. At all times, we imagine we are objectively looking at an objective, real mountain that is exactly as it appear to us. But that image is actually inside our head and we only imagine (and believe) that it is outside. At no time at all is it anywhere other than inside our cranium, and at no time is it anything other than an internally constructed representation of a mountain. Through brilliant mathematics, our mind cleverly transforms and projects the image to give the illusion that it is reflecting reality.

It is vital that we have a "Reality Principle" to ground us. Imagine that we were all fully aware that we were solely experiencing "stuff" inside our heads and that, in truth, we had no sure sensory knowledge of the world at all. We would all know that there was a mysterious reality "out there", and it would fill us with dread and anxiety because absolutely anything could be going on out there and we would have no confidence that we were ready to deal with it. We would be like the prisoner's in Plato's cave who become aware that there's another, much more complex world and all they were seeing were shadows on a wall. Or imagine that because of a computer glitch that flashed up some dramatic anomaly that no one could miss, everyone in *The Matrix* became aware that they were in an artificial construct – a simulated reality – and yet they had no idea how to escape from the simulation, and no idea of what reality might be like.

It's vital that all of our experiences seem to come from *outside*, even though they are in reality all *inside* (our heads; in fact, our minds).

Dreams, we know, are entirely generated internally and yet are experienced as external happenings of the same kind as "normal" reality. Our whole experience of reality is tantamount to a dream that we don't interpret as a dream, yet it uses exactly the same mental "software" that dreams use.

Even though our eyes are closed, we see in our dreams (and the blind can regain their sight in their dreams). In other words, we make up an entire visual landscape that is an internally-generated illusion from beginning to end. Is that not both wondrous and also phenomenally alarming? It *proves* that our minds can construct wholly fake "external" realities. So why should we assume that the reality we take as real truly is?

Monads – Mind and Matter

A monad in one respect is just a dimensionless mathematical point, the fundamental unit

of an absolute Cartesian reference frame by which the whole of objective reality can be defined. Yet, by Descartes' definition of mind as unextended and dimensionless, a monad is also the fundamental unit of mind and indeed life. A monad is thus the basis of both objective and subjective reality. As a mathematical point, it is objective and, as a mind, it's subjective. Mind and matter, subjectivity and objectivity, come together in the monad – the fundamental unit of existence itself.

The monad is the answer to every problem of mathematics, science, religion, philosophy and even the paranormal. The Leibnizian Monadology explains everything. Nothing else could even begin to accomplish what the Monadology does.

Monads bring mind and matter together via their common language – mathematics. Mathematics is thus the language of existence. It is the arche sought by the ancient Greeks. As Pythagoras stated, "All things are numbers." To be more exact, all things are mathematical, mental points – monads – and from them everything else flows.

One point we must emphasize is that no one can ever have sensory experience of a monad. We can have access to the mental domain via our own minds, but the only way we can understand the mental domain and how it is configured is via reason. That's it. There's no other way. If you're not rational, you'll never comprehend the universe. Not all the faith in the universe will help you one jot. "Revelation" won't take you one step closer to the truth. Emotions won't serve you and your senses are useless. No experiment can assist you. You have entered the Logos world and only reason and logic can accompany you.

Science refuses to countenance the existence of the soul because the largest Hadron Collider ever constructed won't lead you to the soul world. No experiment can reveal it.

The soul is an object of reason. It can be understood only by reason. It is the subject of rationalist not empiricist philosophy. It is defined by mathematics. It is not a scientific entity since it is outside the material world, but it is unquestionably ontologically real and rationally coherent. It is the basis of everything. It is the foundation of existence. It is the arche.

Several other things must be understood about zero. It is ALIVE. It is what we call a mind or a soul. It experiences things. Not consciously to be sure (at least not until it evolves consciousness), but nevertheless it thinks and it seeks. What it is seeking is to convert all of its potential into maximum actualization. Perhaps no one captured its essence better than Nietzsche with his doctrine of the Will to Power: all living things seek more power. That is the fundamental principle of existence. Only when they have total power – when they are God – can they feel satisfied. But then they fall victim to ennui, to BOREDOM. The significance of boredom can never be overestimated. That which "becomes" can never "be". It can never stop. It will always change. As Heraclitus stated, "There is nothing permanent except change."

"Becoming" indicates continual motion and this is an essential principle of existence: it is *always* in motion. Motion is an inherent feature of existence. If there were no motion – no "becoming" – there would only be eternal stasis indistinguishable from perfect nothingness. Being – pure being – is death. It is the state of changelessness and that which does not change is not alive. To be alive means to change. The Catholic notion of achieving the "beatific vision" – gazing upon the perfection of God for eternity – may sound seductive at first glance (it is just the Christian version of Plato's notion of gazing at the perfect Forms forever), but it actually represents stasis and death. Think how bored you would be if you had stared at God for a trillion trillion years, with an eternity still to come. It would, paradoxically, become hell. So life does everything it can to avoid any such possibility. Reincarnation is the true principle of life. Everything reincarnates, including the universe and even God.

As for boredom, it is a critical driver of "becoming". Boredom forces us into action, and is therefore an antidote to stasis. It doesn't allow us to be complacent. Boredom *hurts*. It tells us

we have become frozen and need to do something to unfreeze ourselves.

So, zero is not anything simple. It is ontological. It is alive. It is driven. It contains eternal motion (energy *is* motion). It is teleological. It is always seeking. Power is what it lusts for. Therefore, above all things, it desires infinite power. This craving is the root of all religious beliefs. Unhealthy people alienate themselves from their own divinity by imagining an external perfect being (this is what Abrahamism and resurrection are all about); while healthy people know that they themselves can become God (this is what enlightenment and reincarnation are all about).

Most souls are deluded about the nature of existence. Why? Because they have not yet acquired reason. Only reason reveals the truth – because existence itself is fundamentally rational. The truths of existence are actually just the truths of mathematics. They are the only absolute, objective truths to which we can ever have access. Everything else is mere opinion and belongs to the subjective world. Things like faith and feelings are wholly subjective. It is wrong to pretend they have any connection with the truth.

What is Energy?

Energy is just a mathematical entity that is in motion forever. A moving point can trace out a straight line, a circle, a sine wave, a function, and so on.

A straight line with a point at infinity is functionally equivalent to a circle. A plane with a point at infinity is functionally equivalent to a sphere.

“The point at infinity, also called ideal point, of the real number line is a point which, when added to the number line yields a closed curve called the real projective line. The real projective line is not equivalent to the extended real number line, which has two different points at infinity. The point at infinity can also be added to the complex plane, thereby turning it into a closed surface (i.e., complex algebraic curve) known as the complex projective line, also called the Riemann sphere.” – Wikipedia

“The sine function is the orthogonal projection of the rotated unit circle. The cosine function is also the projection of the unit circle, just 90 degrees out of phase with sine. In three dimensions, the unit circle, sine and cosine are the unit helix as viewed from each axis. This fundamental geometry is expressed by Euler’s formula.” -- Wikipedia

So, we see an astonishing set of links between straight lines, circles, planes, spheres, sine and cosine waves, helices and infinity points. This is all part and parcel of mathematics. Nothing else can touch the power of mathematics – which is why nothing else exists. Mathematics is all there is.

The universe can be boiled down to a consideration of two features of a mathematical point. A point can be stationary (thus forming part of a fixed Cartesian grid) or it can be in eternal motion – tracing out a straight line (with a point at infinity), a circle or a wave. It turns out that by characterising all moving points (of energy) as waves provides the optimal way of describing the world. Quantum mechanics – the modern basis of science – is just wave mechanics. Fourier wave analysis is indispensable to any study of waves.

Simple waves can be added together to create complex waves (mathematical functions) of every possible shape. Waves are the letters of the alphabet and wave functions are the words, books and libraries that flow ceaselessly and with infinite variety from the basic letters.

A static point (monad; zero) contains an infinite number of moving points (i.e. all numbers greater than zero, both real and imaginary, and real and imaginary must always be treated on a par).

A moving point in the domain *outside* space and time (i.e. in the wavenumber and frequency domain) is an infinite pure wave, and such waves are the basis of thoughts and

thinking. A moving point *inside* the space and time domain is the “material” energy and matter of the familiar physical world. (Note that a static point can never be in space and time: it will always be dimensionless.)

Basis waves adding and subtracting endlessly is the essence of the so-called material world. As for the “mental” world, it is the domain of static monads (true zeros) experiencing the information communicated to them by the moving points that issued from them (energy).

Each static monad contains infinite flowing points. Static points are dimensionless while dynamic points are dimensionless in the mental domain and dimensional in the material domain. Static and dynamic dimensionless points are the mental world. Dynamic dimensionless points when passed through the space-time filter become dimensional and give rise to the material world.

The dynamic material world of dimensions originates from the dimensionless world of mind. Mind thinks but does not physically move; matter moves but does not mentally think. Therein is the description of everything. Points, static and dynamic, and their mutual mathematical relations, are all there is.

A static entity – a monad, a zero – contains dynamic elements – all conceivable numbers. Any number is, ontologically, a wave. Zero itself is not a wave since there is nothing there that can do any moving; instead, zero acts as a container for infinity (all possible numbers). Zero’s unique property is that everything can fit into it. The reason for this is that zero contains all positive real numbers and all negative real numbers, all positive imaginary numbers and all negative imaginary numbers. All of these numbers summed together cancel out, leaving just ... ZERO. No number is more deceptive than zero. It may appear to be “nothing”, yet “everything” would be a more accurate description. It is something and nothing simultaneously, and it contains movement – energy – an infinite amount of it, and yet an infinite amount of energy that cancels to zero. It is also the “point at infinity”.

Hegel spoke of being (*thesis*) and nothing (*antithesis*) creating a synthesis (*becoming*) that then dialectically propelled the universe all the way to the Absolute (God).

We can reformulate this slightly differently, in mathematical terms. Let’s make zero (*nothing*) our thesis, and the contents of zero (infinite numbers – *something*) our antithesis. Let’s make the eternal movement of numbers (energy) our synthesis (*becoming*). Energy, mental and physical, creates ALL of the universe.

We have thus placed Hegel’s dialectical logic on a mathematical and scientific footing, and we have shown that his dialectical system is compatible with how the universe unfolds.

So, what could be simpler? Static mathematical points provide the stage. Moving mathematical points (energy) are the actors, both mentally and physically. And eventually the stage and the actors combine to create conscious beings – us – capable of free will, capable of consciously pursuing our greatest desire: *to become God*.

Sensorium

Sensorium (from Latin *sensorium*, organ of sensation): the part of the brain that receives and correlates the impressions conveyed from various sensory areas; the entire sensory system; the sum of an organism’s perception; the “seat of sensation” where it experiences and interprets the environment in which it resides.

## **The Most Beautiful Shapes in the Universe?**

The Five Platonic Solids:

Platonic solids are regular polyhedra. They are solid geometric figures, with identical regular polygons (such as squares) as their faces, and with the same number of faces meeting at every corner. Euclid proved that there are only five such polyhedra.

The five Platonic Solids came to be regarded as the shapes of the five basic elements of the world: earth, air, fire, water, and the aether.

1) Tetrahedron: four faces. The tetrahedron is based on the equilateral triangle, the simplest regular polygon. The tetrahedron represents the element of FIRE.

2) Octahedron: eight faces. The octahedron is also based on the equilateral triangle. It represents the element of AIR.

3) Icosahedron: twenty faces. The icosahedron is also based on the equilateral triangle. It represents the element of WATER.

4) Cube: six faces. The cube (hexahedron) is based on the second simplest regular polygon: the square. The cube, standing so firmly on its base, represents the stable EARTH.

5) Dodecahedron: twelve faces. The dodecahedron is based on the third simplest regular polygon: the pentagon. The dodecahedron represents the universe since the twelve zodiac signs correspond to the twelve faces of the dodecahedron. Its cosmic element is AETHER.

And let's not forget the beauty of the Sphere, from which the Crystal Spheres of Creation were formed, and which contain the five elements.

In the Platonic view, the universe was literally made of perfect geometric shapes. It's almost a shame that it isn't!

## **The Holographic Principle**

The Holographic Principle encodes information from (D+1)-dimensional space onto D-dimensional space, without any information loss. This means that a 2D-plane can carry the same information as a 3D-object. A 2D hologram (the interference pattern on a photographic plate) can represent three dimensions.

Put another way, the holographic principle, expresses the idea that our three-dimensional reality is actually a projection of information stored on a distant, two-dimensional surface.

In the case of a black hole, everything about the interior of a black hole is encoded on the surface of its event horizon. We can't recover information from beyond the event horizon, but perhaps we don't need to because all of the black hole's information concerning everything that has ever fallen into it, is represented on the event horizon itself.

In effect, all statements pertaining to information "inside the black hole" can be replaced with statements about information "encoded on the event horizon."

As well as black hole event horizons, there are also horizons in cosmology. The difference is that we can stand outside the black hole, but we can't stand outside the universe. The cosmological horizon is a sphere surrounding us. It's defined as the horizon beyond which things are so far away that light signals from them don't have time ever to reach us. Everything beyond the cosmological horizon is entirely invisible to us – just as invisible as everything beyond the event horizon of a black hole.

If we think of the whole universe as the interior of a cosmological horizon, just as a black hole is the interior of its event horizon, all of the universe's information must be available at the horizon.

We can talk about what's inside the cosmological horizon, but not what's outside. All information inside the universe will be encoded on the horizon itself, just as it is for a black hole.

If the holographic principle is right, our universe is a phantom – a projection from

somewhere else, a boundary that we have not yet begun to map.

The Holographic Principle is considered to be of critical importance by some theoretical physicists who believe it will become a foundational aspect of a new physics paradigm, from which quantum theory and relativity may both be deduced as special cases.

### Pitch Your Banner

Illuminism's account of reality is utterly compelling. Nothing else comes close to matching its power. Nothing can beat the ontological mathematics upon which Illuminism is based.

If, at gunpoint, you had to attach your banner to some system on which you staked everything, which would it be? The Illuminati have chosen mathematics. They can think of no serious rival. They have therefore chosen hyperrationality since mathematics is the essence and origin of the hyperrational. Humans are being rational when they think mathematically, and irrational when they don't. It really is that simple. Anything not on the side of mathematics is irrational and false.

We cannot attain an earthly paradise until humanity has become a mathematical species, and ordered everything mathematically.

Thanks to mathematics, it is no longer embarrassing to talk about souls, the afterlife and God. Even paranormal phenomena can be treated with dignity and gravity. All of the secrets of existence are locked inside zero and infinity, the flip-side numbers of the soul.

Scientific materialism, the only plausible alternative to mathematics, fails precisely because it dogmatically rejects zero and infinity. It deals with incomplete mathematics, thus rendering it absurd. Mathematics must be complete. No numbers are privileged over any other. Above all, numbers greater than zero and less than infinity are not privileged over zero and infinity; positive numbers are not privileged over negative, and real numbers are not privileged over imaginary numbers.

Once you accept complete mathematics, once you have assigned ontological reality to mathematics and all of its numbers, and stopped treating it as a suspiciously successful abstraction that "accidentally" happens to be perfect for describing reality, you have begun the journey to absolute truth.

All systems of great thought contain one central idea that constitutes a revolutionary break from everything else. Consider the various outlandish interpretations of quantum mechanics. The standard Copenhagen Interpretation says that reality doesn't exist in any definite state until a measurement takes place. The Many Worlds interpretation says that there are infinite quantum worlds. Other interpretations say that there are instantaneous, non-local connections between things, or that all possible paths are taken by quantum particles or that signals are passed back in time, and so on. All of these are treated as respectable hypotheses and all are consistent with the equations of quantum mechanics even though they all radically contradict each other, and describe "reality" in completely different ways. As yet, no experiments can refute any of these interpretations, and it's by no means clear that any definite experiment will ever emerge to settle the matter. What if it remains forever impossible to judge between these interpretations? That means that each person will have to adopt a faith-based position towards one interpretation if he wishes to have a clear notion of "reality"; otherwise, he will have to agnostically accept a blur of contradictory positions and never have any clear view of reality.

The Illuminist interpretation of quantum mechanics, like all the other interpretations, has a revolutionary ingredient. In the case of Illuminism that ingredient is the ontological reality of ALL numbers. That's all you have to accept in order to become an Illuminist and to enjoy the full benefits of the most powerful, eternal, immutable and absolutely true system of rationalism

available to us: mathematics. Our version of quantum mechanics isn't in fact an interpretation: it's an inevitable consequence of mathematics, and is fully integrated with the rest of mathematics. It's as true and irrefutable as mathematics itself. Above all, it is based on zero and infinity.

It's thanks to zero and infinity that religion, philosophy and the paranormal aren't bad jokes and idiotic Mythos. It's science's failure to address zero and infinity that causes science to fail when it comes to answering any of the big questions. Illuminism resolves all of these difficulties. Illuminism provides the grand synthesis where every aspect of reality is brought under one banner – mathematics. There can be no rival banner, no conceivable alternative. Illuminism is the end of the line. There is no destination beyond. Illuminism is the omega point of thought.

## Alpha and Omega

“Alpha” is the label we apply to the bare soul, the soul as pure potential, and “Omega” is what we call the full, Illuminated soul, the soul as complete actualization.

The Omega soul is *God*.

Where are YOU?

Never forget this – you are fundamentally a dimensionless being. Your true self has no physical location at all, and cannot be damaged by anything in the physical world. It isn't subject to any degradation or corrosion. Time doesn't eat away at it.

Zero is the key to everything. What could make more sense than that existence is “nothing”? It requires no input. It doesn't need anything to get it started. It can never perish. It will endure forever. All existence ever does is “rearrange” nothing in endless ways, and anything not forbidden is compulsory. The most stable arrangements persist; unstable ones quickly exit the stage.

All objective mathematical properties of the universe always sum to zero. The only entity that is not zero is the subjective mathematical world of the mind, the soul. Without zero as an ontological reality, there could be no mind and no life. There could be no subjectivity.

Zero and infinity = the subjective realm. Everything between 0 and infinity (in all directions) = the objective realm.

Without zero and infinity as ontological realities – i.e. if we existed in the world described by scientific materialists – there would be no life, no mind and everything would be fully determined. It would be a giant, pointless, clockwork mechanism. Even quantum mechanics is wholly dependent on zero. The quantum realm in truth acts as the interface between the subjective mental world and the objective material world.

It's essential to grasp that zero is the number of subjective experience and subjective experience is what people actually mean by mind and life. Without subjectivity, mind and life could not exist. Subjectivity is all about an agent that has experiences and processes information in a unitary way. That agent is the monad – the zero – the soul. It is subjective precisely because it is not in the objective physical world. It's not part of material cause and effect. It can autonomously generate its own behaviour according to its own nature. It is beholden to no one. It is its own God. Like God, it has *infinite* capacity.

Each and every one of us is nothing and everything, zero and infinity – and is that not exactly the solution you would always have hoped for in terms of making us immortal beings with Godlike potential?

The universe is purely mathematical. That is the surest statement of all. It is incontestable. Mathematics involves ALL numbers, not just an arbitrary set that make sense to the scientific mind. ZERO is the most important number of mathematics, and it is intimately linked to its equally mysterious twin – INFINITY. These two numbers drive everything else.

ZERO and INFINITY are your guarantors that you have a soul, that you are immortal and that you are capable of becoming God. The scientific mind is repelled by zero and infinity, hence science, as it stands, can never describe the truth of reality.

We are making no faith-based statements about the soul. We are putting forward the supreme, rational, Pythagorean-Platonic view that mathematics is reality. The universe cannot be understood without zero and infinity being acknowledged as ontological realities. We reject science on the grounds that it lays claim to only a subset of mathematics (one without zero, infinity, negative and imaginary numbers). It is incapable of explaining why science is so mathematical while only being a limited expression of mathematics. It has NO SUFFICIENT REASON for excluding the numbers that comprise *complete* mathematics. Science is therefore an irrationalist, faith-based position that rejects complete mathematics for dogmatic, ideological, materialist reasons.

The scientific mind ultimately suffers from a lack of imagination, intuition and reason. It clings to the mantra that what is not observed does not exist; that absence of evidence is evidence of absence. It has placed evidence above reason, hence is irrational since it is only through the exercise of (flawed) reason that it reached this conclusion in the first place. Without reason, we can make no sense of the world. Reason is our lodestone. It's as close as we will ever get to an "organ of truth". In human beings, reason is certainly not infallible. In Gods, it is. Gods make no rational errors. They have complete rational understanding of the universe.

So, will you stand with reason and mathematics or with scientific irrationalism that makes the astonishingly fallible human senses the arbiters of truth and reality? In other words, will you choose rationalism or empiricism?

The Illuminati are committed to the supremacy of rationalism. Empiricism has a role, but only as a servant of rationalism, a window through which we can gain clues about the rational universe. It is NEVER reason's master.

#### The Importance of Being Zero

ZERO = SUBJECTIVITY = SOUL = IMMORTALITY = INFINITY = ALL KNOWINGNESS = GOD!

The number zero IS existence. It is the arche – the fundamental substance of existence, and there's an infinity of zeros. With zero, all of the mysteries of existence are answered. The first person to understand zero's full significance was Leibniz, with his dazzling Monadology. The world owes him everything.

#### Scientific Misrepresentation

A neutron can be regarded as a proton plus an electron plus an antineutrino. A proton can be regarded as a neutron plus an anti-electron (positron) plus a neutrino. When a neutron is converted into a proton, it emits the excess electron and antineutrino. For a proton to become a neutron, it gives off an anti-electron (positron) and a neutrino.

Note the beautiful mathematical symmetry. In truth, are these not mathematical rather than scientific entities? Mathematical properties define them. Science is just a way of labelling mathematical functions with helpful names that allow us to make them more accessible to our understanding. Yet the very process of inventing this new vocabulary leads to many misinterpretations because we start treating the names as the reality rather than as the underlying

function. So, for example, people refer to “electrons” as “particles” and are then baffled by the Heisenberg uncertainty principle. So, they introduce a new concept called wave-particle duality. However, if all particles were characterised as what they actually are – Fourier Transform functions – there wouldn’t be any confusion at all. The uncertainty principle is an inherent aspect of Fourier mathematics.

Science both simplifies (useful) and distorts (harmful) mathematical functions. People start thinking of the simplified vocabulary as the truth (in fact, the mathematical functions themselves always remain the truth), and the distortions and misinterpretations start to grow rapidly. The more complex the problem being solved, the more the language being used to describe it becomes a barrier rather than a help. For instance, “time” has baffled philosophers and scientists for millennia. Why? Because they haven’t associated it with its actual mathematical underpinning – imaginary numbers. So, the endless debates about time are riddled with nonsense since the word “time” has never been properly mathematically defined.

With scientists trying to produce the grand unified theory of everything, it is the actual vocabulary of science that is getting in the way. “Space”, “time”, “particles”, “mass”, “gravity” and so on are all so poorly defined that it’s not really possible to say what people mean when they use these terms.

Science has been able to gloss over the problem until now. However, the final barrier cannot be overcome unless science starts switching to the sort of *precise* mathematical definitions and concepts we have outlined. As Descartes said, “Mathematics is a more powerful instrument of knowledge than any other that has been bequeathed to us by human agency.” Roger Bacon declared, “Mathematics is the door and the key to the sciences.”

Illuminism takes the mathematical approach to its logical conclusion. Whereas science is an “open” system – i.e. we can never really be sure of its status; all theories, no matter how well supported by evidence, are *never* definitively proved and always remain susceptible to being replaced – mathematics is “closed”. All “objective” mathematical statements can be precisely proved while all self-referential, “subjective” mathematics is subject to Gödel’s Incompleteness Theorem, which is the origin of free will and the means to operate outside strict objective causality.

Objective causality is what scientific materialism is based on, and it logically destroys any concept of free will. For freedom to genuinely exist there must be another type of causality separate from objective causality. This other causality is of course subjective causality – our own natures, desires and personalities. These cause our behaviour, not agencies external to us over which we have no control.

Scientific materialism denies the existence of the subject (because the subject is based on the mind, the soul, zero), hence it denies subjective causality.

By defining mathematics as reality itself, Illuminism provides a perfect, provable closed system of objective mathematics, while leaving us with the quality and capability we all know we possess – personal freedom of action. It does this via subjective mathematics, the one unprovable aspect of mathematics.

If any person declares that they *always* tell the truth, we can all have opinions on whether or not they’re being honest. However, it is for each of us to judge, based on our own criteria. A regular liar might be able to psychologically convince himself he never lies (many Christians do this), and might pass an “objective” polygraph test. His own subjective opinion can trump objectivity and can surmount “truth”. By referring matters of fact to their own subjective interpretations, people can escape from any system of objective causality.

When Nietzsche said, “There are no facts, only interpretations”, he was in some sense making an earlier, non-mathematical statement of Gödel’s Incompleteness Theorem.

Only entities that can refer facts to themselves and put whatever interpretation and gloss they like on those “facts” are capable of authentically free action. Psychologists might be able to predict with great accuracy what a particular person will do in a particular situation if they have a hoard of psychological data about him, but they will never achieve 100% accuracy. People, no matter how robotic, can always spring surprises.

Mathematics, unlike science, can account for human freedom. Freedom comes as part of the mathematical package – which combines objective *and* subjective mathematics. There is nowhere to go outside this system of mathematics. The system is closed. All of objective mathematics is self-consistent while subjective mathematics defies consistency (the price of freedom!). Mathematics caters for zero and infinity. It caters for minus and plus infinity. It caters for imaginary numbers as well as real numbers. It caters for negative imaginary infinity and positive imaginary infinity. There is nothing outside this system. There is no destination beyond mathematics. There is no agency outside mathematics, no external non-mathematical entity.

Mathematics defines everything. The laws of objective mathematics provide absolute, provable knowledge – the Platonic, immutable eternal Forms. Mathematics provides the sole source of certain knowledge. Any non-mathematical knowledge is mere opinion, not worth a candle in terms of actual, reliable, irrefutable knowledge. (By contrast, all scientific knowledge is inherently refutable and science is even defined by many in terms of its capacity to make refutable statements.)

Illuminism, by being the supreme champion of mathematics, throws down a gauntlet to all other religions and philosophies. What can these possibly offer that beats mathematics? Even science can't beat mathematics. In truth, science is for unimaginative, limited mathematicians who haven't yet grasped the staggering power and scale of mathematics unbound. True mathematics knows no limits. It does not baulk, as science does, at zero, infinity and negative and imaginary numbers.

Illuminism really is the end of the line. If mathematics is reality then Illuminism *must* be correct. Our task then is to show that mathematics is indeed reality. So, we challenge all the doubters to point to a single thing in the physical universe that is not mathematical. Name one, just one.

If an Abrahamist claims that “God” is not mathematical then how does such a person account for the fact that this God appears to have used nothing but mathematics in his Creation? How did “God” become so mathematical unless he himself is nothing but mathematics? An all-powerful, non-mathematical God could make substances with no mathematical properties – so where are these unmathematical substances? Is it even possible to conceive of any substance that does not conform to mathematics? Mathematics IS organisation, order and form. How can there be anything organised, ordered or formed that is not based on mathematical laws? It's IMPOSSIBLE.

Mathematics can exist separately of God, but God cannot exist separately of mathematics. God is defined by mathematics, just like everything else. God does not create the mathematical universe; the mathematical universe creates God. God is simply the answer to the self-solving cosmic equation. There is nothing beyond this equation. It is EVERYTHING.

Illuminism is the final answer to everything. Why? Because it identifies mathematics as the final answer to everything. What sane person would possibly line up against mathematics? Only fools and madmen would oppose mathematics. If it really came to it, if you were asked to decide the eternal fate of your soul by declaring your unswerving allegiance to one religion or another, which religion would you choose? Every Illuminatus knows that mathematics trumps everything else, so Illuminism – the Pythagorean religion of mathematics – is the only rational choice. All of the irrationalists would choose their irrational non-mathematical and

anti-mathematical religions – and would thereby damn their own souls forever.

They would literally go to hell because they weren't smart enough for heaven. Reason, not faith, is the only show in town. Reason is nothing but mathematical expertise.

Illuminism declares that it's mathematics or nothing. There's nowhere else to go. Mathematics is the seal of knowledge. Mathematics is the true "last prophet". It's the only prophet that tells the truth and accurately predicts the future. The only true holy texts are those of mathematics.

"All things are numbers." – Pythagoras

"Number rules the universe." – motto of the Pythagorean school

Pythagoras solved the problem of existence 2,500 years ago. Humanity still hasn't cottoned on. Why not? Because most human beings are STUPID, and mathematics is reserved for clever people. The truth is not for everyone – only for the smart. The stupid turn to faith precisely because it doesn't involve any intelligence or mathematics.

What is the supreme irony, the great cosmic joke? – that mathematics defines existence and yet most people *loathe* mathematics. They loathe the truth of their own lives and the truth of the universe. And, somehow, what could be more appropriate than that most people should be blind to the truth? Does that not sum up the human condition? Truly, the faithful are the blind leading the blind. The best amongst them are one-eyed kings. The Illuminati on the other hand are those with the "second sight" (the ability to see mathematical truth).

No Beginning and No End

Mathematics has no beginning and no end, hence neither does the universe. Mathematics is not a person (it is not an eternal "God"), but it is inherently mental and therefore alive. Mathematics is not conscious – in fact, it's fundamentally unconscious – but it is capable of generating consciousness via evolutionary forces.

With consciousness, mathematics becomes self-aware, conscious of what it actually is. Only those human beings who have understood that all things are mathematical are fully conscious.

A non-mathematical universe is an impossibility. Without mathematics, there would be permanent chaos and randomness. Actually, the truth is even more profound. Existence can ONLY BE mathematical. It is impossible for existence to be composed of anything non-mathematical.

The name "God" that Abrahamists apply to a supposed eternal Creator can in fact only be applied to mathematics itself.

Mathematics is a dynamic, dialectical, self-solving system. It operates via great cycles – cosmic Ages – where it transforms all of its potential to actualisation. Once it has reached a solution – perfect actualisation – it resets itself (through the process we call "divine suicide") and returns itself to blank zero; pure potential. Then it starts solving itself all over again. It endlessly delights in this calculation. This calculation – that never ends – is life itself. This is the perennial process of existence. This is the *only* way existence can be.

This is the gospel of Mathematics.

This is the gospel of Pythagoras.

This is the gospel of the Illuminati.

Leibniz's Net

Imagine the Monadic Mind Field as an infinitely extended crystal lattice, with the light of God ceaselessly flowing through the Cosmic Diamond.

Imagine separating each monad and imagine that each monadic "diamond" is infinitely

faceted. Take an infinite network of such monads, each reflecting all of the others. What would happen? We would experience the transcendent light of divinity. There would be a chain reaction of enlightenment, and our universe would become ILLUMINATED.

We've based Leibniz's Net on Indra's Net of Buddhism, which Wikipedia describes in the following way:

“Far away in the heavenly abode of the great god Indra, there is a wonderful net which has been hung by some cunning artificer in such a manner that it stretches out infinitely in all directions. In accordance with the extravagant tastes of deities, the artificer has hung a single glittering jewel in each ‘eye’ of the net, and since the net itself is infinite in dimension, the jewels are infinite in number. There hang the jewels, glittering like stars in the first magnitude, a wonderful sight to behold. If we now arbitrarily select one of these jewels for inspection and look closely at it, we will discover that in its polished surface there are reflected all the other jewels in the net, infinite in number. Not only that, but each of the jewels reflected in this one jewel is also reflecting all the other jewels, so that there is an infinite reflecting process occurring.”

Windows: Transparent, Translucent, Opaque

In Leibniz's published *Monadology*, he refers to “windowless” monads – no information can ever enter or leave such monads. They are wholly autonomous agents.

Leibniz secretly produced numerous other *Monadologies* involving different “windowed states” of monads.

In the conventional *Monadology*, the monads had windows that were perfectly opaque to the outside world (no information came in or out), but were mirrored inside, so that information endlessly reflected around within the monad. In another, the monads' windows were perfectly transparent (there were *no limits* to the information that could enter and leave). In another, they were translucent (some information could enter and some leave). In another, they had both an opaque and a transparent layer; the opaque layer was private (closed) and the transparent layer public (open). There could also be a translucent layer (partially open; fuzzy).

The six levels of consciousness:

- 1) God Consciousness
- 2) Collective Consciousness
- 3) Personal Higher Consciousness
- 4) Personal Consciousness (This is divided into Logos consciousness (left brain dominance) and Mythos consciousness (right brain dominance, verging on primitive bicameralism; “narratised sentience” rather than true consciousness).
- 5) Personal Unconscious
- 6) Collective Unconscious

Plants and minerals operate at the level of the deep collective unconscious. This is machine-like, obeying strict mathematical laws.

Animals exist mostly at the level of a shallower collective unconscious: they are driven by archetypal, instinctual behaviour, but the higher animals are beginning to enter the personal unconscious zone, and those that can recognise themselves in a mirror (the “mirror test”) have the first glimmerings of consciousness.

Most humans have barely advanced beyond animals and have acquired “narratised” animal sentience via the acquisition of language. They are bicameral and lacking in reason. They are Mythos rather than Logos people.

Truly conscious human beings are those that belong to the Logos species. They are capable of making effective contact with their higher personal consciousness (as Socrates did with his “daemon”).

A higher *collective* consciousness exists for all higher consciousnesses, mediated by pure reason.

Above the collective consciousness is the God consciousness of the whole universe and the whole of existence.

In terms of monadic windows, the following scheme applies:

God consciousness: all monadic windows fully transparent to a God Mind (it knows everything).

Collective consciousness: all monadic windows are transparent to the common operation of reason (a group can act rationally as one entity, thus expressing the General Will). Otherwise, the monadic windows are opaque (our thoughts are private).

Personal higher consciousness: monadic window is partly opaque, partly transparent to allow higher communication.

Personal consciousness: monadic window is opaque at this level (our thoughts are private).

Personal unconscious: monadic windows is translucent (thoughts are partially available to other monads: this is the channel through which “psychic powers” operate).

Collective unconscious: all monadic windows are fully transparent and we share all of the cosmic archetypes.

### Mirroring

In Leibniz’s Monadology, every monad is likened to a mirror of God, reflecting his divine will.

### Mirror Neurons

“A mirror neuron is a neuron that fires both when an animal acts and when the animal observes the same action performed by another. Thus, the neuron ‘mirrors’ the behaviour of the other, as though the observer were itself acting. ... Mirror neurons were first described in 1992. Some scientists consider this to be one of the most important recent discoveries in neuroscience. Among them is V.S. Ramachandran, who believes they might be very important in imitation and language acquisition. Ramachandran has also speculated that mirror neurons are involved in understanding other people’s feelings (empathy) and that they have played a role in the development of human culture.” – Wikipedia

According to body language theories and neuro linguistic programming (NLP), “mirroring” (consciously or unconsciously reflecting another person’s body movements) plays a vital part in establishing rapport between people. Mirroring, when performed unconsciously, may involve the mirror neurons described above.

People moving to the *same* rhythm on the dancefloor gravitate towards each other and are “repelled” by those moving differently. People on the same “wavelength” notice far more about each other. Words like “connection”, “bonding”, “social cohesion” and “relating” all reflect types of mirroring. Oxytocin, the “bonding” molecule, is released when we make a good connection with others. We literally feel a form of love towards them. That’s why personality profiling and matching should be inbuilt in society: we ought to be with people with whom we have a connection and be separate from those on a different wavelength who will certainly irritate us.

Ramachandran’s speculation that mirror neurons may be involved in empathy (and indeed sympathy) seems plausible. So, what’s the difference between empathy and sympathy? Empathy means “*in* feeling” and sympathy means “*with* feeling”. Empathy is the cognitive (intellectual) and affective (i.e. connected with emotions) effort to understand another person’s experience. Its goal is understanding. A difference remains between the other person and the empathiser. With

sympathy, the position between the two becomes radically more blurred. The sympathiser feels what the other is feeling to such a degree that they are almost having the same experience. It is much more affective and much less cognitive. Sympathy involves “shared sameness” (the two become one, so to speak) while empathy might be called “shared difference” (the two remain two while strongly sharing the same experience).

Consciousness is something that develops socially rather than individually, so Ramachandran’s additional speculation that mirror neurons may be implicated in language acquisition seems worth exploring given how crucial language is to consciousness.

One can imagine a highly intelligent and dominant alpha human making grunting noises and pointing gestures to those in his group and being imitated by the other members of his tribe until they all reached a common understanding about what various signs and sound meant, and thus collective communication was born.

Babies use mirroring to emulate their parents’ language skills and body language – which is why it’s crucial for parents to spend a lot of time with babies and teach them lots of good habits and complex skills. Stupid parents ignore their children, or stick them in front of a TV, and thus the babies grow up stupid, their potential unfulfilled.

Of course, if mirroring went too far, we would all become clones, so there must be anti-mirroring mechanisms. We have the ability *not* to sympathise with people, and empathy can be used negatively as well as positively (i.e. we might endeavour to understand how another feels in order to manipulate them for our own ends, and often to harm them. The Nazis, for example, spent a lot of time trying to “empathise” with the Jews arriving at death camps in order to make it easier to kill them with minimum fuss. The whole concept of a shower after a long journey must have seemed perfectly reasonable and indeed desirable to the Jews).

So, mirroring cuts off at certain point. Autistics are lacking in empathy and sympathy, but they are almost never dangerous. Psychopaths, on the other hand, can be highly empathic while having zero sympathy for others. Many people who get to the top of society are psychopaths. The Old World Order – the elite dynastic families that rule the world – are psychopathic. They care only about themselves and have no interest in helping anyone else. When 1% of the world can accumulate as much as 42% of the wealth of the world, no one could accuse these people of being remotely caring towards others or interested in their welfare. Whatever their self-serving rhetoric, they ought to be recognised for what they are: outright psychopaths and sociopaths. They shouldn’t be allowed anywhere near positions of power. All of the families of the Old World Order should be put out of business – by 100% inheritance tax. They’ve had their day in the sun. Now it’s time for the people to rule the world.

### The Mathematical Psyche

In Illuminism, everything reduces to mathematics. Mathematical functions define life. Viewed objectively, mathematical functions are just that: mathematical functions. But a particular class of functions, when experienced subjectively, have another complexion altogether: they are *psychic* functions. Jung called them archetypes and he said they were stored in the collective unconscious. We all have access to them. They are the mind’s operating system.

Each species has its own set of archetypes. They evolve in conjunction with the species, better adapting it to its environment. They are the mental flip side of genetic evolution. They are our instincts. Instincts aren’t physical; they’re mental.

All animals are creatures of mental instinct. Human beings are instinctual beings with one crucial extra ingredient – the ego archetype, leading to *consciousness*. The only thing that prevents us from being organic machines is that this single one of our instinctual psychic archetypes can develop non-instinctually. It can exhibit free will and break out of causal and

instinctual necessity.

This is the manifestation of our soul in the material world, in the domain of space and time. Behind it stands our true soul – the Self – outside space and time. The ego is the Self’s agent in *this* world. The ego perishes when we die (because it’s tied to this world), but the Self endures.

The Jungian archetypes are the mental scaffolding that allows the ego to exist, and to be connected to the Self. Just as archetypal processes are involved in creating the conscious ego in our infancy, so archetypal processes kick in at the end of life to reverse the process i.e. to return consciousness to the unconscious domain. The “death archetype” manages the transition of your mind from ego-consciousness (which is rapidly expiring as your last hour approaches) to Self, which will assume control and begin the search for a new body for you to inhabit (via reincarnation). The more evolved your Self is, the better it is at identifying the best host in which to reincarnate. The Self is the element that can become God. The ego is its temporary, mortal aspect.

In fact, all animals have an ego, but, with the exception of humans, it remains so primitive that it’s barely worthy of the name. Even in many humans, it’s rudimentary. Many human beings are able to suppress their ego and operate as little more than automata. The phenomenon of hypnosis is equivalent to ego-suppression. A human being becomes a kind of sleepwalker. This was exactly what humanity was like before our ego became sufficiently advanced.

The evolution of our ego – our consciousness – is the one thing that science doesn’t have a hope of explaining because it evolved mentally, not physically.

Darwinian evolutionary theory can never be complete until it explains mental evolution, the evolution of archetypes, culminating in ego-consciousness. Of course, this is the province of the soul. Science will never help us here until it embraces soul theory.

Given that the biological evolution of human beings is effectively over, humanity’s future evolution will be in the psychic rather than physical sphere.

Higher archetypes already exist for bridging the gap between human beings and Gods, but they are extremely difficult for ordinary human beings to access, just as difficult as the ego-consciousness archetype is for animals to access (which is why they barely register any signs of consciousness).

## **The Continuity Editor**

Many movies have glaring “continuity errors”. As a scene is shot and re-shot, someone might forget to reset a clock in the background, so the same scene might apparently be taking place at several different times according to a hawk-eyed viewer. If an amendment to a scene is re-shot the following day, all sorts of things might be different because everything might have been moved and then moved back, but not in perfect alignment with the previous day’s set-up. Some TV shows are dedicated to analysing all of these geeky “bloopers”. The amazing thing is that the average person almost never sees these errors because his attention is always on the main action and the emotion of the scene, and is barely aware of the background detail. The same phenomenon applies in “magic” shows where illusionists re-direct our attention at vital moments.

In our lives, our conscious mind pretends it’s in full control at all times (this illusion is crucial to our sanity), but much of the time it’s our unconscious mind that’s actually running the show and taking the decisions. Consciousness acts as a “continuity editor” whereby it converts all of our behaviour – whether chosen by our conscious or unconscious mind – into a seamless conscious narrative. There are almost never any “bloopers”. Consciousness simply pretends that

everything was its own doing. It doesn't acknowledge the existence of the unconscious at all.

Although we all talk about the unconscious and the powerful effect it has on us, how many of us say in our daily discourse, "Ah, that was my unconscious mind that made me do that." You'd be locked up if you said such a thing, yet if you go to see a psychologist he will tell you that, for example, "You're unconsciously displacing your anger towards your boss onto your girlfriend." It's OK for the unconscious to be discussed in that setting, but not otherwise. We are all St Peters when it comes to our unconscious: we are always denying it.

Consciousness cannot admit to not being in 100% control at all times. The unconscious is mentioned only if we have a mental breakdown and need help, at which point a psychiatrist tells us all the things we thought we were responsible for were actually being caused by ultra-powerful unconscious forces.

Isn't it interesting that we simultaneously accept and deny the unconscious? We bring it out into "daylight" only when we must, yet it may be the case that most people are driven by their unconscious most of the time. Why aren't we discussing the unconscious MOST of the time? We all have to worship at the altar of consciousness and maintain the illusion that it is all-powerful.

We are all illusionists and our greatest illusion of all is that our consciousness is always in charge. It's a perfect continuity editor, and it has to be.

Mythos thinking is so powerful and comes as second nature to us because our consciousness is the ultimate weaver of narrative. It fits everything we do into its narrative. Narrative is what consciousness is: it's the story of "I".

#### Mathematics and Physics

Albert Einstein perhaps more than anyone else established the primary role of mathematics in science. If experimental evidence and empirical data are difficult or impossible to obtain then the "logical consistency of mathematics" will point the way. Einstein's theory of general relativity perfectly illustrates the power of mathematics, pure thought, logical principles and aesthetics to depict reality, with minimal reliance on experimental evidence. With his Pythagorean and Platonic mathematical idealism, Einstein brought together *pure* mathematics (concerned with the *exact* deduction of the consequences of basic logical axioms), and the *applied* mathematics of science, where approximation rather than absolute analytical precision reigns.

"How can it be that mathematics being a *product of human thought* which is *independent of experience*, is so admirably appropriate to the objects of reality?" -- Einstein

Isn't it apparent that mathematics ISN'T the product of human thought? It's so admirably appropriate to the objects of reality because it IS reality. The fact that it is independent of experience shows that we can deduce how everything works. We are not required to perform experiments.

"Our experience hitherto justifies us in believing that nature is the realization of the simplest conceivable mathematical ideas. I am convinced that we can discover by means of purely mathematical constructions the concepts and the laws connecting them with each other, which furnish the key to the understanding of natural phenomena. ... In a certain sense, therefore, I hold it true that pure thought can grasp reality, as the ancients dreamed." -- Einstein

It's a shame that Einstein didn't follow through on this. In the end, he remained to all of the prejudices of scientific empiricist materialism.

#### Bad Infinity

*Bad infinity*: "spurious" or the "false" infinite as opposed to the "true" infinite."

What does it mean to "define" something? As Spinoza recognized, it involves setting

boundaries for it, determining its limits, showing how it is distinct from other things. The infinite, in this view, is something undetermined, unbounded, unlimited. For Spinoza, the infinite was limited only by itself since nothing else could limit it. Like God, it was “self-determined”. God, of course, is himself said to be infinite.

For centuries, and indeed millennia, theologians used a conception of infinity that amounted to having their cake and eating it. For them, God was infinite and thus infinitely separate from lowly, finite human beings. We were as nothing compared with God. The infinite and the finite were regarded as mutually exclusive, with nothing at all in common because to say they were bridgeable in some way would be to claim that human beings might become Gods! – the uttermost blasphemy and heresy. However, even though theologians held such views, they were also eager to argue that God was everywhere, which would logically imply that he was where all finite things are and even where evil is. In fact, he must even be where Satan is, unless Satan is nowhere (in which case how can he have any effect?). Moreover, according to Christianity, God – the infinite – became Incarnate in Yehoshua ben Yosef (Jesus Christ) – a mortal, finite human being.

So, when it suited the theologians, they were perfectly happy for the infinite and finite to have some sort of relationship.

In the medieval Christian view, God created the universe out of nothing (out of “non-God”). Creation was a vast sphere of finite, limited non-God substance, with Earth at its centre. Infinite God was in the Empyrean, the highest heaven, which extended away from the Creation Sphere infinitely in all directions. It’s easy to see that such a God transcended the finite physical universe. Much less obvious is the claim that he was also immanent in the finite universe i.e. everywhere in it, which he must be in order to be truly infinite. How can the infinite coexist with the finite?

Spinoza’s definitions of the finite and infinite proved a major challenge to the views of theologians because if infinite God has contact with finite man and a finite cosmos then his infiniteness is necessarily limited according to Spinoza’s doctrine, which means that he is no longer God! In relation to Spinoza’s philosophy itself, no contradiction arose because Spinoza was a pantheist, meaning that God was literally everywhere and everything. There was no separate, finite Creation. God himself is infinite, and all finite things are simply the places where he (as perfect self-determination), has chosen to define himself. He provides the space in which the infinite can emerge in its multifarious finite forms, while also fully containing them.

Hegel adopted Spinoza’s position and maintained that traditional theology is fundamentally mistaken. The claim that the infinite God and his finite creation must be absolutely distinct actually cancels God’s infinity since the finite Creation now limits him. The way out is to contend that God contains the finite world as a moment of his own being. Any alternative implies that infinity is limited by the finite and therefore logically becomes finite itself.

For Hegel, the infinite is not the unlimited, but the self-limited – the self-determined Absolute. God can limit Himself and then negate that limit. God has both form and content, but is not limited by them

since he can negate whatever limits or determinations he has established for himself. Hegel expressly states that the finite has no independent existence apart from the infinite, and this is incontestably correct.

Hegel distinguished “wrong”, “bad” or “spurious” infinity (which is merely the negation of the finite), from the “good” infinite which is able to absorb the finite. Spurious, bad infinity is just a repetition of the finite, the “infinity of endless progression”, as Hegel described it. Spurious infinity in a sense fails to meaningfully include the finite. It just keeps repeating the finite rather than truly containing it, as good infinity does. Absolute infinity is the Totality, the Whole that

includes All.

Infinity never stands in opposition to the finite, and in fact “good” infinity IS the finite while bad infinity is just the limitless repetition of the finite, but at all times the finite and infinite are harnessed together. Infinity – the limitless – is made up of the limited. Because the infinite contains the finite within itself, it is not limited, or defined by anything other than itself. The infinite is fully self-determining and self-defining via the finite! There is no such thing as some vague, indeterminate infinity. It is ALWAYS connected with the finite.

Contrary to what scientific materialists say, infinity does not destroy the finite. The finite is the basis of infinity, and infinity of the finite. The finite and infinite flow in and out of each other and their linking point is zero. As soon as division by zero takes place in an equation, you know you are entering the domain of the infinite. It’s entirely natural and nothing to be afraid of. You’re simply entering the monadic domain – the mental realm – where zero and infinity are in charge. It is the Cartesian world of non-extension. Yet all of the possibilities of extension are contained here. The monadic domain is the unextended and extended combined, the source of all. Extension cannot arise except from the non-extended domain. The reverse is not true. Extension is born from non-extension, from infinite assemblies of dimensionless points (as in the number line), but non-extension is not born from extension. The mind is primary and matter is derived from it. Mind is not an add-on to matter; matter is an add-on to mind.

The finite and the infinite cannot be in opposition. If the infinite does not contain the finite then it is limited by the finite and itself must be finite because, by definition, the infinite cannot be limited. So the infinite must contain the finite. So, what is the infinite? It is the finite repeated endlessly. But there’s more to it than that. If the infinite is the finite undergoing limitless repetition, why can’t the finite also be a limitless repetition of something? If we chop up infinity into endless finite sections, is each finite section itself infinite in respect of something else? What we have in mind, of course, is the infinitely small. Is the finite an endless repetition of the infinitely small, while the infinite is an endless repetition of the finite?

If the finite is the thesis and the infinite the antithesis, the dialectical synthesis is the “finite-infinity”. The finite and the infinite are in a sense in a circular relationship and the factor that defines this circle is none other than zero.

Let’s show this mathematically. The number 1 can be broken into ten units of 0.1, or one hundred units of 0.01. We can keep reducing the size of the divisions and increasing the number that fit into 1 until we reach divisions of zero. How many zeros can fit into 1? – infinity! So here we have a finite number – one – that contains an infinite repetition of zero. What about number 2? How many zeros fit into 2? Well, it must be infinity again, but it can’t be the same infinity as the one applying to 1. In fact, it must be twice that infinity.

So, we can start to define a “finite-infinity”. Let’s call the infinite number of zeros that fit into 1 “alpha-infinity”:

Equation A)  $1/0 = \text{alpha infinity}$ , or  $\text{alpha infinity} \times 0 = 1$

Alpha-infinity is both a genuine infinity and yet it equals a finite number (1). Two times alpha-infinity = 2. We can define ALL finite numbers in terms of alpha-infinity. The endless repetition of the finite to produce the infinite then becomes the endless repetition of alpha-infinity. Infinity is therefore the repetition of infinity! The whole system is mediated by zero: the monad, the dimensionless point.

We can now accurately define the two radically different types of infinity: “good” and “bad”. “Good” infinity relates to alpha-infinity where infinity is contained within the finite. “Bad” infinity is where the infinity is not contained within the finite and just keeps going forever, endlessly replicating the finite. Whenever we talk about infinity, we should check whether we mean good or bad infinity. Good infinity works in perfect tandem with the finite while bad

infinity allows the finite to run out of control.

## **Hotel Infinity and the Big Bang Expanding Universe**

“We’re always full, but we always have room for you.” -- Amanda Boyle

Mathematician David Hilbert introduced the paradox of the “Grand Hotel of Infinity”. The mind-boggling feature of this hotel is that even if every room is filled, more guests can ALWAYS be accommodated. A “No Vacancy” sign never appears over the entrance of Hotel Infinity, even if it’s infinitely full.

It’s simply impossible to overestimate the significance of Hotel Infinity since it goes to the heart of the phenomenon of the expansion of the universe and the explanation of “dark energy”.

In terms of good and bad infinity, we can define Hotel Infinity in relation to bad infinity. Unlike good infinity which can actually be defined in finite terms (recall that alpha-infinity equals the number of zeros, each separated infinitesimally, that can be fitted into “one”), bad infinity cannot be mapped to a finite number. Rather, it is the endless succession of finite numbers into which we can fit an infinite number of “ones”.

Hotel Infinity is the “limitless finite” into which we can always fit the finite. The finite can be defined in terms of the “finite infinite”: alpha-infinity. There’s always room in infinite infinity for finite infinity. In fact, there’s infinite room.

When we talk of Hotel Infinity being full and yet still having vacancies, we actually mean that a finite infinity of its rooms are occupied, hence any number of other finite infinities can be accommodated. What we don’t mean is that an infinite infinity of rooms are filled in Hotel Infinity because a) there definitely wouldn’t be any vacant rooms in this case and b) there wouldn’t actually be anything outside Hotel Infinity since it would contain EVERYTHING. Bad infinity is all that there can possibly be.

In his book *Black Holes, Wormholes & Time Machines*, Jim Al-Khalili expertly explains the concept of Hotel Infinity and its relation to the expanding universe. We will quote the whole passage because this concept is of infinite significance (so to speak!):

“It turns out that there are in fact an infinite number of different infinities!

“Where is all this leading us? The cosmologist Igor Novikov, considered by many to be Russia’s answer to Stephen Hawking, uses the idea of different infinities to explain how an infinite universe is nevertheless still able to expand. Imagine that you check into Hotel Infinity, which has an infinite number of rooms. You are told at the front desk that they are very busy that night and that there are already an infinite number of guests so all the rooms are occupied. You complain to the management that you had a reservation and insist that they find you a room for the night. ‘No problem,’ says the management, ‘in Hotel Infinity there is always room for more.’ They then proceed to move the person in room 1 into room 2, the person in room 2 into room 3 and so on, all the way to infinity. You are then given room 1.

“What if an infinite number of guests arrive at once? Still no problem. The management now move the person in room 1 into room 2, the person originally in room 2 into room 4, the person in room 3 into room 6, 4 to 8, and so on until all guests are moved. Now all even numbered rooms are occupied. Since there is an infinite number of these rooms, all original guests are accommodated. This then leaves the infinity of odd numbered rooms now vacated and available for the new arrivals.

“We can relate this example of the hotel guests to the space occupied by an infinite universe. It does not matter that new guests are arriving all the time. The hotel, being infinite, can

always accommodate them. In the same way, an infinite space can always expand.

“We now come to probably the most confusing feature of an infinite universe. If something is growing in size, then it would, by definition, take forever to become infinite. Thus if our Universe is infinite in size today then it must also have been infinite in the past. In fact, it must already have been infinite in size at the moment of the Big Bang! This really flies in the face of the common notion of the Big Bang as the event when all of space was squeezed down to a point of zero size ... The only way to think about this is to imagine that the Big Bang happened everywhere at once in an already infinite universe.”

In the final paragraph, Al-Khalili betrays the scientific materialist obsession with real numbers and real space. If he instead turned to complex numbers with their imaginary components, he would see how easily these paradoxes can be resolved.

“If something is growing in size, then it would, by definition, take forever to become infinite.”

This is the classic Big Bang position. The universe is expanding, but it's finite. In order to get a dimensionless point (the Big Bang Singularity) to expand up to the inconceivably vast scale of the universe we find ourselves in, cosmologists typically invoke “inflation”. This is the physical universe's best bicycle pump and it inflates the universe to vast proportions in a very short space of time. Even many physicists find it quite comical and express the opinion that it can't be right, that it's merely a provisional hypothesis. However, scientists make progress in their careers depending on how many papers they publish and the beauty of inflation theory is that it allows calculations to be performed that fit reasonably well with experimental data. Since there's nothing else available in terms of the mainstream, scientists simply churn out inflationary papers and it becomes accepted as “truth”. It is in fact completely false, but scientists are in no hurry to admit that. Until they have something else that is equally productive in terms of calculations and scientific papers, they will stick to inflation theory. You could never accuse scientists of being obsessed with the truth. Like virtually everyone else, they are obsessed with career progression and paying the mortgage.

Let's examine how absurd conventional Big Bang theory is. It basically divides the universe into a Big Bang Singularity on the one hand and nothingness on the other. The singularity “explodes”, inflates and “fills” a certain portion of nothingness, leaving infinite nothingness outside the filled nothingness, although the picture is even more complex than that. Consider this quotation:

“What Shape is the Universe? – The Universe is what is known as a hypersphere. A hypersphere is almost impossible to visualise, as it is a four-dimensional sphere – it alters with time. However, you can use the analogy of an onion to describe it quite well. Imagine the universe as it is now, this very instant, to be the outside layer of an onion. If you could look out into the universe as it is now, you would be looking around this shell. If you could look far enough, you would look right round it and see the back of your head. But we cannot look at the universe this very instant, because as we look out we are looking back in time. You can imagine that everything you are looking at that is at the same distance – say, five light years away – is on the same shell of the onion. The further away you look, the closer you are looking to the centre of the onion. These layers do not exist in this state any more (in terms of place or appearance) as they have moved (with the expansion of the Universe) since the light left them, but this is how we see them. You cannot travel from one side of the outer sphere (the universe as it is now) to the other side through the centre, as the centre is not just empty space; there is no space. You can travel only around the shell itself, as this is where the space exists. Well, we said it was hard to visualise.” – *The Independent: Science Made Simple*

So, we discover that interior nothingness is being *created* as the universe expands. It is

often said that we must not think of the Big Bang as the explosion of a single point in space. Rather, ALL of the points of space are contained in the Big Bang Singularity and these all rush out in every direction. However, we are now faced with a multitude of problems. Is the number of spatial points present in the Big Bang Singularity finite or infinite? If finite then we will have a finite universe: it will literally stop growing at some stage (because the finite number of points will all be used up). But what sufficient reason could be given for a finite number of spatial points? What would prevent an infinite number? If infinite then they must give rise to an infinite universe. But according to conventional Big Bang theory, the universe isn't infinite and was most definitely finite in its earliest stages. So, if there were infinite points then they would have to be compressed into a finite space. How could that possibly happen UNLESS spatial points take up no space i.e. are unextended, hence MENTAL rather than physical? You cannot have infinite *physical* points in a Singularity or in some small post-Singularity physical spaceball because it would thereby occupy infinite space. In fact, even with a finite number of physical space points, it is inconceivable that a universe-sized collection of them could be in a Singularity or in a small physical ball after the initial explosion: they would occupy far too much space.

It is exceptionally unclear what Big Bang theory is actually claiming. It's incoherent, and hoist with its own petard of the finite and the physical.

Let's examine standard Big Bang theory in detail. It states that the universe began about 13.7 billion years and has been expanding ever since. There is no centre of the universe, no centre to the expansion. The expansion is the same everywhere. Most people imagine the Big Bang as an ordinary explosion, expanding out from a centre into pre-existing space. But of course there is no pre-existing space in which to expand. The explosion is of space, not in space. The whole universe is expanding and doing so equally at all places. There was no space and time before the Big Bang, and scientists refuse to even contemplate the word "before" since what, for a scientific materialist, does it mean in the absence of physical time?

Fred Hoyle wrote, "My non-mathematical friends often tell me that they find it difficult to picture this expansion. Short of using a lot of mathematics I cannot do better than use the analogy of a balloon with a large number of dots marked on its surface. If the balloon is blown up the distances between the dots increase in the same way as the distances between the galaxies."

The two-dimensional surface of the balloon is to be compared with the three-dimensional space of our experience. No dot on the balloon surface is privileged over any other. They are all to be treated identically. As for the centre of the balloon, that is not on the surface, hence does not exist! Therefore, it is definitely not the centre of the universe.

Sometimes, the growing radius of the balloon is compared to time, so the centre of the balloon was once the Big Bang singularity 13.7 billion years ago, but of course it's not there now. Nothing in the interior of the balloon is there now: it corresponds to the past.

Others prefer to regard any points not on the surface as not being part of the universe at all, as nothingness, non-existence.

In summary, in relation to the balloon analogy:

The 2-D surface of the balloon is analogous to the 3 dimensions of our space. The 3-D space in which the balloon is expanding isn't analogous to any higher dimensional physical space.

The centre of the balloon does not correspond to anything physical. It's not the centre of the universe. That centre was once the Big Bang Singularity, but that was 13.7 billion years ago.

The universe is finite in size and growing like the surface of the expanding balloon (which is finite).

The "cosmological principle" states that the universe should be uniform (homogeneous and isotropic) over very large scales i.e. it should look the same wherever you are and in all

directions; no area is privileged over any other. In particular, there is no “centre” of the universe; there is no place that any Creator God assigned as any special location. Humanity has no divine significance.

The cosmological principle can be considered a strong disproof for the existence of any Creator God who designed a universe for humanity’s benefit. Earth has no special status. It’s as about as average as it’s possible to get.

When Hubble discovered the existence of galaxies other than ours, this was another fatal blow to the Creator God. What conceivable purpose could hitherto unseen and independent galaxies have in relation humanity?

One of the most shocking aspects of Big Bang theory is the implication that no space is left behind i.e. as the balloon expands, the interior of the balloon – which was once space (during the expansion) – is space no longer (because the expansion has moved on). This is a radically challenging concept for scientists to explain. Philosophically, we have space expanding into nothingness and creating something where there used to be nothing and at the same time turning something into nothing in those zones where space has expanded beyond them. This violates the principle that something cannot be created from nothing and something cannot become nothing.

Philosophically, the picture portrayed by conventional Big Bang theory is preposterous. The description of space which it provides is incongruous. Space is in some places but not in others. So what is space? How does it travel? How does it disappear from areas it had previously occupied? How does it occupy areas it is just expanding into? Is it a substance? Is it like some sort of fluid or gas or aether? If so, why doesn’t it fill everything?

Consider the following ancient thought experiment by Lucretius. If you believe you are at the edge of the universe and you throw a spear, what will happen? If the spear travels as normal, then you aren’t at the edge. If it strikes something then that would have to be the “wall” of the universe. If it vanishes completely from sight then it must have emerged onto the far side of the boundary – the “other side”.

You would, of course, be shocked if your spear either hit a hard surface or disappeared. More likely, you’d discover that you never actually found any edge of the universe i.e. it’s infinitely large.

Lucretius’s thought experiment provides a good, simple way of imagining being physically present at the proposed edge of the universe, but is it possible to make any sense at all of this experiment in relation to the space of Big Bang theory? Scientists, always contemptuous of philosophy, simply avoid the question and say that time and space are wherever time and space are and that’s it’s meaningless to talk about wherever they are not.

Or some might propose that if Lucretius threw his spear, it would travel all the way round the universe and strike him in the back! After all, if you set out from anywhere on Earth and keep walking you will eventually return to your starting point. You will never encounter any wall at the edge of Earth. But what if Lucretius threw his spear upwards, into outer space?

All of these philosophical obstacles can be easily resolved via the Illuminist version of Big Bang theory, which involves a dimensionless Singularity, and a subsequent infinite, and instantaneous, expansion.

It starts with a Singularity containing a “bad infinity” of monads i.e. all the monads of existence. Within this Singularity, all monads are essentially identical. In order to become individuated, they must create an environment where individuation is possible. Individuation requires space and time: a physical universe.

The physical universe we inhabit consists of six dimensions, three “real” and three “imaginary”. The “real” dimensions are the origin of space, and the “imaginary” dimensions are the origin of time. Space and time are treated on a par; neither is privileged over the other. The

distance between any two points in a 6D universe that comprises real and imaginary numbers can be real, imaginary or zero. It can be shown that all points in this 6D universe can be connected to the Singularity via zero-distance routes. In other words, in a 6D universe (based on three real and three imaginary dimensions), an infinite number of individuated points can nevertheless remain completely connected, all of them separated by zero distance, via the original Singularity. This astonishing result is the key to reality, to linking the purely mental domain of the Monadic Singularity with the whole of physical space i.e. mind and matter are fully linked by the Singularity.

This is the crucial link that eluded Descartes. He conceived of an unextended domain of mind and an extended domain of matter and he couldn't see how they were linked. Well, in fact, they're linked by the Singularity.

The Singularity contains all of the points of necessary to construct a physical, dimensional universe (like a vast Cartesian coordinate system). Moreover, it can instantly generate a physical universe infinite in size – because all points are connected to the Singularity.

The Dimensionless Singularity gives rise to the infinite physical universe instantaneously. This is the TRUE Big Bang. The Big Bang universe goes from a Singularity to an infinite universe without the need for any “inflation”. The universe has no edge, no boundary, because it's infinite. Lucretius will always have room for throwing his spear. There's no conundrum about space being in some places but not others: it's everywhere. And it has a centre: the origin, the Singularity!

### The Big Bang That Never Ends

According to conventional Big Bang theory, the Big Bang ended long ago, but the universe continues to expand. From where is the expansion originating? It can't be the Big Bang Singularity – because that's long gone.

According to Illuminism, the Big Bang hasn't ended and the Big Bang Singularity still exists – indeed it's eternal – and continues to carry out the same process it always did.

The Big Bang, at its inception, was the release of a “good infinity” of monads into physical spacetime. The Big Bang Singularity itself is a “bad infinity” source of monads, but in order for bad infinity to determine itself, it must finitize itself and it does so by releasing a constant sequence of good infinities, as if it were counting 1, 2, 3, 4, 5... This release that began at the Big Bang is still happening. This is the force that causes the universe to expand: the infamous “dark energy”. Dark energy is simply the Big Bang as it manifests itself NOW.

The Big Bang is an archetypal Hotel Infinity phenomenon. Although the Hotel – the universe – is always fully occupied, there's always room for more. Hotel Infinity is defined according to bad infinity i.e. it reflects the monadic bad infinity of the Singularity. It can accommodate an infinite number of good infinities. The expanding universe is analogous to a new party of infinite (i.e. good infinity) guests arriving at the Hotel and being accommodated by the skilled management's tried and tested methods for assigning them rooms. The whole process is beautifully controlled. It really is just like counting.

Our universe, from the first instant of the Big Bang, was infinite and it has been getting more and more infinite, so to speak, ever since, just as Hotel Infinity gets more and more infinite as more and more parties of infinite guests arrive and are fitted in.

This ongoing expansion of the universe has the most extraordinary consequences, which have been entirely overlooked by conventional physics. Physicists will tell you that the expanding universe does not affect the size of atoms, molecules, planets, stars and galaxies. It's the space between the galaxies that grows, they say. They do, however, concede that the wavelength of electromagnetic radiation extends as space expands and this is the explanation for

the famous microwave background radiation that permeates the universe and is cited as one of the primary proofs of the Big Bang and the expanding universe. However, this microwave radiation is consistent with two radically different types of universe: a finite expanding universe as traditionally associated with the Big Bang model, and the Hotel Infinity expanding universe in which the universe was infinite from the start of the Big Bang.

But it is a fallacy that only electromagnetic radiation is affected by the expanding universe. As any physicists will tell you, if you know the precise position of a particle at one instant, the correct answer to where it will be at the next instant is ANYWHERE. It could appear at any point in the entire universe. In other words, the wavefunctions of all particles embrace the complete universe. This means that the wavefunctions must change as the universe expands: there are more and more points that they must accommodate. Those forces dependent on these wavefunctions will also be affected as the universe expands. Electromagnetic forces caused by negatively charged electrons interacting with positively charged nuclei will, in effect, be diluted by the expanding universe. The effect will be extremely subtle but over billions and billions of years it will start to have a radical effect.

Gravity, based on spatial relations between objects with mass, will grow weaker as space expands. Electromagnetic forces will grow weaker as wavefunctions are changed by the increasing size of the universe and the increased number of points available to a wavefunction that imply weaker interactions between electrons and nuclei. Even the weak and strong nuclear forces will eventually succumb to the expansion of the universe. New space is literally appearing everywhere, not just between galaxies. It's appearing within atoms, molecules, planets and galaxies, even within us.

In relation to matter, the effects may be marginal for billions of years but nevertheless they are growing all the time and eventually they will become decisive. These forces – the forces of expanding space (or spacetime to be more exact), of “nothing” – will eventually overpower and eliminate gravity, then electromagnetism, then the weak and strong nuclear forces. All matter will be converted into space! The destiny of the material universe is to be wiped out by the relentless march of space. Expanding space will end physical existence. Of course, when it has succeeded in eradicating matter, it has in effect returned the world to a purely mental state. In short, it has returned everything to the original Big Bang Singularity. It has brought to an end a universal Age.

The bad infinity Hotel Infinity is actually a “spread out” version of the bad infinity monadic Big Bang Singularity: the Singularity is dimensionless and Hotel Infinity is dimensional. Ontologically, Hotel Infinity is simply an infinitely expandable 6D Cartesian grid, into which more and more points keep pouring.

When expanding space wipes out matter, Hotel Infinity and the Big Bang Singularity become indistinguishable. The universe can now begin again. A new Age of the cosmic cycle can commence.

Is it not wondrous? The universe is ultimately all about the relentless release of space, of nothing. The material world is created from space at the beginning of each new Cycle then wiped out by space by the end, then the whole process begins again. This goes on forever. This is the true story of the cosmos – the story of NOTHING. Nothing creates and nothing destroys. Yet it's not “nothing”, it's ontological zero, it's elementary mind, it's SOUL. The universe is controlled by souls.

We have provided a mechanism for explaining the cyclical nature of existence. There is no Big Bang followed by Big Crunch. Rather, there is an ongoing Big Bang that “ends” as the “Big Nothing”, the wholesale eradication of all matter.

(Note: although scientists talk about the expansion of “space”, it's actually spacetime

that's expanding. That's because the universe is six-dimensional and incorporates space and time. Einstein's "4D" universe also includes time, so it's odd that only space is mentioned in terms of the expansion. How can space expand independently of time if they are fused together in four dimensions? Of course, scientists don't understand time, and don't realise it comes from imaginary numbers, while space comes from real numbers. We follow the convention of referring to expanding "space" because it sounds more consistent in relation to everything else that is written about the subject, but in fact we always mean "spacetime".)

#### Minds and bodies

Although we are all individual minds in an ocean of other minds, we relate to each other not mentally, as you might expect, but via matter. This is because matter, located in space and time, is the essential ingredient of *individuation*. Minds, outside space and time, are inherently unindividuated in any meaningful way. Minds need bodies (provided by the world of matter) to become individuated. Individuation ultimately leads to consciousness since, as Hegel so brilliantly recognized, self-consciousness requires a multiplicity of potentially individuated beings: it develops as a social phenomenon, never in isolation. A human who grew up alone on a desert island could never be conscious. More crucially, a "Creator" God, all alone, could never be conscious, hence a Creator God is impossible.

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There is one potentially radical problem with the Hotel Infinity Big Bang theory, and it equally applies to standard Big Bang theory. It relates to the issue of the plenum. Existence must constitute a plenum. There can be nowhere where existence does not reach. Therefore, to say that there is a Singularity and that there is nothingness (non-existence) outside the Singularity waiting to be filled is a contradiction of the Plenum Principle. In fact, there cannot be anything OTHER than the Singularity. Remember, the Singularity comprises infinite monads (minds) and forms a mental plenum. It is a Singularity only with respect to a hypothetical physical world that will originate from it, not in terms of a mental world of which it is the fullest possible expression.

So, we reach an apparent impasse. If the plenum is mental then there is no such thing as a physical universe. Anything that does not exist forever cannot exist at all. If the physical universe exists it should always have existed, but Big Bang theory based on physical existence emerging from a Singularity outside space and time (i.e. not in the physical world at all) renders this impossible. If the Singularity theory is correct then there cannot be a physical world. The Singularity must be all there is. To reiterate, the Singularity is EVERYTHING. It's the plenum. It's the totality of mental existence. There isn't anything physical beyond it. There isn't a "non-existence", a nothingness, waiting to be filled by some cosmic explosion.

The question becomes – where does the idea of the physical universe come from? How can it seem so real and so physical if it's not actually there at all (in physical terms)?

And here comes the ultimate paradox: the physical universe really is there and really is physical and yet it's entirely a mental construct located WITHIN the mental Singularity. There is only one way for this to be achieved and that is mathematically.

Here's the cosmic trick that allows the physical world to be actual and objective yet entirely mental. Monads do not have to physically move outside the Singularity into "space and time"; they simply have to mentally harmonize a set of respective coordinates that reflect the positions they would occupy if they DID leave the Singularity (which of course they can't since there's nothing "beyond" the Singularity; the Singularity is the existential plenum and nothing can exist outside it). The physical world is exactly what you would get if monads erupted from the Singularity and filled all of "space and time". Yet such a world is ABSOLUTELY

INDISTINGUISHABLE from one where no monads leave the Singularity and simply arrange themselves according to mathematical coordinates that would reflect physical existence if such a thing were possible. In other words, the essence of “physicality” is not actually being located in “space and time” but to be arranged mathematically as if space and time existed. It’s the mathematical coordinates assigned to the monads that count, not the physical movement of monads into some physical arena. In fact, monads never move. There’s no need (or indeed possibility) for movement since they are not physical.

A mental mathematical system based on Cartesian coordinates cannot be differentiated from a physical mathematical system based on Cartesian coordinates. Ontologically, there’s no way of telling them apart. But, logically, only the mental version can exist since it does not violate the Plenum Principle.

The “physical” world is governed by mathematical laws, which are, as we now see, non-physical. Why would the world created by non-physical laws not also be non-physical? What does it add to describe something as “physical”? Why not just specify the mathematics that describes the world and leave it at that? When Dr Johnson kicked a stone to refute Bishop Berkeley’s view that there was no material world but just a world of ideas, he simply demonstrated that he had no conception of what Berkeley was talking about. We human beings experience absolutely nothing that is not mediated by our minds. We are our minds.

The world of matter can never be anything other than an unprovable hypothesis since all we can ever experience are mental ideas. Occam’s Razor enjoins us not to multiply entities unnecessarily and, quite simply, there is absolutely no need to posit a material world. As science has demonstrated, this alleged world of matter is best characterized mathematically. Relativity theory, M-theory, Statistical Mechanics, Quantum Mechanics, the Standard Model of particle physics, and the Higgs field and Higgs boson are all staggeringly mathematical. Why not take the logical step and characterize the world they describe as mathematical rather than physical?

Mathematics can be contained within an entirely mental world. What is added by claiming that there is something physical “out there” when we can equally well say that there is something mental “out there” with precisely the same properties as the speculated physical thing, but without the requirement to call it physical? An unattributed quotation about mathematics says, “The Universe exists independently of our minds but understand her mathematical laws and you can control her to an incredible degree of accuracy. Fail to understand them, or ignore them, or forget them, and she can be as malevolent as Moby Dick.”

Bishop Berkeley got to the heart of the matter when he declared that to be is to be perceived. He was asserting that the world would vanish if there wasn’t any observer around. Einstein felt that quantum mechanics with its emphasis on observer-created reality was heading in the same direction and defiantly declared, “I believe the moon is there even if nobody’s looking.”

What scientific materialists are really obsessed with is not a material world per se. What they insist upon is an objective world that persists even if there are no observers; that was there before the birth of humanity and will be there after we’re gone. These aims can all be satisfied by an objective mathematical world. For that, all you need is an infinity of unconscious mathematical minds (monads) all encoded with the entire set of laws of mathematics. The way they mathematically interact with each using their inbuilt laws of mathematics constitutes the objective world that is not dependent on any individual mind, that requires no conscious minds, that is eternal (because mathematics is eternal).

Mathematics, and only mathematics, can deliver an objective world, but there is no need at all for that world to be physical, solid, tangible. We know that atoms are mostly atom space and force fields so where is this “solid” world of matter? There’s simply no such thing. It’s a

fantasy, an illusion. The sooner we concentrate on discovering the secrets of the objective world of mathematics and forget about the mysterious, unobservable “physical” world, the better. MIND IS ALL THERE IS. Mathematical laws shared by all minds are the basis of the world that we call “material”. Rather than talk of mind and matter, we should actually talk about subjective and objective mind. Subjective mind is what we normally think of as mind, and objective mind is what we have historically called matter. There’s no Cartesian dualism. There is only a mental monism, but with mind manifesting both subjectively and objectively.

## **Neoplatonism**

Leibniz had a profound understanding of Neoplatonism and this represents an excellent way of thinking about reality. In Neoplatonism, there is an ineffable source of everything called the “One”. From this emanates a cosmic mind called the Nous (which contemplates the One) and from this emanates a World Soul called the Psyche (which contemplates the Nous). From the World Soul emanates Nature. The World Soul divides itself into two, a higher united half and a lower fragmented half. The higher half remains in touch with the Nous. As for the innumerable fragments of the lower half of World Soul, these are our individual souls that enter into Nature. Many of the souls become enmeshed in the material world and fail to look upwards to the higher World Soul, the Nous and the One. Only a few souls try to contemplate the essence of things and become united with the higher spiritual levels.

## **Am I Alone?**

Descartes famously declared, “I think therefore I am.”

There is no sufficient reason why there should only be a single “I” and a single set of thoughts. Using the *Infinity Multiplier*, we can posit an infinity of I’s and an infinity of sets of thoughts. These thoughts do not need to be conscious. In fact, the vast majority won’t be. The less conscious a thought is, the more objectively mathematical it is. All minds have a substratum of unconscious activity that is entirely objectively mathematical. The so-called world of matter is what is produced by the mathematical unconscious of infinite minds: by the way they interact with each other mathematically, using the mathematical laws that science has traditionally probed.

Kant claimed that there was an unknowable noumenal universe that existed outside space and time but which formed the basis for the phenomenal universe defined by space and time. The only plausible way to understand the noumenal universe is as a mental universe. But Kant also argued that it’s our minds that create the phenomenal world from the noumenal raw material. To put it another way, our minds impose mental categories on unknowable mental (noumenal) data and convert it into knowable mental (phenomenal) data. In this system, only mind exists. The noumenal and phenomenal worlds are both mental. That being the case, what’s the point of splitting a single mental world into knowable and unknowable? What’s the point of saying that minds project reality onto an underlying mental reality? From where do minds get these categories of reason and understanding, and intuitions of time and space, that they then apply to the noumenal universe? How did these minds evolve that could create phenomenal reality so brilliantly?

For Kant, time and space were given to all minds as a priori intuitions, independent of, and preceding, any sense impressions; in fact forming the context and arena in which sensory

impressions could be processed. Next, he proposed categories of thought (unity, plurality, totality, reality, negation, limitation, substance, causality, interaction, possibility, existence and necessity). These structure the way we apprehend reality. They are the mental apparatus that allows us to make sense of the world. But there's no attempt to explain how these miraculous minds came to possess these rather convenient qualities.

Kant was familiar with Leibniz's work but he never really grasped what Leibniz was doing. Kant's system is highly retrograde in relation to Leibniz's.

Kant posits unspecified mental entities (noumena) which do not have any knowable properties but are nevertheless the basis of reality. Somehow, these noumena gave rise to minds which are able to project a phenomenal reality onto the noumena. In many ways, this is a spectacularly incoherent view. Above all, how did the noumena generate minds and where did the intuitions of space and time and the categories of thought come from, and are they completely separate from any hypothetical properties of the noumena?

In Leibniz's system, the "noumena" are the monads themselves, whose properties are known. Their mathematical interaction produces the objective world that the minds are then able to perceive when they evolve consciousness. Before that, they act unconsciously, as mathematical components of the objective mathematical world.

Leibniz's system contains extraordinarily few features. All you have are monads, inbuilt with mathematics, that interact with each other mathematically, creating the objective world. The monads, which are all originally unconscious, individually interact with this objective world they have collectively created and in doing so they become conscious. There's nothing more to it, and mathematics is the glue that binds everything. We could choose to call the monads noumena and the world they generate the phenomenal world but noumena and phenomena are utterly wedded in this system and there are no unknowable elements. Time and space are objectively real, not subjective as in Kant's system. The categories of thought are all categories of mathematical understanding. To understand mathematics fully is to understand the whole system.

There's no denying that Kant was a brilliant philosopher, but unlike Leibniz he was not a mathematical or scientific genius. Kant's "minds" are able to make sense of the universe via some deus ex machina process: they are simply endowed (without any explanation) with the means of understanding the world (the phenomenal world but not the noumenal). In Leibniz's system, minds are mathematical and the world they are attempting to understand is mathematical, based on the same laws, so the gulf between, minds, noumena and phenomena collapses: they are all bound by mathematics. To understand mathematics is to understand the entire system.

#### The Three Possibilities

- 1) Mind creates an idea of an external world but there is no external world. (Classic Idealism)
- 2) There is an external world made of material things. (Classic Materialism)
- 3) There is an external world made of immaterial (mental) things, giving the illusion of physical things. (Leibnizian Panpsychism)

Panlogism: the philosophical doctrine that the universe is the act or realization of *Logos*. In this doctrine, logic and ontology are essentially the same. This view is especially associated with Hegel, but Heraclitus and the Stoics also subscribed to a similar view. (Heraclitus was a firm advocate of both the dialectic and the Logos, the ordering principle of the cosmos; the Stoics adopted Heraclitus's Logos and also spoke of "logoi spermatikoi", meaning seeds of the Logos that act as agents of the Logos. These might be loosely compared with Leibniz's monads.)

#### Five Views of the Absolute:

- 1) Hegel: the Absolute is Unconscious *Geist* (Mind/Spirit imbued with Reason).
- 2) Schopenhauer: the Absolute is Unconscious Will.
- 3) Hartmann: the Absolute is the Unconscious (comprising Reason and Will).
- 4) Nietzsche: the Absolute is Unconscious Will to Power.
- 5) Jung: the Absolute is the Collective Unconscious.

### Block Time

Einstein said of the flow of time that it was only a “stubbornly persistent illusion”. He was a believer in “block time”, that the future is already there, that there’s no difference between the past, the present, and the future: we perceive it as flowing when, really, it’s not. According to this doctrine, the universe is deterministically programmed. Only one future is possible, hence free will is an illusion.

In block time, time doesn’t “happen” at all. Like space, time is simply there, laid out before us. Just as there’s a landscape, so there’s a “timescape”, all around us. Block time is called that because it’s all there as a single block. It’s not being formed as a moment-by-moment moving sequence, as with the conventional view of time. No matter how impossible block time seems, that’s how physicists like to think about time. Intervals of time are measured (with clocks) just as intervals of space are measured with rulers. Although there are events, nothing’s actually happening except the activation of our consciousness to register the events – but all events have already happened.

Einstein’s colleague Hermann Weyl said, “The world doesn’t happen, it simply is.” He contended that only our consciousness is a process going forward in time. Criticising Weyl’s view, Jim Al-Khalili wrote, “Weyl would have us believe that despite nothing ever changing in 4D spacetime, our consciousness still somehow moves through it, which is how we have the feeling of an ever-changing present moment. He claims that this feeling is illusory. But movement, however illusory, implies change, and change requires the passage of time. So if our consciousness experiences change then it must exist outside static spacetime. However mysterious consciousness is, I am not willing to attribute to it such status.”

In a letter to the widow of his friend Michel Besso, Einstein wrote, “The past, present, and future, are only illusions, however persistent.” That was his attempt to console her, but isn’t it actually an extremely disturbing thought that offers no comfort at all?

Max Tegmark wrote, “You have to distinguish two ways of viewing reality. The first is from the outside, like the overview of a physicist studying its mathematical structure. The second way is the inside view of an observer living in the structure. You can think of a frog living in the landscape as the inside view and a high-flying bird surveying the landscape as the outside view. These two perspectives are connected to each other through time. The important thing to remember is that Einstein’s theory taken as a whole represents the bird’s perspective. In relativity all of time already exists. All events, including your entire life, already exist as the mathematical structure called space-time. In space-time, nothing happens or changes because it contains all time at once. From the frog’s perspective it appears that time is flowing, but that is just an illusion. The frog looks out and sees the moon in space, orbiting around Earth. But from the bird’s perspective, the moon’s orbit is a static spiral in space-time. [**‘The frog feels time pass, but from the bird’s perspective it’s all just one eternal, unalterable mathematical structure.’ -- interviewer Adam Frank**] That is it. If the history of our universe were a movie, the mathematical structure would correspond not to a single frame but to the entire DVD. That explains how change can be an illusion. ... If the mathematical universe hypothesis is true, then we aren’t asking which particular mathematical equations describe all of reality anymore. Instead we have to figure out how to separate the frog’s view of the universe—our observations—from

the bird's view. Once we distinguish them we can determine whether we have uncovered the true structure of our universe and figure out which corner of the mathematical cosmos is our home."

Note how this answer "explains away" the phenomenon rather than actually explaining it. Tegmark steers the issue away from the key point – how can there be *any* perception of time flowing if time *isn't* flowing? We are simply told that this is an illusion and then treated to some remarks about a bird's eye view. What the reader wants is to have the illusion explained – because we ourselves are in the position of the frog. Is our idea of free will completely false? Are we all programmed machines? How does consciousness generate the illusion of time passing if time isn't passing?

An enormous number of scientists simply prevaricate, as Tegmark has done. They invent a nice little metaphor that never survives close scrutiny. If block time is true, free will is false, and consciousness invents a phenomenon (the passage of time) that has no underlying reality. These are staggeringly radical and controversial statements to make, yet advocates of block time make no attempt to address these issues and blithely keep spouting their "time is an illusion" mantra.

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Block time resurrects the philosophy of Parmenides, who insisted that all change is illusion; that there is no flow of time. Karl Popper, critiquing block time, referred to Einstein as a new "Parmenides".

## The Information Universe

"It is not unreasonable to imagine that information sits at the core of physics, just as it sits at the core of a computer." -- John Archibald Wheeler

A scientific position that has a resemblance to Leibniz's Monadology is known as "Digital physics". Wikipedia says, "In physics and cosmology, digital physics is a collection of theoretical perspectives based on the premise that the universe is, at heart, describable by information, and is therefore computable. Therefore, the universe can be conceived as either the output of a computer program or as a vast, digital computation device (or, at least, mathematically isomorphic to such a device). Digital physics is grounded in one or more of the following hypotheses; listed in order of increasing strength. The universe, or reality:

is essentially informational (although not every informational ontology needs to be digital);

is essentially computable;

can be described digitally;

is in essence digital;

is itself a computer;

is the output of a simulated reality exercise.

In 1990, distinguished physicist John Wheeler suggested that information is fundamental to the physics of the universe. All things physical are actually informationally based. Wheeler said, "...every item of the physical world has at bottom — a very deep bottom, in most instances — an immaterial source and explanation."

Doesn't that point to immaterial, dimensionless, information systems: monads.

## Non-Existence

The Rig Veda says, “There was neither non-existence nor existence then; there was neither the realm of space nor the sky which is beyond. What stirred? Where?”

Since it’s absurd to assert that there was neither non-existence nor existence (one or other must be true), perhaps we are to understand this as a claim that there was no clear distinction between the two: they were so intermixed that they could not be defined separately. Yet, logically, this cannot be the case. Existence and non-existence can never mix. They can never be together. One permanently excludes the other, unless we take the view that non-existence is that which has no possible effect on existence, has no consequences of any kind, is entirely empty, contentless and redundant; in which case an infinite “amount” of non-existence could be forever “present” with an infinite amount of existence. But since it would have no impact whatever, why say it was “there” at all? We could simply conclude that existence was on its own.

Either non-existence has no consequences with regard to existence (in which case it’s a superfluous hypothesis and can be dismissed) or it excludes the possibility of existence, in which case we wouldn’t be here. Since we are, non-existence can be safely dismissed. Whatever way you look at it, non-existence is refuted.

When we use words such as “nothing”, “space”, “void” and “vacuum”, we certainly can’t mean “non-existence” since this is an impossible or 100% ineffectual concept. In fact, “nothing”, “space”, “void” and “vacuum” can be defined very easily as areas in which no atoms or molecules or present i.e. “real” matter is absent. What can be present instead of matter? Well, we can conceive of gravitational fields, electromagnetic fields, Higgs fields, “virtual” particles and so on.

We know that light can travel through a vacuum, so there must be something for it to travel through, some sort of medium. A void/vacuum is existence devoid of matter, not devoid of existence. How can a vacuum allow light to pass through it if there’s nothing there? Plainly, a light-bearing capacity is present. Even if the ether is done away with (as in relativity theory), there must be something that bears light, that allows it to be “here” at one moment and “there” at another. Those terms only make sense with regard to a space that is always there. General relativity says that space can be “bent”, so whatever space is, it seems to have that property. You can’t bend non-existence since there’s nothing to bend, so space is most definitely something. But given that it’s the presence of matter that bends space, what happens if you remove all matter from space? There’s no gravitational field left. Space is not bent. What is space if it’s devoid of matter? Space, in the last resort, is something that can never be removed because it is ultimately something that is unextended, that consists of dimensionless, mathematical points: it is MIND, and mind can never be removed.

## Zeno

Zeno of Elea was a philosopher of ancient Greece who is famous for using ingenious paradoxes to challenge common sense ideas of motion and change. By revealing fatal contradictions, he hoped to defend Parmenides’s position that change is illusory. (He was a student of Parmenides.)

His key idea is that a moving object can never cover any given distance because, after going half the way, it still has half to go, then half again, and half again, and so on, ad infinitum. Hence, it never reaches the end.

By introducing infinity, Zeno came up with a puzzle that baffled the Greeks and remains challenging even now, thousands of years later. The average person would not be able to provide an answer to Zeno.

His paradoxes are all about whether or not space and time are infinitely divisible and this remains the most important question of all because the answer to it determines whether existence is mental or physical. If space and time are infinitely divisible then existence is mental, monads (dimensionless points) are the *arche* (the fundamental stuff of existence), and the soul, the afterlife and God can all be rationally defended. If space and time are not infinitely divisible then existence is material, the arche consists of something like the 1D-strings of M-theory and it's impossible to rationally defend any religious aspects of existence. There is no scope whatever for any dimensionless, unobservable arena of existence.

The stakes involved in this question can therefore not be any higher.

#### Zeno's Arrow Paradox

Zeno's arrow paradox says that if you examine an arrow in flight at one instant in time, it will appear no different from an arrow hanging motionless in the air. So, what is different about a moving arrow and one frozen in the air? Where is the "motion"? It is apparently unobservable, so does it exist at all or is it just an illusion?

#### "The Achilles"

"Greek philosophy would never quite defeat Zeno – for Zeno had a paradox, a logical paradox that seemed intractable to the reasoning of Greek philosophers. It was the most troubling argument in Greece: Zeno had proved the impossible.

"According to Zeno, nothing in the universe could move. ... Zeno's riddles plagued mathematicians for nearly two thousand years. In his most famous puzzle, 'The Achilles,' Zeno proves that swift Achilles can never catch up with a lumbering tortoise that has a head start." – Charles Seife

In the Achilles paradox, the tortoise has a clear start of, say, ten metres. When Achilles reaches the ten-metre mark, the tortoise has of course moved on and reached a new point. When Achilles reaches that new point, the tortoise has again moved on. Whenever Achilles reaches the point where the tortoise used to be, the tortoise has moved on – so Achilles can *never* logically catch the tortoise. Ipso facto, our notion that in real life Achilles can easily overtake the tortoise and win the race is logically impossible, hence motion and change are illusory because they have no logical basis.

Can you answer Zeno? Can you see the fatal flaw in his argument? If so, you're a genius.

The paradox can be reduced to a less entertaining but more analytical form. The paradox in its most basic form states: how can we ever get from zero to one if there are an infinite number of points lying between these two numbers? If moving from one point to the next point represents an act that takes a finite interval of time to accomplish (no matter how small) then there are an infinite number of such acts to be accomplished, involving an infinite time. So, we can never get from zero to one in a finite time. And if we can't even get as far as one, how can we get anywhere at all?

We shall examine this paradox in detail, given its crucial importance.

#### The Importance of Being Zero

Many problems in mathematics arise from treating zero as an abstraction. We know that one and one equal two, and two and two equal four, but zero and zero are said to equal zero.

According to the Axiom of Archimedes, if you add something to itself enough times, it will exceed any other number in magnitude. Zero seems to confound this axiom, or does it? If zero is ontological and refers to a thing – such as a mathematical point – then zero and zero equals TWO zeros (two mathematical points). In other words, if zero is a thing, it becomes

closely related to the number one. In fact, we can actually introduce a new definition. If we accept Descartes' division of the world into extended matter and unextended mind, we can regard "1" as the basic unit of the material world and "0" as the "1" of the mental world. All of the problems that arise in mathematics as a result of zero are pointing to a fundamental, existential division in the world between mind and matter. Wherever we see zero, we are seeing a reference to the mental, not physical world. Division by zero is problematic because it is the ontological equivalent of dividing matter by mind, the extended by the unextended. Yet it is precisely because of this that humanity's greatest challenge lies in unlocking the secrets of division by zero. At the moment, science has fled from the battlefield. M-theory, the ultimate scientific theory of materialism, tries to assert that zero can never occur in the physical universe, so division by zero is ontologically impossible.

If we add zero to any other number, the number apparently remains unchanged. Likewise, if we add any number of zeros to any number, it remains unchanged. But is that really true? Is one plus one zero the same as one plus two zeros? Or in the latter case do we actually have something different; i.e. we have one plus two zeros (mathematical points) rather than one. We can't observe any additional zeros, but they are logically there. It's their predisposition to materialism that makes scientists treat zero the same way in all contexts i.e. they think that ten zeros and a thousand zeros are exactly the same. But they're not – nine hundred and ninety zeros separate them!

Zero functions like an orange in the presence of apples. If you add one orange to two apples you don't get three apples. Similarly, if you add zero to a number, zero doesn't vanish. It's still there, but it's being ignored.

The conventional way of handling numbers unconsciously reflects the ideology of materialism, of extended things: it is inherently hostile to the idea of mind. If you add non-extension to extension, it doesn't change extension, hence it is disregarded. But, in fact, you continue to have non-extension plus extension. The non-extension is still there. It hasn't gone anywhere. You have chosen to omit it. In calculations based on materialism, this is perfectly valid, but what happens when non-extension collides with extension, as in division by zero? Then you can no longer ignore non-extension: mind has reared its ugly head in the bastions of materialism.

M-theorists try to duck the problem by banning zero from their equations, but they can't just wish it away, no matter how much they might like to. M-theory will definitely fail to be a Grand Unified Theory of Everything because, quite simply, it does not account for everything. It ignores zero, hence infinity, even though these are the two controlling concepts of reality. They are the numbers that define the mental domain, the same domain that M-theorists insist is impossible.

Think of the number line. In terms of mathematical points, there are a "bad infinity" of points, yet the number line can be divided into an infinite number of sub-infinities ("finite" infinities) and each of these finite infinities can be matched to the familiar finite numbers of the extended world: 1, 2, 3, 4 etc. In other words, each finite number is underpinned by a "finite infinity" of mathematical points (monads). Thus the extended world and the unextended world are linked together by guess what? – "finite infinities".

- 1) Thesis: zero and the infinite (the infinite mental domain of non-extension).
- 2) Antithesis: numbers greater than zero and less than infinity (the finite material domain of extension).
- 3) Synthesis: *finite infinity!* (the finite and the infinite in harmony: mind and matter are together and seamlessly interacting).

Scientific materialists have denied that mind and matter can coexist, hence they have

denied reality itself. Any system that rejects zero and infinity is radically incomplete. In mathematical terms, it's insane to omit zero as part of reality. You can't have a scientific reality based on a version of mathematics lacking its core number, its indispensable origin: *zero*. Science and mathematics must reflect each other perfectly and that means that science has to learn to live with zero – with mind!

Existence comprises two interacting worlds. One is made of infinite dimensionless points (monads) and is mental and non-extended. The other is made of “finite infinities” that equate to finite numbers, and is material and extended. Zero and infinity are hard-wired into the material world and are inescapable. In fact, the finite world could not exist without them: they are its fundamental basis.

When all matter is removed from a region of space to create a vacuum, the monads remain, providing a perfect mathematical grid that can be mathematically navigated by entities such as photons (which are themselves dimensionless, of course). Even if you removed all of the matter from the universe, the mathematical grid would endure. This is ABSOLUTE SPACE. Everything has a specific location in a precisely defined coordinate system.

In “extended” reality, “1” is the basic unit, but 1 can be divided into fractions.

In “unextended” reality, “0” is the basic unit, but each unit can be counted as “1”. However, these unextended 1s can never be divided.

Thus we can think of reality as being composed of divisible 1's (the material world) and indivisible 1's (the mental world). The latter are monads, and are zeros in relation to divisible ones.

Looking at it another way, we have the Leibnizian binary system of 1's and 0's, yet it can also be called a system of 1's only i.e. divisible 1's and indivisible 1's. When you divide a divisible 1 infinitely many times, you arrive at indivisible 1. So divisible 1 is just an alpha-infinity collection of indivisible 1's. Divisible 2 is twice that particular infinity and 10 is ten times it.

Indivisible 1's are mind and divisible 1's are matter. And that's all there is in the universe. Instead of ... -2, -1, 0, 1, 2 ..., we could write the number line as ...-2, -1, “indivisible 1” (= indivisible minus 1), 1, 2 ...

We could create a new mathematical system where “indivisible 1” replaces 0 and where we can work out all infinities if we can calculate how many indivisible 1's they contain. Isn't that a better approach to a Grand Unified Theory than simply dogmatically denying the existence of zero (indivisible 1) and infinity? M-theory posits a different indivisible entity: a non-zero 1D string. What sufficient reason could Nature have for stopping at an indivisible finite entity rather than an indivisible zero entity? It's wholly illogical and unmathematical.

Zero is about indivisibility. A finite “indivisible” string is absurd. Why can't we just cut it a bit more? What's to stop us? This debate is one in which Leibniz himself engaged centuries ago, and he of course was the supreme champion of the indivisible point – the monad. Nothing has changed.

Science continues to advocate a version of ancient Greek atomistic theory where atoms cannot be divided. Well, we know that atoms CAN be divided into subatomic particles: electrons, protons and neutrons, and we know that protons and neutrons can be further subdivided into quarks. Why should we imagine that this process ends just because materialistic ideologues want it to? Leibniz rightly asserted that the divisible can always be divided, and division can't cease until the logically indivisible (monads) are all that remain.

If you throw two apples into a black hole, do they entirely vanish from existence or are they crushed down to zero-extended monadic apples? If a black hole singularity is indeed a mathematical point then Leibniz's Monadology is proved correct. After all, if extended things

have disappeared from reality then they must have been compressed into unextended things – monads – because only mathematical points (monads) can exist in a Singularity (and that’s true of the Big Bang singularity too, of course).

“Monad” is the perfect name for the fundamental units of existence because monad means “unit”. A monad is both a 1 (a unit) and a zero (an indivisible, dimensionless mathematical point). It is the synthesis of the binary system based on 1 and 0:

- 1) Thesis = 1
- 2) Antithesis = 0
- 3) Synthesis = the monad, the 1 and the 0 (“something” and “nothing”).

What could be more intuitively right than that the whole of existence should be grounded in the synthesis of something and nothing, being and nothingness? And, as Hegel realized, being and nothingness combine dialectically to produce BECOMING. That’s what monads truly are: eternal becomings, units of existential becoming, driving themselves onwards and upwards forever. What are they becoming? Ultimately, GOD!

The key to the “new” mathematics (ontological mathematics) is:

1 (divisible) divided by 1 (indivisible) = alpha infinity (the first infinity, the “finite infinity”).

When we replace 0 by 1 (indivisible) then an equation such as  $2 \times 0 = 0$  is radically changed. Now it becomes a way of counting monads (indivisible 1s) rather than divisible 1s.

If we rebrand 0 as 1 (indivisible) then puzzling equations such as  $2 \times 0 = 3 \times 0 = 10 \times 0$  vanish. They don’t equal each other at all. Only if zero is regarded as “non-existence” do these equations make any sense. Otherwise,  $2 \times 0 = 2$  monads and  $10 \times 0 = 10$  monads.

What does  $(1/0) \times 0$  equal? Do the 0’s cancel, leaving 1? Or does the rule that multiplying anything by zero generates a result of zero win the day? By using 1 (indivisible), the answer becomes clear: it’s 1. Here’s why. If the two 1 (indivisibles) cancel then we are left with 1.

Alternatively, if we divide 1 by 1 (indivisible), we get alpha infinity. If we then multiply this by 1 (indivisible) we get alpha infinity  $\times$  1 (indivisible) which, according to equation A) above, equals 1. Problem solved. Zero is now manageable. We can relate it to finite quantities: we have tamed the beast!

1 (indivisible) and alpha infinity allow us to cross from mind to matter and back again.

The remarkable difference between 1 (divisible) and 1 (indivisible) is that the former actually contains infinity (alpha infinity). That’s the great secret of the finite world. It’s not finite at all. It’s made out of alpha infinity – an alpha infinity of zeros.

The real paradox at the heart of Zeno’s puzzle is how a finite unit can actually contain infinite points. Yet that’s the inevitable outcome of bad infinity: of numbers going on and on forever. We can break bad infinity into an infinity of good infinities and each of these good infinities can be labelled as a finite unit (because  $0 \times \text{alpha-infinity} = 1$ ), so now we have an infinity of finite units. The mental universe is the bad infinity universe, so to speak, while the material universe is the good infinity universe, of controlled and organized infinity. It’s essential for minds to create a material world in order to master infinity, to allow them to become individuated and independent.

The remarkable thing about the material world is that you can more or less forget about infinity (as scientists do) and just treat everything as finite rather than being based on an underlying infinity. The jump from the mental to the material world can be regarded as an infinite one – an alpha infinity one, to be precise. After that jump, the infinite seems to vanish. It becomes a ghost that haunts the material world, only intruding in places such as black holes.

Think of the following process: take the number 1 and half it, half the answer, half it again and keep halving it. This will produce the series: 1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128...

The terms get smaller and smaller. Where are they heading? -- to zero. Zero is the limit of the series. It is an infinite series and yet it has a limit. Of course, it must have a limit because 1 is itself a finite, limited number. Good infinity is necessarily limited ergo it can't do anything other than reach a limit. Once again, we are forced to confront the paradoxical finitude of the infinite. Even an infinite number of terms can reach a final destination (a limit).

However, it turns out that some series don't reach a limit and spiral off to bad infinity. These are divergent series while those that reach a limit are called convergent. And some series that look as if they might be convergent turn out to be reaching their hypothetical limit rather too slowly and so they too diverge. The ontological finite material world contains only convergent series. Only in extreme conditions such as the Big Bang or black hole singularities does divergence to bad infinity take place – and in those cases we have actually left the material world.

The concepts of limits and convergence are essential to the material world, to taming the infinite. Limits and convergence make the infinite finite. And that's why Achilles beats the tortoise in the material world. He doesn't get stuck in some twilight, infinite trap, as Zeno maintained.

The faulty logic in Zeno's argument is the assumption that the sum of an infinite number of numbers is always infinite. While this seems intuitively logical, it's wrong. For example, the infinite sum  $1 + 1/2 + 1/4 + 1/8 + 1/16 + 1/32 + \dots$  is equal to 2. This type of series is known as a geometric series. A geometric series is a series that begins with one and then each successive term is found by multiplying the previous term by some fixed amount,  $x$ . For the above series,  $x$  is equal to  $1/2$ . Infinite geometric series are known to converge (sum to a finite number) when the multiplicative factor  $x$  is less than one. Both the distance that Achilles travels and the time that elapses before he reaches the tortoise can be expressed as an infinite geometric series with  $x$  less than one. So, Achilles traverses an infinite number of "distance intervals" before catching the tortoise, but because the "distance intervals" are decreasing geometrically, the total distance that he traverses before catching the tortoise is not infinite. Similarly, although it takes an infinite number of time intervals for Achilles to catch the tortoise, the sum of these time intervals is a finite amount of time.

## **The Solution or Not?**

Materialists are very happy with this answer and regard it as more or less definitive. They believe they have brought the monster of infinity under finite control and made it manageable and comprehensible. But is talking about "limits" really addressing the fundamental issue?

The mere existence of a limit doesn't mean it can be reached. Our universe has an observable limit, but it's not one that any human being can ever reach. If limits are unreachable then the problem isn't solved at all. It has been solved merely abstractly and not ontologically. Unless we can prove that the limit not only exists but can also be reached, we have to find another answer. No argument has ever been offered to show that Achilles can actually reach the limit.

The truth is this: it is indeed impossible for an infinitesimal entity (a zero) to get from zero to one by hopping from one point to another, following a geometric progression. Why? – precisely because there are infinite steps to negotiate. Calculus won't help and limits won't help. In this form of the paradox, even if Achilles somehow overtook the tortoise, he himself could still never finish the race.

The real reason why zero to one can be negotiated despite being separated by infinite points is that as soon as any entity becomes more than zero, it becomes finite. If we divide 1 by 0,

we get alpha infinity. However, if we divide 1 by any number greater than 0 and less than 1, we get a finite result. As soon as an entity can beat the “zero trap”, it also beats the infinity trap since it’s only division by zero that generates infinity.

Leibniz used the concept of a “flowing point” to escape from the paradox. A flowing point in continuous motion is always moving away from where it was, hence occupying fractionally more than the zero space of a static point. A flowing point is ipso facto bigger than a stationary point. Even if it is only a tiny difference, it is sufficient to bring the flowing point into the finite domain. A flowing point is all that’s needed to break the “spell” of infinity. Infinity actually only applies to STATIC points.

We can think of the universe as being comprised of nothing but two types of point: static and dynamic. Static points are true zeros. They are monads (minds) and they form an infinite static Mind Field. Each monad is the container for an infinite number of different types of flowing points (each with a different energy). These flowing points flow across the Mind Field and create the finite material world of our experience. They interact in a multitude of ways to provide all of the phenomena we encounter. And that, more or less, is the whole of reality: static points and dynamic points.

The only complication is the concept of the expanding universe. Does that not imply the movement of monads? Well, no, it doesn’t. What it does imply is that a growing number of monads must become “individuated” i.e. they must take a definite position in the absolute Mind Field (Cartesian coordinate system) of six dimensions centred on the Monadic Origin (the Genesis Point that gave rise to the Big Bang in the first place). Monads themselves do not have to physically move, and indeed nor can they physically move since they are minds, not bodies. All they have to do is assume definite and unique coordinates in the 6D space (i.e. they must obey an exclusion principle, like fermions in particle physics). The greater the number of monads that do that, the more that “space” – the Mind Field – expands, and therefore the more space there is in which flowing points can move. Thus space expands both mentally and physically and must be considered an amalgam of the mental and the physical. All physical properties are dependent on the size of the universe, so the more it expands, the more “stretched out” all physical properties become. In the limit, physical space becomes one with mental space.

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So, the real answer to Zeno’s paradox is actually not to do with “limits” at all since this consideration does not address the key issue of how you get to the end of an infinite number of points. Limits only work because of something more fundamental: the ability of points to “flow” and thus become finite. Infinity is a feature of static points, not of moving points. The paradoxes of infinity do not apply to physically moving environments.

Thanks to equation A), an alpha infinity of zeros is equal to a finite number, 1 – so any finite entity can easily bridge an alpha infinity number of points (but not a bad infinity number of points). This is a fundamental property of numbers. The material world is the domain of the finite counting numbers stretching ever onwards to “bad infinity”. You cannot get to “1” without first going through alpha infinity. In the material world, alpha infinity (and multiples of it) is bridged all of the time as a matter of course. Only hypothetically – if we imagine individually counting all of the infinite points between zero and one – would we never get to the end.

As soon as anything is bigger than a point, it is no longer stuck in Zeno’s infinite trap. Zeno’s paradox does not in fact apply to either Achilles or the tortoise. Every time Achilles takes a step, he crosses an infinite numbers of points. Crossing infinity is what all of us do all of the time whenever we go for a walk. “Good” infinity is no barrier to anything finite; only “bad” infinity presents an insurmountable barrier.

It is inevitable, if we have infinite time, that if we start at zero and keep adding, point by point, infinitesimal increments, we will eventually arrive at 1, and from 1 we will get to 2, and indeed all other numbers – because that’s exactly how the number line is constructed. Even though it takes us an infinite number of points to get to 1, we MUST get there in the end, providing we are not restricted by time considerations. What is this telling us? It’s saying that an infinite number of points are finite nevertheless. Never forget, an alpha-infinity of zeros equals one, a finite number.

If you start at zero with the intention of getting to one, and keep hopping forward by one infinitesimal increment at a time, you are not faced by an unbridgeable infinity (bad infinity), but by a good infinity that you will inevitably cross (if you have infinite time). The gap between one and you is always shrinking as you hop forward. You are converging on it. It is the limit of your journey. You are not involved in an unlimited process (as you would be if you were confronting bad infinity, when no amount of time would allow you to reach the end). That’s why you must draw the clearest distinction between good and bad infinity.

“Good” infinity = limited infinity, finite infinity, convergent infinity, contained infinity, manageable infinity, alpha infinity.

“Bad” infinity = unlimited infinity, infinite infinity, divergent infinity, uncontained infinity, unmanageable infinity, omega infinity.

Zeno’s paradox is a fallacy because it fails to distinguish between these two radically different infinities. It is attempting to apply a bad infinity argument to a good infinity scenario. With good infinity, you can always reach the end. With bad infinity, you never can. Numbers themselves are limits. Even though there are infinite points between 0 and 1, every one of them can be exactly labelled (i.e. given a unique number). With bad infinity, the assigning of numbers never ends. We cannot assign a unique number to the terminus of bad infinity because we can never reach it. We do, however, reach the terminus of good, alpha infinity and it has a unique and specific number: 1.

If we can attach a precise number to something then it’s limited and manageable. If we can’t, it’s unlimited and unmanageable.

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The essence of Zeno’s argument in his paradox is that we cannot finish the act of sequentially going through an infinite sequence. Although calculus shows that the sum of an infinite number of terms can be finite, it does not appear to explain how we can finish going through an infinite number of points if we have to go through them one by one.

The paradox does not actually consider the time it would take Achilles to catch the tortoise. Rather, it simply points out that for Achilles to catch up with the tortoise, he must first perform an infinite number of acts, which seems to be impossible in and of itself, and would in any case seem to involve an infinite amount of time. In fact, we could equally well frame the paradox in terms of time rather than space.

If there is a one-to-one mapping between the acts and the points in space, or intervals in time during which that act takes place, then we need to complete an infinite number of acts to finish it. But surely an infinite sequence cannot be finished. Wikipedia says of this paradox:

“Zeno’s arguments are often misrepresented in the popular literature. That is, Zeno is often said to have argued that the sum of an infinite number of terms must itself be infinite – with the result that not only the time, but also the distance to be travelled, become infinite. However, none of the original ancient sources has Zeno discussing the sum of any infinite series. Simplicius has Zeno saying, ‘It is impossible to traverse an infinite number of things in a finite time.’ This presents Zeno’s problem not with finding the sum, but rather with finishing a task with an infinite

number of steps: how can one ever get from A to B, if an infinite number of (non-instantaneous) events can be identified that need to precede the arrival at B, and one cannot reach even the beginning of a ‘last event’?”

The fact is that Zeno would be right if we existed as dimensionless beings that hopped from one mathematical point to the next and then the next, and so on. But we’re not, and we don’t.

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The key lesson is that the finite is buried in the infinite, and vice versa. An infinite number of points can always be counted off into finite numbers.

The Einsteinian Solution to Zeno’s Paradox of Achilles and the Tortoise

Everything is moving at the same overall speed – including Achilles and the tortoise – but this speed is divided between space and time. Achilles always beats the tortoise because he is moving faster through space (and correspondingly slower through time). His extra speed through space and reduced speed through time both work to his advantage, so he wins (think, in the limit, of light which is everywhere at once because it doesn’t experience time at all).

The key to the paradox is that neither Achilles nor the tortoise can ever slow down. The paradox relies on artificially analysing the race over shorter and shorter intervals – and decoupling space and time – but such decreasing intervals never apply in reality because everything is moving at a constant speed through spacetime, and space and time can never be decoupled.

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Guess what? – Achilles doesn’t always beat the tortoise! If the tortoise reaches the event horizon of a black hole before Achilles, it will never be caught! – because time itself slows down and finally stops.

“So if you, watching from a safe distance, attempt to witness my fall into the hole, you’ll see me fall more and more slowly as the light delay increases. You’ll never see me actually get to the event horizon. My watch, to you, will tick more and more slowly, but will never reach the time that I see as I fall into the black hole. Notice that this is really an optical effect caused by the paths of the light rays. This is also true for the dying star itself. If you attempt to witness the black hole’s formation, you’ll see the star collapse more and more slowly, never precisely reaching the Schwarzschild radius. Now, this led early on to an image of a black hole as a strange sort of suspended-animation object, a ‘frozen star’ with immobilized falling debris and gedankenexperiment astronauts hanging above it in eternally slowing precipitation. This is, however, not what you’d see. The reason is that as things get closer to the event horizon, they also get dimmer. Light from them is redshifted and dimmed, and if one considers that light is actually made up of discrete photons, the time of escape of the last photon is actually finite, and not very large. So things would wink out as they got close, including the dying star, and the name ‘black hole’ is justified. As an example, take the eight-solar-mass black hole I mentioned before. If you start timing from the moment you see the object half a Schwarzschild radius away from the event horizon, the light will dim exponentially from that point on with a characteristic time of about 0.2 milliseconds, and the time of the last photon is about a hundredth of a second later. The times scale proportionally to the mass of the black hole. If I jump into a black hole, I don’t remain visible for long. Also, if I jump in, I won’t hit the surface of the ‘frozen star.’ It goes through the event horizon at another point in spacetime from where/when I do.” -- Matt McIrvin.

“As an object crosses the black hole’s event horizon, its image seems to freeze and fade

away because you can't see the light it emits after that point." -- Abraham Loeb  
The Grin of the Cheshire Cat from *Alice in Wonderland*

The frozen image that gradually fades away. Did the Cheshire cat come from a black hole, and return to it?

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According to current cosmological thinking, around 70% of the universe is composed of "dark energy", which acts as a repulsive force opposing the attractive gravitational force. So, the universe is entering a phase of accelerated expansion. Eventually, all of the galaxies around us will have gone – the galaxies will have raced away from us and passed from our knowledge, though it has been said that they might leave behind a fading afterimage – the Cheshire cat again.

#### Monads and the Plenum

An infinity of "nothings", each with infinite capacity to do work i.e. they have infinite energy. Only monads can satisfy the *Plenum Principle* – filling every possible point of existence. Nothing else can. Some people might argue that a single monad with infinite capacity would also satisfy this principle, but this is false. The *Infinity Multiplier* goes hand in hand with the Plenum Principle and states that if there is one instance of an existential substance, there is no sufficient reason why there should not be an infinite number, so one automatically becomes infinity. Whatever circumstances allowed one monad to exist would be equally valid for an infinite number to exist, there being no sufficient reason to prevent it. Nothing can exist outside the Plenum since every conceivable possibility is catered for by the Plenum. It is, after all, infinite, and nothing can exist outwith existential infinity since it literally accommodates *everything*.

#### Ontological versus Abstract Zero

At school, you are taught that if you have five apples and you then subtract five apples, you have zero apples left. This is "abstract" zero.

Ontologically, of course, the five apples didn't disappear. Someone else took them, or you ate them, or they were pulped, or sold, or fed to horses, or whatever.

Similarly, if you subtract ten zeros from ten zeros, the answer might seem to be zero zeros. But where, ontologically, did the original ten zeros go? Like the apples, they didn't vanish. They're still somewhere. They can never be destroyed.

Ontologically, there is no such thing as "abstract" zero i.e. you can't annihilate anything that already exists. You particularly cannot annihilate monads – zeros.

### **The Creation of True Knowledge?**

Can true knowledge be created from nothing? Or is Lucretius right that nothing can be created from nothing? If so, all true knowledge has always existed, like the Platonic Forms. It's innate. We all have access to it. It's just waiting there for us – the complete knowledge of everything, the knowledge of God.

Absolute knowledge does exist eternally – it's the knowledge of mathematics. All other knowledge is provisional and fallible. It comes into being by combining various mathematical elements in novel ways. This type of knowledge is created by a mathematical process but does not belong to the eternal verities of mathematics.

Descartes argued that since we have a concept of an infinite, perfect being in our minds

then such a being must exist. This is a rather dubious proposition. What's true is that we have an innate concept of infinity and we combine it with the concept of a being (ourselves writ large) and come up with God. God is infinite. All other beings are finite. We are all poised between zero and infinity. Can some of us bridge the gap and become God?

“What is man in nature? Nothing in relation to the infinite, everything in relation to nothing, a mean between nothing and everything.” – Pascal

“Nothingness is being and being nothingness ... Our limited mind cannot grasp or fathom this, for it joins infinity.” – Azrael of Gerona

If zero is non-existence, *nothing* can come from it. If it is existence then *everything* can come from it.

### Abstract Zero versus Ontological Zero

Abstract zero, the zero of non-existence, has no properties, qualities or consequences.

Ontological zero, the zero of existence, has infinite energy.

We can think of the two types of 0 coexisting, in a manner of speaking, but abstract zero (non-existence) adds nothing to ontological zero (existence), hence has no observable consequences.

Science treats zero as non-existence. Ontological mathematics treats it as pure existence, containing infinity. To be infinite means to contain *all* numbers (all frequencies of energy).

Zero is the origin. From the zero of non-existence, nothing comes. From the zero of existence, everything comes.

### The Imaginary Number

“The imaginary number is a fine and wonderful refuge of the divine spirit – almost an amphibian between being and non-being.” -- Leibniz

“Leibniz thought that “i” was a bizarre mix between existence and nonexistence, something like a cross between 1 and (God) and 0 (Void) in his binary scheme. Leibniz likened i to the Holy Spirit: both have an ethereal and barely substantial existence.” – Charles Seife

It was Descartes who scornfully referred to the square roots of negative numbers as “imaginary”. Leibniz initially followed the popular sentiment that imaginary numbers were bizarre elements of abstract mathematics that had nothing to do with reality. It took him decades to attain the astounding insight that imaginary numbers are ontologically real: they have actual existence as much as “real” numbers. With that divine intuition, he was able to formulate the Illuminati's six-dimensional universe consisting of three real dimensions exactly matched by three imaginary dimensions. This is the surest foundation of reality. All attempts to privilege real numbers over imaginary numbers are absurd. The mathematical mind of the universe doesn't assign one type any greater reality than the other. It isn't baffled by imaginary numbers as humans are. Science is still wedded to the primitive superstition that imaginary numbers are weird, “fairy” numbers that haunt the real world.

Gauss's fundamental theorem of algebra states that a polynomial equation of degree  $n$  has  $n$  roots. A quadratic equation (degree 2) has two roots, a cubic has 3 roots and a quartic 4 roots. But, crucially, this is true only if imaginary numbers are accepted as well as real numbers. Hasn't the penny dropped? Imaginary numbers are as fundamental to mathematics as real numbers. Mathematical self-consistency collapses without them. Mathematics is formally incomplete without imaginary numbers. Reality is based on complete, not incomplete, mathematics. Science on the other hand is formally based on incomplete mathematics and hence has to “suffer” the irritating presence of imaginary numbers in so many of its equations. One would have thought that scientists would by now have added  $2 + 2$  to get 4 (or perhaps  $2^2 + 2i^2$  to get

zero!).

*Imaginary numbers are embedded in reality.*

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“The central aim of Eastern mysticism is to experience all phenomena in the world as manifestations of the same ultimate reality. This reality is seen as the essence of the universe, underlying and unifying the multitude of things and events we observe. The Hindus call it *Brahman*, the Buddhists *Dharmakaya* (the Body of Being), or *Tathata* (Suchness), and the Taoists *Tao*; each affirming that it transcends our intellectual concepts, and defies further conception. This ultimate essence, however, cannot be separated from its multiple manifestations. It is central to its very nature to manifest itself in myriad forms which come into being and disintegrate, transforming themselves into one another without end. In its phenomenal aspect, the cosmic One is thus intrinsically dynamic, and the apprehension of its dynamic nature is basic to all schools of Eastern mysticism.” – Fritjof Capra, *The Tao of Physics*

This Eastern view is compatible with the philosophy of Heraclitus (one of the great Grand Masters of the Illuminati in the ancient world) who characterised the universe as an ever-living fire (living energy we might say now), fundamentally dynamical and dialectical in its nature. For Heraclitus, everything flows, everything is becoming, there is a unity of opposites in perpetual strife, and underlying everything is the Logos – a rational set of laws.

What is the difference between Eastern religion and Illuminism? The former chose to embark on a mystical path and its main exponents are priests, monks and holy men. The latter, on the contrary, chose the path of hard analysis, logic, reason and, above all, mathematics. Its main exponents are philosophers, scientists and mathematicians.

While the Illuminati have always tolerated mysticism to a certain degree, ultimately they place no confidence in it if it cannot be further processed into mathematics. Mathematics, and nothing else, is how we gain true understanding of the world. Eastern mysticism might be a good path for non-mathematicians to follow. Perhaps it's as close as they will get to the truth. Nevertheless, Eastern religion has many ludicrous elements – none more so than the concept of karma. This was the Eastern attempt, in the absence of a moral monotheistic God, to build morality into the fabric of the universe itself.

However, the universe is fundamentally amoral at its basic level, just as Western scientific materialism maintains. Good and evil enter the universe at the same time as consciousness, as Hegel asserted. Only a conscious mind can be moral or immoral. Consciousness forms in the evolving universe at a late stage. Billions of years can pass when there is no moral dimension in the universe at all. Therefore “karma” would have to be something that emerged from the universe rather than being a fundamental part of it from day one. If the theory of karma were remotely true, we would observe a universe getting better and better in a moral sense, thanks to the relentless operation of karma, punishing the bad and rewarding the good. We observe no such thing. The wicked are always in power. The Devil always reigns.

The only thing that will ever help the universe to become a better place is reason. This world of ours remains overwhelmingly hostile to rationality. Only the dialectical process – over an immensely long timescale – delivers a better universe. Look at humanity. The vast majority are still in thrall to faith, superstition and ignorance. Only a small number are rational, and they are the ones who have delivered all of the scientific progress from which the human race has benefitted. Rather than being revered for their achievements, they are treated with scorn as geeks, dorks and nerds, while vacuous celebrities and greedy entrepreneurs are lauded as gods.

“In general relativity, the gravitational field and the structure, or geometry, of space are identical. They are represented in Einstein's field equations by one and the same mathematical

quantity. In Einstein's theory, then, matter cannot be separated from its field of gravity, and the field of gravity cannot be separated from the curved space. Matter and space are thus seen to be inseparable and interdependent parts of a single whole." – Fritjof Capra

"In the Eastern view, the reality underlying all phenomena is beyond all forms and defies all description and specification. It is therefore often said to be formless, empty or void. But this emptiness is not to be taken for mere nothingness. It is, on the contrary, the essence of all forms and the source of all life. ... Buddhists express the same idea when they call the ultimate reality *Sunyata* – 'Emptiness', or 'the Void' – and affirm that it is a living Void which gives birth to all forms in the phenomenal world. The Taoists ascribe a similar infinite and endless creativity to the *Tao* and, again, call it empty. ... In spite of using terms like empty and void, the Eastern sages make it clear that they do not mean ordinary emptiness when they talk about *Brahman*, *Sunyata* or *Tao*, but, on the contrary, a Void which has infinite creative potential." – Fritjof Capra

Everything that Eastern religion seeks to achieve is accomplished far more effectively by Leibniz's infinite ocean of monads. Each monad is "nothing" in physical terms (being a dimensionless mathematical point), but also contains an infinite amount of energy. It is both nothing and everything (in terms of numbers): zero and infinity. Whereas Easterners talk in vague, mystical terms, Leibniz, one of the world's greatest logicians and the discoverer of calculus, provides a supremely analytical and logical platform based on precise mathematics. Leibnizian Monadology doesn't involve any woo woo, voodoo or mumbo jumbo. It's not nebulous and hazy, retreating into weird Zen paradoxes (e.g. the sound of one hand clapping – whatever that means) to try to explain itself.

Leibniz assigned the number zero to each of the fundamental units of existence. How more precise could he be? Monads are ontological zeros: they have real existence. They are the arche, the basic substance of existence from which everything else is constructed i.e. everything comes from "nothing" – as in Big Bang theory, except this is a very different type of "nothing" from the one scientific materialists have in mind. "Nothing" here refers to mind!

Eastern thinkers should be able to grasp that Leibniz has placed their mystical systems on the firmest of mathematical footings, so shouldn't they all embrace the Monadology? All Eastern religions can retain their present form and ceremonies, while acknowledging that they are now substructures of Illuminism.

There is no Creator God in Leibniz's system. No monad is inherently more special than any other; they're all on the same footing. There are no privileged monads, no "blue bloods". This is the purest meritocracy. The monads that prove the most talented and hardest working will go furthest in the cosmic journey.

Although God is not an inherent part of the monadic system in any explicit sense, he is absolutely implicit. *Every* monad has the potential to achieve maximum actualization and thus reach Godhood. We can all become God. Reincarnation is fundamental to this view. We accomplish perfection across countless mortal lives as we progress on our immortal journey. Just as numbers are finite entities within an infinite system, so are mortal lives within an immortal existence. In Eastern religion, the continuous cycle of birth, death and rebirth in the phenomenal world is called *samsara* ("incessantly in motion"). Escape from *samsara* occurs only when enlightenment is attained. For Hindus, enlightenment is called *moksha*, for Buddhists it's *nirvana*, for Taoists it's *Tao*, and for Gnostics it's *gnosis*.

Theoretically, every last monad could become God and we would live in a perfectly divine universe. In practice, once the universe has arrived at a certain finite threshold of divinity – once a certain number of monads have achieved Godhood – they then dictate the outcome for the universe. They can destroy it and begin again (so-called "divine suicide"), or they can instantly promote all monads to Godhood and relish infinite divine bliss for a short period

(though this too must conclude with divine suicide since the universe itself must reincarnate).

This is the *perfect* system. God exists as potential within every monad and the purpose of the cosmic journey is to actualise that divine potential. The rational cosmic dialectic – not moral karma – achieves this. As a necessary part of the dialectic, many monads oppose progress and evolution and operate entirely selfishly and stupidly (e.g. “Abrahamic” monads). It is through the overcoming of these Satanic monads that the divine monads become strong, powerful and supremely rational. Opposition is the motor of progress. Divinity has to be fought for and won. Achieving Godhood is the culmination of the ultimate cosmic struggle. Only the greatest heroes can manage it. Are you a hero? Can you become God? Then join the Illuminist cause.

## **Private Language and Private Gods**

One of the primary disproofs of a Creator God lies in the concept of a private language, a subject in which Wittgenstein took a great interest.

A private language can be defined as one that can be understood only by one person, that by its very nature can be understood only by that one person. It’s *impossible* for anyone else to understand it (because then it would be a public rather than private language). It cannot be translatable into another language because that would make it public. It cannot be learned by any other person because, again, that would make it public. Although it’s unlearnable and untranslatable, its one speaker must be able to make sense of it and use it as he would a public language.

Wittgenstein argued that the idea of such a private language was incoherent and impossible.

Let’s imagine the Creator God before Creation, existing in a state of perfect isolation. There’s no one else apart from him. In order to create an intelligible world, he would have to be an intelligent being using an intelligent language. He would have to be able to think clearly and coherently and understand perfectly how all of the parts of his staggeringly complex Creation fit together – otherwise it would be utter chaos and Creation would instantly disintegrate.

If Wittgenstein is right then a Creator God capable of the act of divine Creation is impossible. Such a God could never construct a private language which would enable him to think in the manner required by an omnipotent Creator. God would be a real thicko, lost in the cosmos for eternity, on his own.

If a private language is impossible, it follows that all language is public, hence that language is a social phenomenon. If language is the basis of consciousness then consciousness is also a social phenomenon. Hegel maintained that self-consciousness cannot arise in isolation (and thereby denied that there could ever have been a self-conscious Creator God). Self-consciousness requires at least one external object – and in particular another potential self-consciousness. The two “objects” come to self-consciousness through their dialectical interaction.

Any animal that does not have a public language is not conscious. Any animal that has a rudimentary signalling or grunting language *is* conscious, albeit at an extremely primitive level.

Some have argued that if a private language is impossible, it might therefore not make any sense to talk of private sensations such as qualia. This does not follow at all. Qualia are concerned with subjective experience, not with language. Any mind can experience something. A public language is not a prerequisite for experience. It would be necessary of course if we wished to share our experience and make conceptual sense of it, but not to have the experience itself. Any entity with sensory apparatus will have sensory experiences. Those experiences have no necessary connection with language or consciousness. If qualia are being necessarily linked to

consciousness then that is overextending the definition of qualia. Any animal can have qualia: that does not make them conscious. If we denied that animals had qualia, we would be turning them into the sort of living automata described by Descartes.

In short, thought is linguistic, language is public and therefore thought, the basis of consciousness, is social and collective. There is no such thing as an isolated, conscious, thinking being with a private language – hence the Abrahamist Creator God is logically refuted.

An interesting offshoot of Wittgenstein’s position is that Descartes’ famous “I think therefore I am” is refuted if it refers strictly to one person. In Descartes’ thought experiment, there is only “I”, but according to Wittgenstein, such an “I” would have no language, no consciousness and be incapable of performing the doubting process described by Descartes. The fact that Descartes could do such a thing is proof of the existence of others.

Only when a child acquires language can it enter the social world and become “I”. Nothing is an “I” unless it has language. Only an “I” can be conscious. The Abrahamic Creator God was not an “I”, hence is refuted. *Yahweh* means, “I am who I am.” This is precisely the name that an alleged Creator God could *never* have – because it’s impossible for a being on his own to be an “I”. Equally, a human baby on a desert island, with endless food and drink at its disposal, would NEVER become conscious as it grew up.

So, Wittgenstein has furnished a persuasive argument for the falsehood of solipsism. If you can think, there must be at least one other who can think too.

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There is an ongoing confusion over what constitutes a mental experience. For example, Jean-Paul Sartre rejected the unconscious as a fiction, as empirically unverifiable. He argued that something cannot be both “unconscious” and “mental” at the same time i.e. he equated something being “mental” with being an element of consciousness; something is mental only if it present to consciousness. This is an exceptionally narrow definition of “mental”, and it also seeks to define qualia as necessarily reflecting consciousness.

Illuminism uses a far more expansive concept of “mental”. Mental events are not required to be conscious events. Qualia are not required to be linked to consciousness. The mind is a subject that has all manner of experiences, some conscious, most not. Consciousness is in fact only a tiny component of mental activity, the cream at the top, the tip of the iceberg.

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“If a lion could talk, we could not understand him.” – Wittgenstein

Wittgenstein’s point is that even if we had the perfect Lionese-English dictionary, we still wouldn’t truly understand what it’s like to be a lion. We would need to experience the ways of the lion kingdom in order to understand it.

We can see the same problem amongst human beings. Mythos and Logos people do not genuinely understand each other. They use the same language, but they use it so differently that they are entirely alien to each other.

It’s all about empathy, and we can only authentically empathise with those on our wavelength. We can’t empathise with lions. We can’t even empathise with others of our own species who are too different from us.

## **The Mathematical Book of Existence**

Imagine mathematics as a dictionary, providing impeccable definitions of all possible

words in the mathematical language, and including a precise definition of all the syntax and grammar rules. Imagine this dictionary encoded within every monad, hence within the whole of existence.

What unfolds in the universe can be imagined as the endless books that authors write using this language. All authors are trying to improve on previous authors, are heavily influenced by previous authors, and are always seeking new angles and new topics. This is the equivalent of the dialectical process. All authors are attempting to write the perfect book, just as the whole universe aches for perfection.

The holy books of Abrahamism are plainly not the works of God, because a divine book would be a perfect book, and a perfect book's perfection would be self-evident to all. The fact that countless people can pick up the Koran, the Torah, and the Bible and immediately find these "divine" books boring, idiotic, preposterous, patently wrong and downright grotesque and offensive is proof by itself that these are not divine works. The problem lies not with the reader but the author(s). He didn't do a good job, did he?

Muslims say that the Koran is perfect poetry – well, they would, wouldn't they? Strangely, non-Muslims are not impressed at all by the Koran and find it incredibly badly written, almost as if it was the product of the ramblings of an illiterate desert tribesman!

When a true book of perfection is produced then by definition it must be recognised as such by all. This divine book is the one that will be produced at the end of history.

## **Archetypal Control**

The conscious "I" versus the unconscious "I" – the latter is composed of many components (archetypes) because there is no mechanism to bind them all into one. It is conscious reason that allows a single, unifying "I" to be created. A soul can be conscious only when it develops an "I". Otherwise, it remains under archetypal, instinctual control.

The ancient bicameral mind – lacking a clear sense of self; a well-developed "I" – was prone to hearing voices of the archetypes (the "Gods", as they thought of them). These Gods controlled their lives.

Abrahamists are modern bicamerals, still controlled by ancient gods, and voices of "revelation". Abraham, Moses, Jesus and Mohammed all heard "voices". If they were around today, they would be diagnosed as dangerous schizophrenics and locked up in mental asylums. Isn't it extraordinary how susceptible most human beings are to madmen? Abrahamists sanctify lunacy!

### **Substance**

One of the key questions of existence is: what is a substance? The simplest definition is "something that doesn't depend on anything else for its existence." In *that* respect, all substances are necessarily unique.

However, we can also use "substance" in the sense of those things that are of the same kind, and can interact with each other. If things cannot interact, they do not belong to the same substance. In Descartes' philosophy, mind and matter were two radically different substances and no one could give any plausible explanation of how they could interact. Indeed, no such answer can be given because wholly different substances can never interact – by definition.

Leibniz's monads are all unique and none depends on any other for its existence, yet all monads are of the same kind. In his published *Monadology*, designed to cater for a Christian audience, Leibniz made the monads non-interactive – and all apparent interactivity was in fact

provided by a divine, “pre-established” harmony. God not only created every individual monad (soul), but then perfectly programmed each of them, and, moreover, programmed each of them to perfectly reflect all of the others, even though they exchanged no information whatever with the others. The whole system advanced in perfect harmony, and the Creator God had complete foreknowledge of everything.

This was the perfect logical account of a logical Creator logically going about the task of creating the “best of all possible worlds.”

Leibniz’s view in this context is perfectly consistent with “block time” i.e. where the whole of time exists at once. It is all programmed into the monads. All past, present, and future events are known. The ultimate fate of each monad is already known (to God). Existence is just the inexorable unfolding of a perfect program written by the perfect programmer. There are no bugs. Everything happens flawlessly, in precise, inevitable sequence. Everything that would happen to each monad was present and known right at the beginning, at the moment of Creation itself.

Of course, this system has no point – just as any system based on “foreknowledge”, determinism, predestination, and knowing the future has no point. Life has a meaning and a point ONLY if the future is unknown. Free will is compatible only with an unknown future.

Leibniz’s true, unpublished Monadology (written exclusively for the Illuminati) entirely supported an unknowable future, free will, no Creator or Creation event, and complete interactivity between all of the monads. This was a “flowing time” system, not block time.

The Leibnizian “infinity multiplier” says that if one of any substance is possible then there is no sufficient reason why an infinite number of that same substance should not exist, each one being a particular, unique instance of the same substance. The conditions that gave rise to one must be able to give rise to a limitless amount, assuming no constraining factors (and no such constraining factors are applicable to existence at its fundamental level). Each monad is a unique instance and expression of a single substance (the monadic substance). The monadic substance is the arche – the fundamental stuff of existence, and there are infinite independent, autonomous instances of that one substance. This system is a strict monism rather than dualism or polyism.

Leibniz asserted that existence must be monistic. There can be only one substance. A monad is a dimensionless point. What possible basic, fundamental entity could be said to exist alongside it? The monadic substance is the simplest possible substance. A monad is a zero, an indivisible entity. It requires nothing. It doesn’t depend on anything. Everything else, of logical necessity, must be related to it and constructed from it. So, there IS a sufficient reason why the monad should be the fundamental unit of existence. There is NO sufficient reason why anything else should be. The monad can, of logical necessity, have no rivals. There can be no secondary, non-monadic substance, existing separately and independently of monads, and not interacting with it. After all, what possible substance could be logically constructed that was not based on fundamental existential units, was not grounded in dimensionless mathematical points?

Where Leibniz argued that if one basic existential unit can exist then an infinite number of these units can exist, creating an existential plenum, scientific materialists claim that if one universe can exist then an infinite number of universes can exist, creating a universal plenum – the famous MULTIVERSE.

For Leibniz, there is ONE universe made of infinite parts; for scientific materialists there are infinite universes, each of which might consist of infinite parts.

Leibniz’s single universe is one of logical necessity: it is the simplest possible. There is only one set of mathematical laws. There is only one type of fundamental unit (the monad). It cannot be pared down any further. It is the simplest system in term of hypotheses and the richest in terms of phenomena that can arise from it, hence is the “best of all possible worlds”. It is the

perfect expression of Occam's Razor, which insists that entities should not be multiplied unnecessarily i.e. the simplest explanation will invariably be the best unless there is a sufficient reason why it shouldn't be.

Now consider the scientific materialist alternative: it is the most complex possible. There are infinite different sets of physics (each applying to a different universe), infinite sets of fundamental constants, infinite sets of starting conditions and even, in Max Tegmark's view, infinite sets of mathematics. There are infinite potential fundamental particles (a different set for each universe). Unlike Leibniz's system which cannot be any simpler, this scientific materialist Multiverse cannot be made any more complex: it literally accommodates every conceivable possibility, logical or not. It is the extravagant opposite of Occam's Razor. What sufficient reason is there for asserting that there are infinite different versions of mathematics, of physics, of fundamental particles, fundamental constants, or initial conditions? Is there any reason for it at all beyond the ability to say such things? By the same token, a Christian might say that there are infinite orders of angels, infinite orders of demons, infinite devils, infinite saints, infinite punishments in hell, infinite levels of heaven, and so on. Such statements can certainly be made, but do they contain any meaning at all?

The Multiverse amounts to saying that scientists have absolutely no idea why anything is as it is beyond sheer randomness. Every possible "answer" exists, and we just happen to inhabit this answer – our particular universe.

To assert that there are infinite answers is logically to say that there is no answer at all. Answers aren't answers in this system: they are just statistical inevitabilities. Nothing is explained.

Scientific materialists constantly scoff at Abrahamists for saying that "God" is the answer to everything. Yet what's their alternative? They simply say that every conceivable possibility will be realised in the universe, so the conditions that gave rise to our universe are inevitable. There is no explanation for the starting conditions of our universe because these conditions are simply one compulsory set of conditions that must exist in an ensemble of infinite possible sets of starting conditions. The same goes for everything. Whatever is being discussed, it's just a statistical certainty in an infinite set of possibilities. So, where Abrahamists always say "God" as their all-encompassing answer, scientific materialists always say, "statistical inevitability". Why is anything the way it is? – because of statistics. Is that a satisfying, acceptable answer? Is it an explanation?

Note that in the Abrahamist system, existence has no formal meaning. God has complete foreknowledge of everything, so people are just programs fulfilling their code, as Leibniz made clear in his published *Monadology*. People are "saved" or "damned" because of the way God programmed them: not because of any actions freely chosen by them. Logically, there is no free will and no free choice in Abrahamism.

In the scientific materialist system, existence again has no formal meaning. It's not inevitable divine programming that guides you now, but inevitable statistical outcomes. Again, there is no free will or free choice. Everything is accounted for statistically. In the "many worlds" interpretation of quantum mechanics (which captures the essence of the Multiverse "philosophy"), there are infinite versions of you (or at any rate an uncountably large number), and every conceivable choice you could make IS made – by one version of you or another. This life you are leading right now contains no free choices at all. You are simply an inevitable manifestation of one set of an uncountably large number of possible sets of choices you might have made. Every conceivable life you might have led is being led somewhere. Your choices are all entirely illusory because there are no choices in this system: all possibilities are enacted with machinelike certainty.

Abrahamism and scientific materialism both represent the absolute denial of human free will and choice, for radically different reasons (one to ensure God's infinite foreknowledge, and one to reflect infinite, inevitable statistical outcomes), and both offer entirely vacuous answers to existence ("God" in one case, and "statistical inevitability") in the other. There is no point, purpose or meaning in either system – just sheer inevitability.

Both of these systems are HORRIFIC! They are anti-life. They are an insult to humanity. Both degrade the human condition, and make us mere automata. Both must be absolutely rejected.

## **The Sensorium and Cognitorium**

The *sensorium* is the "sensing thing". It was the term used by Newton to refer to the seat in the brain of sensation and perception. We can contrast it with the *cognitorium* (the "cognizing thing") – the seat in the brain of cognition (including intuition, reasoning and processing the data from the sensorium).

Animals live almost exclusively in the sensorium. They barely have any cognitorium at all. Most human beings are also locked in the sensorium (all Myers-Briggs sensing and feeling types reside here; it is the home of the Mythos species, and of extravert types (looking outwards)). In other words, most human beings are just sophisticated animals.

Myers-Briggs intuitive and thinking types are the denizens of the cognitorium; it is also the home of introverted types (looking inwards). The Logos species "owns" the cognitorium.

Humanity needs to leave the sensorium and migrate to the cognitorium. That is the next stage of human evolution. When we move, we will be leaving behind the past, and the crazy Mythos narratives such as those of Abrahamism.

While mathematics and philosophy are quintessential cognitorium subjects, science is a strange hybrid. It reveres the Newtonian sensorium – but then uses the cognitorium to make sense of it. Its inherent contradictions arise from the fact that it straddles two domains that sit uneasily with each other. Science can never quite work out what it is and what it's doing. Is it searching for the truth, or not? Is it about truths of reason (cognitorium truths) or truths of fact (sensorium truths)? Is it about the necessary, analytic truths of the cognitorium or the contingent, synthetic truths of the sensorium? Is it about cognitorium rationalism, or sensorium empiricism? Is it about cognitorium mathematics? Science, frankly, is a mess, unable to define itself in any sensible way.

### **The Non-Search for Truth**

Science is not concerned with the search for the truth. It's all about experimentally verifying hypotheses and theories. This is a process that can never end. There are always new hypotheses and theories waiting in the wings; there are always new experiments that can be performed, and any one of them might overthrow an existing theory. No "end" is ever reached, or is even capable of being reached. There is no "omega point" of absolute truth.

Mathematics is about nothing but the truth. Science is simply a process with no endpoint, no goal, no aim, no purpose. In fact, modern science exactly reflects one of its own key theories – Darwinian evolution. This has no point, purpose, aim or objective either, but keeps producing better and better adapted ("fitter") organisms. Scientific theories are just better and better adapted (fitter) intellectual constructs, but they serve no more purpose than a human being does (in scientific materialism, human life is pointless and purposeless; it's just an inevitable offshoot of Darwinian processes).

Wouldn't you rather involve yourself with a different type of science? – one that pursues absolute, unarguable truth. Such a science already exists: it's scientific rationalist idealism, and Leibniz, the greatest genius in history, was its finest exponent.

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“Nothing is so fatal to the progress of the human mind as to suppose that our views of science are ultimate, that there are no mysteries in nature, that our triumph's complete, and that there are no new worlds to conquer.” -- Sir Humphrey Davy

Physics professor Brian Cox – notoriously hostile to philosophy – cites this as one of his favourite quotations about science, and in many ways it sums up the difference between the scientist on the one hand and the mathematician/philosopher on the other.

Who would NOT want to know that our view of science is COMPLETE, that we know everything? Well, only scientists, apparently. Some people are desperate to know all of the answers. Scientists aren't. They are the sort of people who prefer the journey to arriving at the destination. Truth doesn't excite them. Advancing towards it does. This represents a peculiar psychological condition – eternal deference, never wanting to reach the end, always putting off the climax, always avoiding Judgment Day. Why are they so reluctant to become God? Is that why most scientists are atheists? Their whole mind set and approach to life is to deny that any final answers are possible – so is it any wonder they are so hostile to anything final, definitive, conclusive: the end of the line? Scientists don't believe in ultimate meaning (Truth with a capital “T”), so they invest meaning in a never-ending process, a Sisyphean task. Then they have no need to worry about God, the soul, the afterlife – the answers to the real questions of existence. They are forever fleeing from any conclusion, from any confrontation with: “Are you Right, or are you Wrong?”

“There are no absolute truths in science. This is how we make scientific progress.” – Brian Cox

There you have it – science makes progress by NOT knowing the absolute truth. Wouldn't it make more progress if it DID? Why doesn't it look up and see the eternal, immutable, Platonic truths hovering over it, offering ABSOLUTE TRUTH for anyone rational to grasp them?

#### Dialectical versus Non-dialectical Answers

Illuminism didn't arrive at a Theory of Everything in one jump. Rather, it took a long, arduous process to prove that mathematics lay behind everything, and to map mathematical entities to what we perceive via the human mind. Science, like Illuminism, is a dialectical enterprise. Anything that isn't dialectical is wrong, dangerous, fanatical and EVIL. The Jews, Christians and Muslims have all attempted to give a non-dialectical answer to reality. They have all made exactly the same claim that a “divine book” communicated by a “divine prophet” provides the infallible, immutable, eternal truth. In the case of the Jews, the book is the Torah (the Old Testament) and the prophet Moses; in the case of the Christians, the book is the New Testament and the prophet is Jesus Christ (Yehoshua ben Yosef, a Jew); and in the case of the Muslims, the book is the Koran and the prophet Mohammed. All claim to believe in the same monotheistic God though since all give radically different and contradictory accounts of the “truth”, this cannot be the case.

All of these religions use brainwashing and terror tactics to fortify their “thesis”. They make no attempt to seek any antithesis to their view (other than to condemn any contrary view as inherently the work of the Devil). Since they have eliminated any possibility of an antithesis, they have also prevented any synthesis coming into being, which can then act as a new higher thesis

and allow a constantly improving theory to take shape.

All dialectical processes can reflect new facts and evidence. The dialectic is inherently future-oriented. It always moves with the times. It's always contemporary. It continually adjusts itself to reality.

Anti-dialectical religions have no such possibility. They are stuck in the past, hoist with their own petard. They can NEVER reflect any new facts or evidence that contradict the "sacred" scriptures. Therefore, they are forced to become the sworn enemy of all new facts and evidence. The Catholic Church had to deny that the earth revolves around the sun and had to subject Galileo to the Inquisition for saying it did. Thus it always is. Islamic scientists have had no impact in their field because they must never reach any conclusions contrary to the Koran and, of course, the whole of the science is contrary to the Koran.

The Jews, Fundamentalist Christians and Muslims all believe in Creationism and reject the Theory of Evolution. They are dutybound to do so because their holy texts demand it. All three sacred books describe God creating Adam and Eve. There is no suggestion whatever that humanity shares a common ancestor with apes, and such an idea 100% contradicts the idea of a Creator who specially created humanity.

Once you sign up to an anti-dialectical system, you have frozen yourself in time. The Muslims are stuck in 600 CE, the Christians in 0 CE and the Jews hundreds and even thousands of years before that.

Muslims, Fundamentalist Jews and Fundamentalist Christians such as the Amish are staggeringly backward. They do not belong to the modern age. They are anachronisms. They are the past inserted into the present. In every sense, they are retarded.

Afghanistan under the Taliban reveals the true, authentic Islamic mindset, the desperate craving to go back 1,400 years in time, to be with Mohammed. Islam is the most backward system of thought ever devised. It is truly horrifying, an outright assault on reason and progress.

All anti-dialectical religious systems should be banned. They have nothing at all to commend them and they are extremely dangerous. Islam, Judaism and Christianity must be outlawed – to protect vulnerable minds from their pernicious effect. We can never have an educated society until we have eliminated the forces that sabotage education. And what is more hostile to educational progress than the idea that the truth stopped 1,400 years, or even longer, ago? Divine "revelation" is wholly opposed to education. It says that people should believe things simply because someone said so, and not for any rational reasons, or facts or evidence. This is insane. This madness must be cut out of the human condition. There is no place for Abrahamism, no place whatever.

Remember, all legitimate systems, all institutions, of any description, must be dialectical and thus incorporate future developments. The dialect is future proof.

All anti-dialectical systems and institutions must be made illegal since they will only ever act as brakes on progress, and as fanatical centres of resistance to all new truths.

Dialectical systems are always tolerant. Anti-dialectical systems are always intolerant. We must eradicate all of these sources that are opposed to tolerance.

The dialectic this becomes a clear-cut criterion for shaping society. Only dialectical influences are acceptable. All anti-dialectical influences must be eliminated.

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Eastern religions are dialectical thanks to the concept of reincarnation, which is inherently dialectical. Resurrection, on the other hand, is anti-dialectical. You only get one chance at life – and then you end up in heaven or hell. There's no chance to progress, to learn life lessons, to come back in a new body at a higher dialectical level.

The soul must be defined dialectically i.e. reincarnationally. The concept of resurrection lends itself to extreme fanaticism. Imagine the pressure to “get it right” if you only have one life and, if you screw up, you will be sentenced to perpetual hell. That kind of threat does terrible things to vulnerable, superstitious minds. Such minds must be protected from these evil, pernicious ideas. It’s the duty of decent, strong people to put a shield around the weak.

Remember, all processes can be divided into two types: dialectical or anti-dialectical. Souls can be conceived as dialectical (the reincarnation view) or anti-dialectical (the resurrection view). God is also dialectical or anti-dialectical. A God who emerges from the evolution of the universe is dialectical and a Creationist God is anti-dialectical.

Tradition-directed people (Abrahamists) are anti-dialectical, while other-directed, inner-directed and autonomous people are dialectical.

Inheritance – whereby the past is allowed to dominate the future – is anti-dialectical, while meritocracy is dialectical. Monarchy is ferociously anti-dialectical. The dynastic rule of the elite families of the Old World Order is equally anti-dialectical.

The anti-dialectic, in all its guises, must be swept away. The human past represents the triumph of the anti-dialectic. Its future must be about the triumph of the dialectic.

#### Gaia Theory

Gaia theory treats the world as a self-regulating organism, rather than a mechanism (conditions right for life are maintained by feedback processes in which the living and non-living parts of the planet both participate). This is one of the most important ideas of all. Gaia theory becomes the key test for the whole universe. If one planet can act – *in any capacity* – as a non-mechanism, then the same is true for any planet, any star, and any galaxy. Moreover, the same must be true on a smaller scale, all the way down to atoms and subatomic particles. *Everything* is infused with mind. The extent to which mind is meaningfully expressed in each case will be different, but mind is *always* there. Just look at humans – some are geniuses and some are retarded. How can they belong to the same *species*, yet they do.

#### Memory

Long term memory is made possible only by the ability to maintain a narrative of the events of our life: this happened to us and then that and then this, and so on.

Why can’t we remember our earliest years? – because they form no part of our narrative. We didn’t have language, so we weren’t conscious, so we didn’t have any concept of “I”, and we couldn’t establish any personal narrative. Human babies are in exactly the same position as animals. No animal has any kind of sophisticated memory, not even the elephant. Most animals can only remember the last few seconds or minutes. Conditioning – when animals learn to respond in certain ways to their environment as a result of a strong experience of pleasure or pain (reward or punishment) is NOT the same as memory. Conditioned responses can be classified as acquired instincts (as opposed to innate instincts).

Dogs, for example, are creatures that are easily conditioned (hence can respond quite flexibly to their owners), but have primitive memories. They “know” their master only through conditioned responses, not through any kind of intelligent, empathic connection.

Anyone who came along and treated a dog better than its existing master would immediately be accepted as the new master, and the old master would be completely forgotten after a relatively short time. (Well, to be fair, the dog would probably “remember” its previous master’s smell! – dogs have a good memory for such things.)

#### Creator versus Multiverse

Abrahamism is based on the concept of the perfect Designer. The Multiverse theory is the precise opposite and is based on perfect randomness. There is no design at all. Anything that is statistically possible will definitely happen.

Illuminism is based on a self-designing, living universe. It does not begin perfectly, but as pure potential, and then mathematically makes its way towards perfection – by solving its own equation. The universe is self-solving, and the answer is perfect actualisation, the optimal and inevitable solution of the infinite equation. There is nothing random about this universe.

## **Living Mathematics**

The key to understanding reality lies in grasping that mathematics is not a cold abstraction: it is *alive*.

Here are the main points you must embrace:

- 1) Monads are both mathematical points, hence the basis of objective mathematics, and life forces (souls, minds, imbued with eternal energy), hence the basis of subjective mathematics. (Scientific materialism seeks to construct a world of only objects and no subjects – even though we (the human race) are all mental subjects, and not mere objects.
- 2) Numbers are squiggles on paper. Ontologically, numbers are frequencies of energy waves (sines and cosines). Infinite such energies are possible, accommodating every possible number. Quantum mechanics, the bedrock of science, is all about energy waves, and energy waves are nothing but ontological numbers.
- 3) Each monad (soul) contains infinite energy (numbers), but the sum total of the energy is zero (because of positive/negative symmetry).
- 4) Existence comprises infinite monads, each of which contains infinite positive energy and infinite negative energy, leaving a sum total of zero.
- 5) So, although the universe is infinite (everything), it is always nothing (zero). Zero and infinity always go together, but always in such a way that all infinities cancel to zero.
- 6) Existence is therefore, truly, everything and nothing, yet viewed objectively, all of its properties sum to zero: the minimal energy state of the universe, the ground state, the perfect zero-point energy.
- 7) The universe requires nothing because it is always in its ground state of zero, and remains permanently in that state through absolute energy conservation and symmetry (between plus and minus energy).
- 8) Space originates in real numbers, and time in imaginary numbers. Real numbers are not privileged over imaginary numbers. Both have equal status and equal ontological reality.
- 9) Positive numbers are not privileged over negative numbers. Both have equal status and equal ontological reality.
- 10) The universe is permanently nothing, yet that nothingness conceals infinite potential.
- 11) Descartes defined conscious thinking as the key element of the soul (“I think therefore I am.”). Illuminism places “will” first. (“It wills therefore it is.”). Unconscious, striving, blind Will, as described by Schopenhauer, and more especially by Nietzsche (Will to Power), is the essential quality of the soul. The Will to Power, inherent in every soul, drives every soul forward relentlessly. Power is all about evolution, about moving from simple to complex states, from potential to actuality. Will to Power can also be described as the Will to Maximum Actualisation, the Will to Maximum Complexity, the Will to BECOME GOD.
- 12) Any system based on this Will to Power will inevitably evolve and keep attaining

higher and higher states; maximum complexity, maximum power.

13) Monads imbued with Will to Power will, dialectically, produce exactly the world we inhabit – a world of an enormous contest for power amongst innumerable centres of power. Competition for power is the driver of everything. Why does evil exist? It doesn't. "Evil" is simply what arises inevitably in a system of a brutal struggle for power in which no quarter is given (the law of the jungle expresses the law of the universe perfectly). "Good" and "evil" are dialectical twins, and their synthesis is "beyond good and evil" – which is pure rationalism and logic.

14) Why would the world evolve if not internally driven to do so? Why does the inorganic become the organic if it is not somehow seeking to do so (teleology)? Are we seriously to expect that random collisions of lifeless, mindless, purposeless atoms can give rise to evolution via natural selection? What does "natural selection" even mean if not that the most powerful (the best "adapted" in a particular context) wins? In other words, evolution is nothing but the logical expression of the contest for power.

15) Why, ultimately, do Wilful, irrational creatures become rational? It's because knowledge is power, because a mind that subscribes to a Reality Principle rather than a Fantasy Principle, will ultimately win because the former type of mind will be able to understand and control reality (via science, mathematics, technology and engineering). High priests praying to their gods will not invent gunpowder, guns and artillery. The Spanish Conquistadores destroyed the Aztecs and the Incas because Catholicism was a religion much more tied to technology as a means of enforcing power rather than human sacrifice (Aztecs), or mystical appeals to gods (Incas). A mind intent on power will always become rational because that is the most productive avenue to power. That's why Logos minds are evolutionary higher and more powerful than Mythos minds – closer to God, literally. Supreme power comes from complete mastery of mathematics – because existence is entirely mathematical. Consciousness evolves from the unconscious because it is the means by which mathematics becomes self-aware and is capable of recognising itself for what it is. Consciousness allows a purposeful, contextual, directed, concentrated, focused, reflective, considered approach to problem-solving while the unconscious mind is essentially instinctive, immediate, non-reflective, ill-considered, highly emotional and wilful and often fundamentally irrational. The more conscious you are, the more rational and logical you are (the less like an animal). Mythos people are close to animals; Logos thinkers are starting to become gods.

## **The Scientific Materialist Absurdity**

The material universe springs out of nothing: an absolute impossibility within a materialist system that denies the existence of nothing.

Mind emerged from non-mind – an impossibility.

Life emerged from non-life – an impossibility.

Existence consists of absolute scientific cause and effect. Ergo free will and free choice are absolutely denied: an absurdity given that no human being seriously imagines for a single second that he does not have free will.

Free will is completely inexplicable in a scientific materialist universe. Only the existence of a dimensionless domain outwith the dimensional domain (hence not subject to dimensional cause and effect) allows scope for free will. If dimensional entities are lifeless and mindless then only a dimensionless domain can be responsible for life and mind, exactly as Descartes maintained. Only a dimensionless domain allows the phenomenon of subjectivity. Scientific

materialism is strictly objective, and offers no explanation whatever of subjectivity.

Scientific materialism fails to explain the origin of matter, life, mind, consciousness, free will, free choice and subjectivity. In other words, scientific materialism fails to address ANY of the fundamental questions. Nor does it have any language, vocabulary or technical means of addressing the fundamental questions. Nor is it interested in absolute truth: it is committed to provisionalism via continual experimentation in which any experiment can at any time falsify an existing provisional theory.

Scientific materialism is a wholly sterile, faith-based position that has irrational hatred for life, mind and free will and makes no serious attempt to explain any of these.

$$2 + 2 = 4$$

Scientific materialists always demand “proof”, “evidence”. What experimental proof or evidence can be offered that  $2 + 2 = 4$ ? None at all. Do you accept that  $2 + 2 = 4$ ? If you do then you have accepted that the analytic truths of mathematics do not require any experimental evidence or proof but are true nevertheless. So, we ask you not to worry about “evidence” and experimental “proof” when it comes to the absolute truths of existence. It is a category error to treat the analytic truths of mathematics in the same way as the provisional, synthetic “truths” of scientific materialism. Experimental proof and evidence are essential for scientific materialism but irrelevant to mathematics. Once you accept that existence is mathematical, the only criterion for truth becomes whether something is right or wrong mathematically.

Don’t get bogged down in the scientist’s dogmatic mantra of “Where’s your evidence?” Your “evidence” is that  $2 + 2 = 4$ . If the scientist agrees with that statement then he has acknowledged that truth is not grounded in experiment.

#### Motion

Many people believe that motion, of necessity, involves time. Yet photons move even though time has stopped in their frame of reference. Plainly, then, motion can happen in the absence of time. Time is NOT inherent to motion.

Motion is in fact itself one of the intrinsic features of existence. Motion is *energy*. Imagine a sine wave travelling forever. That’s the basic model of energy/motion. A wave’s motion in absolute terms never changes – but if you put it into a spacetime environment then you can analyse its motion with respect to space, time or both (spacetime).

Just as electromagnetic waves always travel at exactly the same speed – the speed of light – so do ALL waves i.e. ALL ENERGY. All waves are either sine waves or cosine waves. Sine waves are associated with imaginary numbers, hence time. Cosine waves are associated with real numbers hence space.

Motion, in the dimensional world, takes place through space *and* through imaginary space (time). It’s NOT time that moves. It’s energy that moves, through time, just as it moves through space. The overall speed through *spacetime* ALWAYS remains the same.

These principles lead to an entirely new conception of reality from the one erroneously peddled by scientific materialism.

The essential points are:

- 1) Ontologically, a number is the frequency of an energy wave.
- 2) An energy wave can be positive or negative, real or imaginary.
- 3) Sine waves are associated with imaginary numbers, and cosine waves with real numbers.
- 4) All energy waves of any type always travel at exactly the same speed (just as electromagnetic waves do).

- 5) Energy IS movement/motion. Energy/motion is ETERNAL. Energy is perpetual motion.
- 6) Energy/motion is an intrinsic feature of existence.
- 7) Energy/motion can occur either dimensionally or dimensionlessly.
- 8) Dimensionless energy/motion is THINKING.
- 9) Dimensional energy/motion is associated with the types of phenomena studied by science.
- 10) Energy/motion can take place through space, time (imaginary space) or both.
- 11) Time “flows” no more than space does. What actually happens is that energy flows through space, through imaginary space (time), or through spacetime.
- 12) People talk of travelling through space and of time “passing”. They should in fact talk of travelling through space or travelling through imaginary space (time). And they could as validly talk of space “passing” as time.
- 13) Travel through space is *psychologically* experienced radically differently from travel through time, but exactly the same process is taking place, except in one case travel is taking place through real space and in the other it’s taking place through imaginary space.

The prejudice that time is necessary for change must be toppled. What is necessary for change is MOTION = ENERGY. Energy/motion is the key to the universe. Existence is a perpetual motion system. Energy/motion through time is no more fundamental than energy/motion through space. Neither is privileged over the other.

The big difference is that we happen to exist in a timelike rather than spacelike environment. We are more or less stationary in space (compared with light speed). Nearly all of our motion is through time, which is why we think of time passing, but not of space passing.

Circularity?

“Why is there something rather than nothing?”... There are only three kinds of possible solution to this problem: religious, philosophical, or scientific. And most attempts run into one of three dead-ends: circularity, infinite regress, or brute fact. The puzzle that the universe seems to obey mathematical laws has suggested to some that in the beginning was mathematics (which would still exist Platonically even if there were no universe) which then engendered physical reality out of necessity, but this is clearly circular. The quest for a scientific explanation is vulnerable to infinite regress: there always seems to be another, more fundamental particle waiting to be discovered; and if there was a Big Bang, a singularity, what came before that? Brute fact is most people’s get-out-of-metaphysical agony card: there is a universe; always has been – get over it.” -- Peter Forbes, *The Independent*

This is an interesting little summary, yet it states that the mathematical view is in some way circular, without explaining why that should be so. Perhaps the suggestion is that we see a physical world seemingly based on mathematics, so we posit an underlying mathematical world, which then gives rise to the physical world. Yet there’s nothing circular about this at all. We are perfectly entitled to infer from the astonishing success of mathematics in describing our universe that what we are seeing is indeed a manifestation of a more fundamental mathematical reality.

The real problem is describing the physical world as “scientific” rather than mathematical. As we have shown, the “Platonic” domain of perfect, immutable, eternal Forms is embodied in an immaterial, dimensionless domain of infinite monads – imperishable zeros. These are imbued with a Will to Power – or an inbuilt tendency to become more mathematically complex, as we might alternatively say. The infinite array of monads is mental, not physical. It’s subjective, not objective. It’s the domain of SUBJECTIVE mathematics.

In order to become more complex, it is driven to generate an OBJECTIVE mathematical

domain – and this is what is called “physical reality”. It is never anything other than an expression of mathematics and the underlying Platonic mathematical laws. There’s no illogical circularity about the argument, except to those who haven’t actually understood the argument.

The answer to Leibniz’s famous question of why there is something rather than nothing is the paradoxical one that something IS nothing – mathematically. Only mathematics can answer this existential conundrum. Plus infinity and minus infinity combine to produce zero – showing that nothing can encapsulate EVERYTHING and that nothing is simply a particular expression of everything, based on perfect symmetry. Something is nothing BECAUSE of symmetry, and we can therefore conclude that mathematical symmetry, and what it necessitates for the fundamental mathematical units of existence, is the ultimate answer to everything. The world arises through local symmetry breaking, but overall cosmic symmetry remains absolutely enforced – all objective properties of the universe MUST cancel to zero. The universe must eternally remain as something wrapped up in nothing thanks to symmetry. Existence is the expression of *everything*, subjected to just one critical constraint – everything must overall balance out to zero i.e. *something* must always remain *nothing*. Mathematics alone can make sense of this, so mathematics is the absolute and incontestable truth of existence.

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Peter Forbes spoke of the problem of “infinite regress” as regards scientific explanations. This is a genuine and serious problem for science, but certainly not for the mathematical Monadology. The monad – the ontological zero – is the end of the line as far as infinite regress goes. There’s nowhere left to go.

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Forbes was reviewing *Why Does the World Exist?* by Jim Holt. We invite everyone to read this book – an up-do-date account of the opinions of the greatest minds of our time as to why our world exists – and compare and contrast it with the “God Series” by the Illuminati. You will be left in no conceivable doubt that we are the only ones who know what we’re talking about. We confront all of the key questions – and we answer them all. There is no ambiguity whatever in our system. There is no contingency or provisionalism or ad hoc hypotheses or synthetic propositions or ungrounded speculation or tentative induction. Our task is in fact exceptionally easy ... because all we’re doing is relying on the ultimate Platonic subject: mathematics itself.

Illuminism is simply an account of how mathematics is actually a living, evolving organism seeking perfection – exactly like us, in fact. And that, of course, is no surprise since we ourselves are mathematical objects. Our souls are mathematical monads and these are none other than indestructible information systems with infinite capacity, enough capacity for us all to be divine!

## **The Platonic Domain**

We are the only ones who have ever defined where the domain of eternal, immutable, perfect Platonic Forms actually is – it’s present in the immaterial, dimensionless, eternal domain of Leibnizian monads. The Platonic laws of mathematics are encoded in each and every monad. Given that monads are the *arche* – the fundamental stuff of existence – the Platonic laws are therefore automatically accessible to the whole of existence, exactly as required for everything to always “know” what to do in any situation. Science is incapable of saying where the laws of science were prior to the Big Bang. So, how could these non-existent laws generate the Big Bang

and control it?

This question of where the laws that govern reality are actually stored, and how they interact with the world down to the smallest detail, is so fundamental that no theory ought to be taken seriously unless it has addressed it.

## **The Spell of Music**

“Music is the sensual presentation of the Idea.” -- Hegel

Music is the sensual presentation of mathematics, to be more precise. Music is mathematics as understood most directly and effortlessly by the subjective mind.

Music is mathematics with rhythm. It's dancing and singing numbers. It's equations that can play a “toon”.

## **Mathematics – “It's alive!”**

Existence is a living mathematical object driven by an inbuilt tendency to seek higher mathematical complexity (equating, subjectively, to the possession of a “Will to Power”). It is therefore teleological – it has a clear purpose (to actualise more complex states) – and it is dialectical and evolutionary. These are all inevitable consequences of its inherent nature. Everything in this system understands mathematics since it's built into everything, hence, objectively, the universe will appear to behave perfectly mathematically (“scientifically”). Life, mind, mathematical laws, energy, energy conservation, perfect cosmic symmetry, evolution – all of these are inherent in this system. It's a self-propelling, self-organising, self-actualising object that requires nothing (because it's perpetually zero, “nothing”). Thanks to Gödel's Incompleteness Theorem, this mathematical object is as much subjective as objective, hence can be free and self-determining but not deterministic. Mathematics is ingrained in the object, but living mathematics transcends rigorous and inflexible mathematical proofs. It recognises higher, unprovable, intuitive truths and, by the same token, it can be riven with falsehood and irrationality.

Living mathematics can and does explain EVERYTHING. There is no need to appeal to anything else. There is no need for a Creator, a first cause, an external energy source or anything else. Everything this object needs is contained within it. It has infinite energy, will endure forever, and will forever be seeking states of higher complexity (greater power). It is always seeking to be all-powerful and all-knowing – to BECOME GOD! That is its innermost nature. Our universe is God evolving mathematically from pure potential to pure actualisation. And all of us have exactly the same opportunity. *As above, so below.*

What is existence? It's something truly extraordinary. It's the quest to express “nothing” optimally. It's the process of rearranging nothing until it has become nothing less than God! There are countless mathematical ways of expressing zero, each associated with a different measure of power. The universe keeps adjusting itself until it has attained the final solution – the arrangement of nothing associated with the maximum subjective experience of power. This is the God Point, the Omega Point, the culmination of the dialectic (which is the process driving the rearrangement of zero in relation to subjective power), the attainment of the Absolute.

Existence is a self-solving, infinite equation, and it is the subjective feeling of power that drives the equation onwards to its final, definitive answer. *Life*, and only life, can solve the problem. A purely objective system could never attain perfection.

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The soul, the monad, is at the core of living mathematics. It is the unit around which everything else is based, upon which everything depends. The mathematical soul is the only type of soul that allows religion to be rational. If the soul weren't mathematical, it would be literally unbelievable, and atheism would be the only possible rational option. Mathematics alone dignifies religion and renders it acceptable.

The key point about the mathematical soul is that it is also a mathematical point, the basic unit of objective mathematics. Dimensionless, the soul is pure mind, and pure subject. The soul is therefore the *perfect* and *only* synthesis of subject and object (mind and matter). Matter is born of the infinite mathematical contents of souls, hence is "soul dust", not "star dust".

The soul goes on a great cosmic journey to actualise its potential. In the beginning, it is strictly unconscious and has much more of the character of an object than a subject. Since all souls come inbuilt with the complete laws of mathematics, a vast collection of primitive souls operates exactly as a gargantuan machine unfolding according to the inexorable laws and patterns of mathematics i.e. it furnishes precisely the regular, mechanistic universe that scientific materialists envisage.

The universe gradually evolves from objectivity to subjectivity (from scientific materialism to philosophy, religion and art) i.e. the soul changes its function from mere mathematical point to budding consciousness, and then full-blown consciousness as in Logos thinkers and all higher minds. That is the cosmic story. The puzzle of mind-matter dualism is resolved by the soul itself.

Mathematics is the key to the mental and material world, the glue that unifies everything. Make no mistake, this is the **ONLY** answer to the mystery of existence. The monad – the soul/mathematical point – is the ultimate existential unit, and its very nature provides the solution to everything, and gives rise to exactly the universe we find ourselves in. There is no Creator, no God watching over us; no God (or karma) monitoring our vices and virtues, our sins and good deeds; no God Messiah coming to save us or to judge us; no God presiding over a Last Judgment or Judgment Day or End of Days; no heaven or hell awaiting us, or to which anyone can send us.

It's all up to us. **WE ARE THE GODS**, the *evolving* Gods. Our life is our own. We have complete responsibility and accountability for ourselves. It's no one else's business. We create our own heavens and hells. We save ourselves; we are our own salvation. We are autonomous, independent, free agents. Our mission is simple: to convert all of our potential into actuality and thus become Gods.

THE END

