

# **Consciousness Explained**

**Its True Nature  
Finally Revealed**

**Edgar L. Owen**

# CONSCIOUSNESS EXPLAINED

It's True Nature

Finally Revealed

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To my secret muse

# PREFACE

This book presents a revolutionary new theory of consciousness and how it works based on a computational model of the fundamental nature of reality. The contents have been adapted from the author's work 'Universal Reality' which presents a complete Theory of Everything including the nature of consciousness (Owen, 2016).

Universal Reality is a computational theory of reality that's consistent with modern science but reinterprets it in a entirely new way based on little recognized fundamental principles. Understanding these fundamental principles makes the nature of consciousness clear and dispels the common misconceptions surrounding it.

Not only does this book reveal what consciousness is it also explains why it is that way. And as an added bonus understanding the nature of consciousness automatically leads to a clear and elegant understanding of the fundamental nature of reality and the universe we live in.

Anyone interested in the true nature of consciousness or reality in general should find this book an extremely interesting and entertaining read. It convincingly clarifies the nature of consciousness and its mysteries in a refreshing new way from an entirely new perspective on the universe. It's a completely new approach to consciousness and reality based firmly in logic and established science that can't be found anywhere else.

This book assumes a general knowledge of modern physical and cognitive science, at least at the popular level, and some familiarity with the great perennial issues of philosophy will be helpful. But all that's really required is the desire to explore the deepest mysteries of consciousness and reality with an open mind.

This book was written primarily in an effort to clarify and further develop my own understanding of consciousness, but hopefully its publication will make it accessible to others as well and generate intelligent criticisms and suggestions for improvement. I personally believe it's the best, most accurate and complete view of consciousness that has so far been discovered, but reality is always full of mysteries and surprises and is always the final arbiter of truth.

To the extent this book is an accurate description of consciousness it's not something I have created, rather it's reality itself revealing itself to someone who has hopefully been able to observe and study it without projecting too much of his own personal programming and prejudices onto it. Reality is continuously revealing itself to all of us in all its awesome glory, and I believe anyone willing to observe it carefully and objectively will be able to personally verify and experience the truth of most of what this book contains.

I would like to thank everyone who has helped make this book possible and encouraged me while writing it. Thanks to all of you for putting up with my unusual hermetic life style. And a special thank you to all my wild visitors, including the occasional human, and to the beauty and profundity of nature, which always inspires me with meaning and joy. Thanks to reality itself for continuously revealing itself in all its glory to those who will only look with opened eyes, and thanks most of all to my secret muse. Thank you, thank you. Thank you all!

And finally thanks to all those thinkers, scholars, scientists and visionaries throughout history without whose heroic efforts, genius and cumulative hard work this book could not have been written.

The author welcomes all comments and questions and can be contacted at [Edgar@EdgarLOWen.com](mailto:Edgar@EdgarLOWen.com).

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# CONSCIOUSNESS EXPLAINED

## INTRODUCTION

Our consciousness in a present moment through which time flows is the fundamental experience of our existence. But exactly what consciousness is and how it can arise in a physical universe from a physical or even a biological brain has long been an unsolved mystery that has baffled generation after generation of philosophers and scientists. Though many have tried science itself has ultimately had nothing meaningful to say about either the nature of consciousness or the present moment.

This is in part due to the mysterious nature of consciousness itself. At once so familiar to all of us, and yet at the same time so difficult to even define, and so apparently non-physical it has eluded all efforts to explain it in terms of a physical or biological source.

Thus the fundamental problem of consciousness is that it's obviously not physical in the sense we traditionally ascribe to an apparently physical universe, and in this contradiction is the key to discovering its true nature. When we step back and carefully reconsider the nature of reality we quickly discover that it simply can't be physical in the traditional sense. In fact all the evidence suggests it's actually a computational structure and its apparent physical nature is an *adaptive interpretation* of its true *information nature* produce by our mind's internal simulation of reality.

When the nature of reality itself is clearly understood and seen with new eyes a revolutionary new paradigm appears that explains both the scientific universe and the nature of consciousness as consistent aspects of a single unified reality.

This new computational understanding of reality immediately solves all sorts of important scientific and philosophical problems from the nature of existence and consciousness to the underlying structure of the universe, and it convincingly confirms and explains the most fundamental and obvious of all scientific observations, the undeniable existence of consciousness in a present moment through which clock time flows.

Consciousness is clearly not physical so it must have something to do with the nature of reality itself. So to understand consciousness we must first reanalyze the fundamental nature of reality to discover what reasonable model would naturally explain consciousness and still be compatible with established science.

The book begins by explaining why the universe is clearly not physical in the ordinary sense of the word but is actually a computational system. This insight is additionally confirmed by analyzing what we really mean when we say something is physical. When the actual meaning of the concept of physicality is understood the reason the universe appears physical even though it isn't becomes clear. At this point the underlying nature of reality emerges and turns out to be automatically compatible with consciousness, and to automatically manifest consciousness in specialized information structures in the brain.

Universal Reality reveals that rather than being a physical structure the universe is more like a running program that continually recomputes its current data state in the present moment. In this view everything is the complete information of what it is, and there is a common substrate of existence within all things that makes those information forms the real actual things of the world.

In this view the apparent physicality of the universe is a cognitive interpretation of the information structure of reality that makes it easier for human minds to make sense of and function within the world. Thus the true fundamental nature of all things is information forms given reality by the common existence they share with all other things. In this view all information forms are *forms of existence that exist within existence* just as ripples, waves and currents are all forms of water that exist within a common substrate of water.

Thus things differ only in the forms of their information. Form is information so all the things of the universe differ only in their information content. They are all just different forms of information in a common substrate of existence, and the existence within them all makes those information forms the real actual things they are the information of.

In this view the essential active ingredient of consciousness is the *immanent presence* of existence. Immanence is the self-manifesting presence of existence in the information forms of everything in the universe including ourselves that makes them real and actual. All things that exist have immanence because they all exist within the common substrate or medium of immanent existence. Existence is the common

active ingredient of all actual things, of the universe itself, and of consciousness.

The self-manifestation of existence within information forms imbues them with immanence. Everything in the universe, including us, is filled with the immanence of its existence. Thus all information forms can be said to shine with the internal light and life and reality of their existence, and this immanence manifests their being and gives them actual presence in reality. It is this intrinsic immanence of things that is the key to consciousness. The internal glow of immanence in things is not something visible to the eyes but it is visible to the mind as consciousness.

Thus consciousness is not something human minds generate and shine onto things. Consciousness is simply the self-manifesting immanence of the information forms of representations of things manifesting within our minds. Immanence is the invisible glow of being in all things. It's the presence of actual existence within things that lights them up with being. Immanence is invisible to our eyes but manifests as consciousness in our minds.

Thus the active ingredient of consciousness is not something produced by biological brains but an essential aspect of existence itself manifesting in our brain's internal representation of things in the world just as it manifests in all forms. This becomes self-evident when we just look at what reality is actually telling us with open eyes and carefully analyze it in the context of the deep principles underlying established physical and cognitive science. What emerges are secrets that at once are incredibly profound but amazingly obvious when finally recognized for what they are.

But we are getting ahead of ourselves here and need to start at the beginning by showing first why the universe is not physical in the traditional sense and then presenting a new theory of reality and existence that leads naturally to a convincing explanation of consciousness.

## **EVIDENCE REALITY IS NOT PHYSICAL**

A computational model is by far the most reasonable and fruitful approach to reality. The computational model of Universal Reality appears both internally consistent and consistent with science and

scientific method. This may initially seem counter intuitive but there all sorts of convincing reasons supporting it.

There is overwhelming evidence that everything in the universe is its information or data only and that the observable universe is a computational system:

1. To be comprehensible, which it self-evidently is, reality must be a logically consistent structure. To be logical and to continually happen it must be computable. To be computable it must consist of data because only data is computable. Therefore the content of the observable universe must consist only of data being computed.
2. The laws of science which best describe reality are themselves logico-mathematical information forms. Why would the equations of science be the best description of reality if reality itself did not also consist of similar information structures? This explains the so-called “unreasonable effectiveness of mathematics” in describing the universe (Wigner, 1960).
3. By recognizing that reality is a logico-mathematical structure the laws of nature immediately assume a natural place as an intrinsic part of reality. No longer do they somehow stand outside a physical world while mysteriously controlling it. A physical model of the universe is unable to explain where the laws of nature reside or what their status is (Penrose, 2005).
4. Physical mechanisms to produce effects become unnecessary in a purely computational world. It’s enough to have a consistent logico-mathematical program that computes them in accordance with experimental evidence.
5. When everything that mind adds to our perception of reality is recognized and subtracted all that remains of reality is a computational data structure. This is explained in detail in the chapter on The Simulation in Universal Reality and can be verified by carefully analyzed direct experience (Owen, 2016).
6. We know that our internal simulation of reality exists as neurochemical data in the circuits of our brain. Yet this world appears perfectly real to us. If our cognitive model of reality consists only of data and seems completely real then it’s reasonable to assume that the actual external world could also consist only of data. How else could it be so effectively modeled as data in our brains if it weren’t data itself?
7. This view of reality is tightly consistent with the other insights of Universal Reality, which are cross-consistent with modern

science. Total consistency across maximum scope is the test of validity, truth and knowledge (Owen, 2016).

8. This view of reality leads to simple elegant solutions of many of the perennial problems of science and the nature of reality and leads directly to many new insights. Specifically it leads to a clear understanding of the nature of consciousness and also enables a new understanding of spacetime that conceptually unifies quantum theory and general relativity and resolves the paradoxical nature of the quantum world (Owen, 2016).
9. These insights complete the progress of science itself in reducing everything to data by revealing how both mass-energy and spacetime, the last remaining bastions of physicality, can be reduced to data as explained in *Universal Reality* (Owen, 2016).
10. Viewing the universe as running programs computing its data changes nothing about the universe which continues exactly as before. It merely completes the finer and finer analysis of all things including us into their most elemental units. It's simply a new way of looking at what already exists in which even the elementary particles themselves consist entirely of data while everything around us remains the same.

Thus there are many convincing reasons to believe that everything in the universe consists only of its data and that the apparent physicality of things is an illusory interpretation produced by our minds. All the apparently material things of the world around us are our experiences and interpretations of various types of information forms in our mental simulations of reality and by extension in the interpretations of science based on these human simulations of reality.

First, a computational universe immediately solves the vexing problem of how nonmaterial laws of nature could possibly control a material universe they were not a part of. This is a problem that was intractable in the traditional materialistic view of science (Penrose, 2005). However, if the universe and the laws that govern it are respectively actualized and virtual types of information then it's natural that both would be part of a single computational universe. The laws of nature are simply the programmatic structure of the elemental program that computes the information state of the universe.

Thus the laws of nature, being forms of information in a reality consisting only of data, are an integral part of nature as real as the data forms that encode actual things, and thus are as real as the things of the world. The laws of nature don't stand apart from nature in some

mysterious metaphysical realm while controlling it as traditional science mistakenly assumes. That the laws of nature find a natural place in our computational model of reality is strong evidence for its validity.

Second, it's quite clear that our experience of a seemingly physical universe, and everything in it, actually consists only of information in the neural circuits of our brains. While there is certainly a real universe external to our brains, the seemingly physical universe we experience our existence within is without any doubt an information construct in our brains. So if just information in our brains can produce such a completely convincing illusion of a material universe, why couldn't the actual universe external to our brains also consist only of information?

That would immediately explain why neural computations within our brain's model of reality could enable us to function so effectively within actual external reality. How could our internal mental simulation of the universe so accurately map the actual workings of the universe if the universe itself were not also an information structure?

Third, all the laws of science consist only of mathematical equations imbedded in a logical framework, in other words they consist only of information. How could information structures accurately describe the universe if the universe itself didn't consist of information structures? This immediately solves the mystery of why mathematics works so incredibly well to describe the universe. Of course mathematics and logic would naturally provide the best description of a universe that was itself a logico-mathematical information structure.

Fourth, when we carefully analyze seemingly material things in our minds we find that they actually consist only of the information of what they are, and this is true of everything without exception. They all consist only of their information, the combined information of their colors, textures, forms, structures, chemical compositions and whatever else makes them up. These are all just different forms of information that in combination are interpreted by our brains as material objects. Our brain tells us these combinations of information forms make material objects but even that interpretation is just more information.

This is also confirmed in the design of robotic control programs and pattern recognition (Wikipedia, Pattern recognition). In robots able to operate effectively within complex environments internal models of themselves within their environments must be laboriously constructed and continually updated from streams of raw sensory data. That data is then converted into simulations of purposeful action within the model,

which are in turn tested, valuated and used to control appropriate motor activities. Internally it's all based on internal data models of the robots within their environments that work only due to the model's logical consistency with the actual data structure of external reality. All living organisms including us operate on similar principles though in much more complex systems.

The information that makes up even a simple physical object, not to mention that of a living being, is not a simple data string like the name or description of an object. It's an incredibly complex hierarchy of forms and multiple hierarchies of subprograms within subprograms, and their ongoing computational interactions and relationships with other forms and programs both internal and external. Think of the hierarchies of total information content of anything down through its individual systems to its individual cells to the detail of every one of its elementary particles and their interactions, and that is the complete information structure that makes up that thing, and actually is that thing. These are the total running programs that things actually are.

Fifth, even modern science now has now reduced the entire materiality of the universe to just mass-energy, and spacetime. However, in the chapter on Fundamental Principles in Universal Reality, we show how spacetime reduces to the information of dimensional relationships, and mass-energy reduces to the information of relative motion (Owen, 2016). So even the universe envisioned by modern science naturally reduces to pure abstract information.

Sixth, accepting a universe consisting only of information doesn't change the universe that we experience around us in the least. It still appears exactly as it did before, as a material universe. The only difference is that we now realize that its seeming physicality is an interpretation of its information structure produced in our minds, and that the underlying data structure of the seemingly physical world we live in is its actual fundamental structure.

Thus it's reasonable to conclude that the data structure of the universe is its actual fundamental nature and its seeming materiality is an illusion produced by our mind as it combines all the sensory information of things into the semblance of physicality.

Thus in our theory all the programs of things that make up the universe without exception consist only of their data in a continual process of recomputation. These programs have existence because they run in the substrate of existence, and thus they become the real actual

things of the world, but the fundamental nature of all these things is information given being by its presence within the substrate of existence of the universe.

Thus at the most fundamental level the things that make up the universe are not material or physical entities, they are simply different information forms that arise in an originally formless sea of existence, as water waves, currents and ripples are different forms of water that arise in an originally formless ocean of water. And since the things of the universe are not physical they have no individual self-substances that make them different things; the only difference between things is the differences in their information forms, the different data that distinguishes them one from another.

Information takes innumerable different forms but the fundamental nature of all the data that makes up the universe is the same; it all consists of abstract data forms that are computationally evolving in a common non-material medium of existence. The only substance of all information forms is existence itself, just as the only substance of all water waves is water no matter how their different forms may vary.

All things in the universe consist only of information given actuality by existing in the universal medium of existence. It is their common existence, rather than any material substance, that makes them all real things. They become real things by appearing in the virtual medium of the quantum vacuum, just as water waves become real by appearing in water.

## **THE SIMULATION**

It's quite clear that the world we experience our existence within is not the actual world but our mind's internal representation of it. In other words the world we experience around us is actually a simulation of the actual world that exists entirely in our brains. It is also quite clear that our internal simulation of reality consists entirely of information encoded in our neural structures, as there are certainly no actual physical objects like rocks or trees in our brains.

It's also clear that the basic logical structure of our simulation must sufficiently map the actual logical structures of external reality for us to function within it on the basis of our simulation. However it's fairly



easy to demonstrate that all the *appearances* of things in the apparently external world are added by mind and don't actually exist out there. Even standard cognitive science confirms that colors, sounds, odors etc. are all internal *interpretations* of our sensory and perceptual *interactions* with the world called qualia rather than part of the external world itself (Wikipedia, Qualia).

Thus the basic logic of the simulation is a highly simplified mapping of the actual logic of external reality but every other aspect of it is added by mind in the simulation. Thus it's clear that our simulation of the world around us consists entirely of information, the information of the actual logic of external processes plus the information of the qualia of our interactions with the world the simulation uses to represent the world in a more meaningful way that's easier for us to function within.

Thus if the information that makes up the simulation in which we appear to exist seems so real and physical then why couldn't the actual external world also consist only of information? The fact that our simulation can model it so effectively with only information strongly suggests it too must consist only of information.

But if the universe is a computational structure then why does it seem so physical? To answer this question we must first analyze what we actually mean when we say something is a physical or material object. What criteria determine whether something is physical or not?

It turns out all physical means is that something is a *persistent spatial association* of specific types of *information* such as the information of its shape, color, texture, hardness, workability, heft and so forth that our mind is programmed to label as physical or material in combination.

This can be easily confirmed. With a little practice it's not at all difficult to analyze any apparently physical or material object into its separate information components, and when that is done it becomes quite clear everything is its total information content only. This is easily confirmed by successively subtracting all the information components of any seemingly physical object one by one. We always find that after all the information of anything at all is subtracted there is simply nothing left. Therefore all any physical thing is reduces to the association of the specific types of information that in combination our brains interpret and label as something physical.

It's just a matter of becoming aware of what we actually see when we observe things. If we really take our perceptions and mental models of things apart into their individual components we find their every component reduces to the information of what it is, and that's all we ever experience because everything without exception is ultimately perceived only in terms of its information. Only information is observable. There simply isn't any way to perceive anything except in terms of its information. Thus the entire observable universe must consist only of the information of what it is and nothing else other than the existence that makes that information a real actual thing in the world.

Thus all the seeming physicality of the things of the world is actually interpretations of their combined information forms in our minds. The apparently physical world in which we seem to exist is our mind's internal simulation of an actual reality consisting only of the information states of running programs. To this extent the physical world is completely an illusion, though certainly a very convincing illusion. Thus the apparent physicality of the world is an evolutionary adaptation that makes it easier and more meaningful for us to function and nothing more than that.

Thus the evidence is overwhelming that everything that exists is its complete information only. Everything is the complete information of what it is given reality by its presence in existence as a form of existence and other than that there is nothing else anything is.

So everything is actually just its information or its data, but this is not data in the trivial sense of data on a printed page or in a computer memory. The medium of this data, the data of actual things, is not marks on paper or electronic bits in a storage device. The data of reality exists in the medium of existence, and that's what makes it real and actual. It makes the data of existence into real actual happening things. Their existence gives them immanence and being, it makes whatever form that data has into the real actual thing its the information of.

All the actual information forms in the universe are filled with the immanence of their existence. The immanence of their existence makes them each into the real actual thing they are the information of. Thus the information of a description of a fox in a book becomes an actual description of a fox in a book. But the information of an actual living fox in the woods becomes a real actual fox in the woods due to the immanence of the existence of its information. The forms are different but the immanent existence that makes those forms real and actual things in the world according to their forms is exactly the same. Whatever a

form is, the immanent existence of that specific information form gives it exactly that reality in the world.

And since existence continually happens and evolves the information forms of all things are continually being recomputed in interaction with all the other data forms that make up their environments.

So it becomes clear there is convincing evidence the universe is best considered a computational structure and that this is completely compatible with both physical and cognitive science. The very notion that the universe is a physical or material structure is simply an outmoded *interpretation* of science rather than science itself. Since this is an interpretation of the science rather than the science itself it doesn't change the actual science in the least and is entirely compatible with it.

Thus the notion of a physical universe in the traditional sense must be replaced with a new understanding of reality that makes better sense and is naturally compatible with consciousness. A new view of reality in which consciousness is an intrinsic aspect of reality itself is urgently required.

## **REALITY**

We can define reality as the 'true nature' of the totality of everything that actually exists in the present moment. It is clear that many things are not as they initially appear to be. We typically see only the surfaces of things rather than the hidden structures and processes that underlie them. The world has a deeper more fundamental reality that is often obscured by appearances and science certainly agrees. The illusory appearances of things are due partly to their representation in mind and partly due to the hierarchical complexity of reality itself. We begin by exploring the fundamental nature of reality and how it's simulated by mind to reveal the true nature of the whole system.

There are three fundamental questions with respect to reality. First why does something exist rather than nothing? Second why does what actually exists exist instead of something else? And third what does actually exist?

# THE NATURE OF EXISTENCE

All things that exist whatever their nature are said to have existence. Existence is what makes something real and actual and gives it being. Existence is typically considered a quality of individual things, but it makes much more sense to think of existence as a universal medium or substrate within which everything that exists actually does exist. In this view it's the presence of things within the universal medium of existence that gives them their individual existences. Thus existence is the common active ingredient of all things that exist that gives them their individual existences.

Since all things that exist have existence, it's quite reasonable to assume that all things that exist must share a common active ingredient of existence that makes them real and actual. If there isn't some common active ingredient then how can the myriads of disparate things in the universe all be said to exist in the single sense implied by the use of a single word? What would saying something has existence even mean if there weren't something that gave it that existence? This is the obvious and logical conclusion.

So we can reasonably assume that the existence of all things that exist is the same existence. The forms of things differ widely but the fact they exist is the same for all. If we define reality as all that exists then the universal substrate of existence fills all of reality, and the existence of any individual thing is its presence in this common substrate of reality. Without being present in the common substrate of existence, a thing would not be present in reality, would have no reality, and would not exist.

This becomes clearer when we consider the analogy of an ocean. Individual things gain existence as forms of existence within an underlying medium of existence just as individual ripples, waves, and currents become real by being different forms of water within a common substrate of water. Thus the big bang can be thought of as the appearance or actualization of various forms of existence in a previously formless sea of existence. All individual things are merely *forms of existence within a universal sea of existence*.

The insight of an underlying medium of existence common to all things is missing from traditional science. This is because there is no actual non-existence to contrast existence with. Thus things are just taken for granted as individual things and their underlying common nature goes

unrecognized and doesn't tend to enter consciousness because there is no non-existence to compare their common existence against.

Individual things are recognized as individual things because they can be distinguished from all the other individual things that have different forms, but there is nothing different to contrast their existence with, and thus existence is rarely recognized as anything actual. Nevertheless existence is real and present in everything that exists in the universe, and is the largely unrecognized underlying presence of the reality of the universe. It's the underlying formless substrate of the universe in which all individual things gain their existence by their presence within it. If there were no underlying medium of existence, the universe and we within it would not exist.

## **THE QUANTUM VACUUM**

Note that we can reasonably identify the substrate of existence with the quantum vacuum since the elementary particles that make up the entire universe all arise within the quantum vacuum which maintains their existence.

In this view science has begun to discover the substrate of existence in its theory of the quantum vacuum. This gives the substrate of existence a firm scientific basis. This is explained in detail in *Universal Reality* (Owen, 2016). The only real difference is that *Universal Reality* treats all elementary particles as the elemental *data forms* of reality rather than physical objects, but of course even science admits that the elementary particles are far from physical in the traditional sense.

## **THE AXIOM OF EXISTENCE**

Something rather than nothing exists because only existence can exist. Non-existence or nothingness cannot exist because nothingness is non-existence and only existence can exist. Thus nothingness cannot exist and can never have existed. Only existence exists or has ever existed or can ever exist. Thus there is not and never was and never could or can be a nothingness out of which something came into being. There is and has always been only existence and whatever forms exist within it.

There is not even nothing outside of existence, or before or after or beyond existence. There is no outside or before or after or beyond existence. There is only existence and everything that exists is part of that existence.

Thus ‘Existence exists’, or more concisely just ‘Existence!’ which implies the necessary existence of existence, is the self-validating self-necessitating fundamental axiom of reality upon which all else depends. This is the ultimate turtle upon which all other turtles stand and the ultimate source of the entire logical structure of reality (Wikipedia, Turtles all the way down). Because the fact of existence is self-evident the axiom is self-evidently true. You would not be reading these words if existence didn’t exist.

At first this may appear to be a mere sophism or tautology but it accurately expresses the actual logic of reality and is the only possible self-contained explanation for the fundamental fact of existence.

One might argue the axiom of existence is circular and of course it is but that is precisely the point since the fundamental axiom of reality must be circular; but it must also be self-evident and meaningfully so. A meaningful circular self-necessitating fundamental axiom is much preferable to a set of axioms that has no underlying logical foundation such as those of Euclidean geometry (Wikipedia, Euclidean geometry).

Because there never was a nothingness out of which something was created there is no need for a creator or creation event. All the interminable disputes about creators and the creation of the universe immediately become illogical and meaningless and must be abandoned. The axiom of existence immediately renders much of philosophy and religious doctrine moot and answers the first question of why something rather than nothing exists.

Thus the fundamental question becomes not why something exists, but why what exists *is* what exists. Through this proper self-consistent, self-necessitating definition reality becomes much simpler and illogical questions concerning non-existence disappear.

Reality is the existence of what exists, and existence is the manifestation of reality. Reality and existence are different perspectives on the same thing. Thus the only thing that can ever be real and actual is existence and the only thing that can exist is reality.

The question of how existence arose out of non-existence is nonsensical and meaningless and should not even be asked. It's based on a misapplication of the logic and language of everyday things where individual things do suddenly appear out of non-existence into existence. But whatever appears always actually appears out of something else, it's always a *transformation* of things rather than a creation out of nothingness. Nothing ever appears out of nothing at all or nothingness. The forms of reality often transform from one thing to another but since reality itself includes everything there is nothing for reality itself to transform from or appear out of.

Of course the physical universe as we know it originated in the big bang some 13.8 billion years ago but this was not the beginning of existence as the universe originated not from the absolute absence of anything but from the quantum vacuum which contained the unactualized virtual possibilities of all possible actualities. We must not mistake the apparent beginning of the physical universe and clock time at the big bang for the beginning of existence itself.

Thus existence has 'always' existed. By 'always' we mean here that there was never a *time* in which existence did not exist. In Universal Reality clock time is computed along with all the other processes of the universe and so clock time would only have begun with the big bang. Thus there was no clock time prior to the big bang and properly speaking no 'before'. Nevertheless there was a timeless present moment in which a prior virtual state of formless existence existed and there was never a time this was not true.

Existence must exist because non-existence cannot exist. The existence of non-existence is a logical contradiction, and logical contradictions cannot exist in a computational universe, since for the universe to be computational it must follow consistent logical rules that don't generate logical contradictions. Thus the axiom of existence provides a clear and convincing answer to the fundamental question of why something rather than nothing exists. It is simply impossible for nothingness to exist so there was always a something that existed and that was the originally formless substrate of existence itself.

## **THE PRESENT MOMENT**

Existence has several intrinsic attributes. The first is presence. For existence to exist it must have presence and be present. The presence of existence manifests as a universal present moment in which everything exists. Since the present moment is the presence of existence there is no actual before or after or outside the present moment. Existence exists only in the present moment it creates by its presence.

The past is a non-existent logical projection inferred backwards from the present. It exists only in memories and its other computational results in the present moment. And the future doesn't exist because it has not yet been computed. Reality exists only in the present moment manifested by the presence of existence.

Many scientists deny the existence of a present moment because they believe it's inconsistent with relativity but this is based on a misunderstanding of relativity as explained in my book on Understanding Time (Owen, 2016). There is no doubt whatsoever that a present moment exists because it's the most fundamental and persistent of all observations both scientific and personal. The crux of scientific method is to develop theories that explain observations, never to deny them. Denying observations is the antithesis of science and the present moment is the most fundamental of all observations.

## **TWO KINDS OF TIME**

There are two kinds of time. There is the time of the present moment, which is universal and absolute and common to everything throughout the universe. And there is clock time, which flows through the universal present moment at different rates depending on local relativistic conditions. Clock time flows through the current present moment at different rates but the universal present moment is common to all observers throughout the entire universe. We can call the time associated with the current present moment *P-time* to distinguish it from clock time.

The fact there are two kinds of time is conclusively demonstrated by the established fact that relativistic space travelers always reunite in the exact same present moment even when their clocks read different clock times. The two kinds of time are confirmed and explored in detail in the author's book Understanding Time (Owen, 2016).



There is no doubt at all that there are two kinds of time and it is totally amazing that no one had recognized this obvious truth before I first pointed it out (Owen, 2007, 2009). This serves as an excellent example of the blindness of science to obvious facts that somehow don't register in the prevailing worldview or may not seem to have a mathematical basis.

## **HAPPENING**

Happening, also called change or process, is another intrinsic aspect of existence. Because of happening change occurs and events happen. Existence continuously happens. Happening is the source of all the processes and change in the universe and the ultimate source of all the activity and life of living beings including us. It is also the source of experience and consciousness. Without happening there could be no experience, no consciousness and no life. Happening is the life force of the universe. Happening occurs and the universe comes alive, events occur, and the universe opens into an observable reality that is available to experience, knowledge, and consciousness.

Happening is the source of the flow of universal P-time and the local clock times computed within it. Clock time is the observational rate of happening at any relativistic location. Happening has nothing to do with clocks *per se*. Clocks are just standard physical processes that measure its local clock time rates.

Happening is the universal *processor* of existence that continually computes the evolving existence of the universe and all its individual data states. Because of happening time flows and the universe comes to life. Since at least the big bang clock time continually flows through the present moment.

## **THE UNIVERSE AS A LIVING SYSTEM**

The universe can be considered a living system in the sense that it continuously happens and evolves of its own accord with nothing outside moving or causing it. In this sense, and only in this sense with nothing supernatural or biological read into it, the universe is alive. It's a living

self-motivating system that continuously evolves all by itself without any external cause or force. It is after all everything that exists and it moves of itself. It's not a biological organism but it is a computational organism.

Thus everything within the universe can be said to share the life of the universe according to its own specific forms. Ultimately the life of the universe is the source of the lives of all biological organisms including us. For without the happening of the universe we wouldn't be alive or even exist. It is clear the reasonable conclusion is that the universe is much more than the blind clockwork mechanism envisioned by traditional science.

We feel within ourselves the special feeling that we are alive, that we are living beings, that we have a life force that animates us and makes us different from inanimate objects. But what this actually is has long been a mystery. We are now in a position to provide an answer. Our personal life force is the same life force of happening that animates all of reality and us as well, each according to its forms. It's the presence of happening within us.

The fact that reality continually happens in the present moment is the life force that we feel within us. Our life force is our participation in the real and actual presence of reality as it happens, as is our consciousness. We feel ourselves alive simply because we are part of the aliveness of the universe and because we are continually happening ourselves as the happening of the universe occurs within us. There is nothing esoteric or supernatural about this. It's simply the experience of the continual happening of the universe occurring within us.

Our life force is the direct experience of happening that animates all reality. What we are referring to here is not the biological definition of a living organism as an autonomous purposeful computational system. Rather it's this biological structure that is animated because it shares in the universal life force that animates all things each in its own way according to its form. Our feeling of being alive is simply what the life force of the universe feels like inside a biological organism. It's the feeling of happening within us flowing through our form.

So both our consciousness and the life force that animates us are not something unique to us but are due to our participation in the realness of reality because we are a part of reality. Of course the particular ways we express our lives and consciousnesses as humans are due to our particular biological form structures but the fact that we are able to be

animate and conscious, and our experience of that, is due to the self-manifesting happening of reality itself within us.

## **ABSOLUTENESS**

Another intrinsic attribute of existence is that it's absolute. The universe and everything in it is absolute in the sense that everything is exactly as it is in the present moment with no possibility whatsoever of being anything else once it happens. And the intensity of its realness has no limits because everything is either absolutely real or doesn't exist at all.

Thus everything that exists is absolutely exactly what it is with not the slightest possibility of it being anything else or any different in any detail whatsoever. Things continually change but once they change they are exactly and absolutely as they are. In this sense all things are absolutely real and actual with no limits whatsoever to their reality.

Because what actually exists defines reality as it actually is there is and can be no alternative to existence as it actually exists. There of course can be theoretical (i.e. currently impossible) alternatives but there is no actually real alternative to exactly what is right now in the present moment of existence.

This is the solution to the second question of existence, why what exists is what exists rather than something else. The answer is simple though subtle. The existence of what actually does exist conclusively falsifies the existence of anything else at all, and this is true all the way back to the big bang and the fine-tuning of the universe. There simply is no possible alternative to any of it once it has happened.

The fact that we can imagine theoretical alternatives in no way implies any actual existence of those alternatives. None of those other alternatives have any existence at all because they just aren't part of existence except as ideas. Thus now that what exists is exactly what exists, and only what exists can exist, those alternatives have no reality at all, and certainly no possibility of existing either now or in the past whatsoever.

Thus the existence of what does exist conclusively falsifies all other alternative possibilities. There is zero probability they ever could

have existed because they never did. When carefully analyzed and understood this logic is sound. We can legitimately imagine other possible outcomes for *individual events in time* only because we can largely recreate the conditions that led to them, but the original event is entirely impossible to recreate as it has already occurred. so we must not fool ourselves into thinking it could ever have been any different than it actually was. The universe as a whole cannot be rerun thus there is no possibility whatsoever it could have been different in any last detail than it actually was.

It's important to understand that alternative possibilities meaningfully apply only to future states and never to past or present states. Alternative possibilities for the future are meaningful because the future is probabilistic because it hasn't yet been computed, and its computation is subject to quantum randomness but the actual present and past conclusively falsify any possible alternatives to their slightest detail and this includes the original complete fine-tuning which simply could not have been other than it actually was.

## **IMMANENCE**

The final intrinsic attribute of existence is immanence. Immanence is the self-manifestation of existence in the actual presence, being and happening of all things that exist. Immanence may initially seem to be a subtle or unfamiliar concept but it's actually what we experience all the time as the here now presence of things. Our experience of anything at all is simply our experience of the immanence of its existence.

In traditional philosophy immanence refers to the hidden presence of the divine within things (Wikipedia, Immanence). We use it in a very similar sense but without any religious or metaphysical connotation. In our usage immanence refers to the internal presence of existence within all things that makes them real and actual and gives them being. Take the information forms of all things, subtract their illusory physicality, and fill their information forms with the inner light of existence that brings them to life in the universe and you have their immanence.

The quantum vacuum is not just the invisible source of real elementary particles, and thus of all things, but is the existence that actually 'shines' within particles to make them real particles present in

the observable universe. That 'shining' is what we perceive as their reality and their actuality. If the information forms of the world had no immanence of existence they would not exist and could never be experienced. We experience things only through their immanence, through the existence shining within them that makes them real, actual and present in reality.

Nothing mysterious, metaphysical or supernatural is implied here. It's just the idea that existence itself is more than just dark dead material things sitting or moving lifelessly in a physical universe. Immanence is what brings the universe and everything in it to life in the real world of existence. Immanence is the discernable presence of existence in everything that exists.

The information of the things of the world is not just there like equations on a page in some dark traditional sense, it's filled with an inner light of being, that makes things really really real and actually there in a much profounder sense. Its being is absolutely real because it is absolutely what it is exactly as it is.

Immanence is analogous to a light bulb that is not just a light bulb in a box, but a light bulb that is plugged in and turned on with existence. Everything that exists has a living essence of existence that internally illuminates its being into reality. Existence, the quantum vacuum, is the ubiquitous substrate of the universe that makes it real and actual. Thus the existence of an information form in the substrate or medium of existence is what makes it present in the universe and into a real actual thing and that existence is discernable within it as its presence in reality.

The old materialistic view of the universe is a blind clockwork universe of passive information forms that wait in the darkness to be observed, but our computational universe is a universe in which all forms actively glow with the inner light of their being, with an invisible inner light of presence, existence and happening. This makes them real and present in a much profounder sense. This is what is meant by the immanence of existence.

In this sense all the forms of the universe glow with life from within as existence continuously animates them into being. Existence is the life force of the universe that is actively present in the forms of all things making them real. Existence continuously manifests itself as immanence in all the forms of the universe as happening computes them into continuing existence and gives them actual reality.

This immanence of existence in all the forms of existence is the essential ingredient of things that makes them real and actual. It is also what makes things available to consciousness, and makes consciousness possible. Without the immanence of existence within things, forms might be blindly registered by brains in the same sense as a computer program registers a change in its data, but that registration would not be conscious. Immanence is of critical important in understanding reality because it's the key to understanding consciousness.

Reality is not just a lifeless mechanical, physical world composed of material bodies but something that *actively self-manifests* itself in the absolute realness and actual presence of its existence in the immanence of all the individual things that exist within it. All things that exist are different data forms of existence. All the forms of the world are empty of any self-substance other than that of their common existence.

Reality, existence, the present moment, happening and immanence are all names for different aspects of the single fundamental and only entity that exists. Tao, properly understood, is an ancient approach to the concept of existence. The fundamental substance of reality is itself originally formless and nameless existence. We seek to describe it as accurately as possible in an English description of its aspects and characteristics since we must after all use language to speak of it. But as Lao Tzu rightly points out, "The Tao that can be named is not the Tao." (Legge, 2010).

## **XPERIENCE**

All the programs of the universe effectively experience the other programs they interact with in the resulting changes to their own information forms. All experience consists of internal changes to an observer's own forms. Our experience of external forms consists not of those forms themselves but of the changes our interactions with them make to the forms of our internal representations of them. Thus experience always consists of changes *to internal* forms even when it's *of external* forms. In all cases we experience both ourselves and other forms as changes to our own forms. Experience can only be of some aspect of our own form.

In a generic sense all programs, even inanimate ones, can be said to continually experience the existence of both their own forms and other

forms they interact with as the continual recomputation of their own forms into existence. In this view experience is not something a form *has* but something a form *is*, of something that is an intrinsic part of it. All forms are in a continual state of recomputation, whether the form itself changes or is unchanged, and every recomputation of a form can be understood as an experience of something.

In this generic sense all the individual forms of the universe can be considered *generic observers*, and the process of their continual recomputation as experience. This is of course not experience in the sense that living organisms have experience but the fundamental nature of the process is exactly the same; the change of a form in response to its interaction with an external form or its own internal transformation. Thus we can coin a neologism and refer to the generic experience of forms as *xperience* in contrast with the *experience* of living programs.

Because all forms manifest the immanence of existence all *xperience* is actually real in the realest sense possible, however its expression is always that of its precise actual form. *Xperience* is the basic process underlying consciousness, and consciousness is simply *xperience* occurring in certain specialized forms of mind's simulation of reality.

*Xperience* is the view of the active manifestation of existence in all forms from the perspective of the forms themselves. *Immanence* is the perspective on the active manifestation of existence in all forms from the perspective of other forms.

Thus immanence and *xperience* are opposite perspectives on the same thing. Immanence is the active self-manifestation of existence in all forms, and *xperience* is the active self-manifestation of existence within a form's own forms. Immanence and *xperience* are opposite sides of the same coin of the active self-manifestation of existence in all forms.

Immanence and *xperience* manifest only through the actual forms they occur within. Thus unless the proper forms to register consciousness are present *xperience* remains unconscious. Thus most of the *xperience* of the universe is unconscious and not conscious experience in the human sense. Unless a program contains a specialized subroutine that monitors its *xperiences* and is able to register the fact it's experiencing them, its *xperience* remains unconscious.

So by and large almost all of the *xperience* of the universe is unconscious because it occurs in inanimate forms that are unable to record or report the fact that they are *xperiencing*. Nevertheless all this

xperience is just as real as conscious experience, and this same xperience is the essential mechanism underlying conscious experience as well.

The fact we humans are able to experience the fact that we are xperiencing and report it to ourselves and others makes us believe that only we have xperience, but in fact all the programs of the universe also xperience in the exact same sense we do, they are just not able to consciously register or report the fact that they do because they lack the necessary forms.

A mountain xperiences its erosion in the computational changes to its forms in the same fundamental sense that humans experience things. It's just that the mountain has no specialized simulation model of its self and surroundings in which before and after states can be conceptualized and compared like we do. The mountain xperiences only its actual here now state in the present moment as it's computed. It doesn't experience comparative changes to its state nor does it experience the fact it's xperiencing as living beings do because it lacks the requisite forms and subroutines to do so.

## **REALITY AS XPERIENCE**

Since everything in the universe consists of information forms and all recomputation of forms into continuing existence is xperience, there is a very real sense in which the universe itself consists only of xperience since xperience is simply the continual recomputation of all the forms of the universe into continuing existence. The universe wouldn't exist if it weren't continually being recomputed into continuing existence in the present moment and all computation of forms is xperience.

In this sense the observable universe becomes the xperience of itself, the xperience of its immanence self-manifesting in all its observable forms. The observable universe is the experience of its own continual happening. Immanence and xperience are the essence or active ingredient of consciousness, thus the observable universe consists only of the active ingredient of consciousness, however most xperience is not conscious in the usual sense even though it contains the essential active ingredient of consciousness.

Thus the universe can be said to consist entirely of xperience, the xperience of all the programs of the universe continually xperiencing



themselves and each other. In this sense the universe continually experiences itself into existence, and experiences itself in the experiences of all its individual programs of the other programs they interact with. The universe must experience itself to exist because experience is the continual recomputation of forms and this is the manifestation of existence.

The universe is the experience of itself, and all the individual programs running within it are the experiences of themselves. In this sense if the universe didn't experience itself it would cease to exist. The universe continually computes and experiences itself into continuing existence. The observable universe is the largely unconscious experience of itself.

In this sense every program in the universe is a generic observer, and the universe consists entirely of generic observers. All the programs of the universe are generic observers though almost all are unconsciously so. Almost all the experience of the universe is unconscious experience. In this sense the (generic) observer becomes an essential integrated aspect of the observable universe that automatically emerges from its fundamental nature. The fact of experience is what makes the observable universe observable. Without generic observers to experience it the observable universe would not exist.

The observable universe is the continual experience of its own immanence. The entire universe experiences its existence in the continual changes to all the forms that make it up. The universe experiences its existence in its own computational happening. And since experience is the active ingredient of consciousness the observable universe waits only the evolution of the proper forms to become fully conscious of itself, as consciousness is implicit in its fundamental design. Meanwhile the observable universe is conscious of itself through all the individual forms of consciousness it has evolved.

The usual perspective on the universe is of individual static things that undergo change, but this new view takes change itself as primary. Experience is the fundamental nature of the universe, and the universe consists of constantly running processes always in the act of computational change. In this view static individual things don't exist in reality. They are only temporal snapshots of the instantaneous states of running programs at some moment in time snapped by some observer and recorded in its simulation.

The universe continually experiences itself in its continual recomputation into existence. The experiences of living beings such as

you and I are simply the participation of specialized neural structures in our brains in this same universal process of xperience.

## **CONSCIOUSNESS**

The immanent existence within forms makes those forms the real actual things they are the specific information of. So to explain consciousness we simply need to identify what forms filled with immanent existence would manifest as consciousness. It's quite clear that the forms we are looking for are forms that encode the fact that experiences are taking place because the immanent existence of those specific forms of experiences taking place is consciousness itself.

So the forms we are looking for are not just the forms of representations of things of the world in our simulation of the world, but specific additional forms encoding the fact that such a representational form is present and being focused on, that it's actively being experienced. The reality of those forms is the experiencing of the representational form, and the immanent existence of this experiencing form gives it the reality of a conscious experience because that's what the form is the information of. The information of the focus of attention form is that an experience is occurring, and the reality its immanent existence gives it is the conscious experience of the representational form.

The immanence of the existence of the representational form is its actual presence in the simulation. The immanence of the existence of the specialized form that focuses on a representational form being present in the simulation is the information the representational form is being experienced and the immanent reality that form's existence gives it is the consciousness of the representational form because that's what it is the information of.

So the consciousness of things is not just the presence of their representations in our simulation, but the presence of a specialized focus of conscious attention form encoding the fact a representation is there and actively being experienced by the focus of conscious attention routine.

Thus the simulation contains a vast unconscious dynamic model of the organism's representation of the world that is continually being updated by sensory updates and cognitive maintenance. At this point all its information is entirely unconscious because it contains all the

representational forms but lacks forms encoding they are being experienced.

Thus consciousness is a specialized subroutine of the program that maintains the simulation that actively monitors it and focuses on specific areas of interest such as changes in its representations. The information forms this subroutine produces are information forms encoding a focused experience on some aspect of the unconscious representational nexus, the information that it's being experienced. And the immanence of this form gives it the actual real existence it is the form of which is a conscious experience. Thus the experience pops into reality as the consciousness of the representational form being experienced. The immanent reality of an information form encoding that a data representation in the simulation is being experienced is the consciousness of that experience of the representational form.

Thus the active ingredient of consciousness is the immanent existence present in all forms that exist that gives every form the reality of what it's the information of, but what makes an information form pop into consciousness in our heads is when it's the form of an experience of another representational form. Thus it's the *experience* that pops into the reality of consciousness because it's the information of an experience occurring.

## COMMENTARY

Consciousness is the active presence of existence self-manifesting in things. Specifically biological consciousness is the active presence of existence in specialized recursive forms in the simulation that actively monitor the presence of other forms. Consciousness is simply the immanence or active presence of the actual reality of these forms.

The phenomenon of consciousness *itself*, how consciousness can arise in a physical brain or more generally a physical universe, is the subject of Chalmers' 'Hard Problem' (Chalmers, 1995). This is in contrast to the structure of the *contents* of consciousness, which Chalmers calls the 'Easy Problems' of cognitive science, which is a vast subject beyond the scope of this book.

Thus to fully understand consciousness we must clearly distinguish between consciousness itself and the contents of

consciousness. The contents of consciousness are all the forms that become conscious within consciousness and their structural characteristics, and consciousness itself is the fact that these contents of consciousness are conscious.

This is immediately analogous to the distinction between existence itself and the contents of existence. Existence itself is the originally formless substrate of reality within which the individual contents of existence have existence. Likewise consciousness itself is the fundamentally formless presence of consciousness within which the individual contents of consciousness become conscious. The analogy holds because the essence of consciousness itself is the immanence of existence itself.

In Universal Reality consciousness itself is easy to understand because it's simply our experience of the self-manifesting immanence of things that actually exist. The individual contents of consciousness include all the information forms in our simulation that are potentially available to scanning by the focus of attention subroutine.

The fact that this recursive subroutine shares in the immanence of all processes is what we call consciousness. Immanence is the essence of consciousness because it explains both the popping into existence of thing forms in the world, and the popping into consciousness of thought forms in the mind. The popping into reality of forms in the world is their existence. The popping into reality of these recursive forms in the mind is their consciousness. These are both manifestations of the same fundamental phenomenon of the immanence of existence.

Our consciousness of individual things is not just the presence of representational information about things in our brains; it's the immanence of the information recursively encoding that information being there. This accounts for the moving focus of conscious attention around the information contents of the simulation. Our simulation encodes and maintains all the information contents of our model of the world, but these contents only become conscious when the focus of attention subroutine encodes the fact they are actively being focused on.

Consciousness itself is difficult to define clearly. Everyone has the experience of consciousness but no one seems to be able to define it much less explain it. Basically consciousness of something is a mental representation of that thing somehow popping out of the mind's dark background into clarity as attention is focused on it to the temporary exclusion of most of the rest of the contents of mind.

Thus the salient feature of consciousness is the exceptional self-illuminating presence of something to attention. Stated this way it's clear that the self-illuminating presence of a thought to consciousness is very similar to the self-illuminating immanence of things into existence in the external world. In fact consciousness is exactly the same immanence of existence manifesting in specialized forms of the mind instead of the forms of things in the external world.

Immanence is the simple fact that everything in the universe shines with the inner light of its existence. Thus our mind's simulation of the world also shines with the inner light of its existence and that is the essence and active ingredient of consciousness. So to explain the structural aspects of consciousness, we just need to determine what information structures in our minds filled with immanence would manifest as consciousness as we are familiar with it.

Our entire simulation of reality contains all the information that is potentially available to consciousness. It's a vast ever changing nexus of interconnected information encoding our mental model of all aspects of our self and the world around us continually updated by sensory and cognitive inputs. When some particular information in our simulation is brought to the focus of attention that is our conscious experience of that information.

The main program that constructs and maintains the simulation is extremely extensive and sophisticated and is always running in the background. The huge volume of information that makes up the simulation continually shines with the immanence of its existence that makes it real but it isn't yet conscious. Thus the immanence of the data in the simulation can't be all there is to consciousness because all the data in the simulation is present but it's clearly not all conscious at any given moment. Something is missing to explain why only small subsets of the entire simulation are conscious at any given time.

The immanence of data representations in the simulation is not sufficient to make them conscious. All forms are the immanent realities of the exact things their forms are the information of. The immanent reality of the form of an external thing is the external thing. The immanent reality of the representation of a thing in the simulation is only the representation itself. It isn't the reality of the organism having the experience of that representation. So for consciousness we need a form that encodes the fact that representation is being experienced and it's the immanence of that form that will be consciousness because that is the reality of what that form is the information of. Consciousness is the

immanence of forms that encode we are having experiences of things in our simulation.

Thus there is a specialized little subroutine of our total program that roams the simulation focusing on particular areas of interest and bringing them to conscious attention. This is the moving focus of our conscious attention onto particular contents in our simulation. This is the key to consciousness.

This little program also generates information but this information is not information about the external world, but *the information that some information about the world is being experienced in the simulation*. It's the immanence of this information that we experience as our consciousness of the original information about the world. So consciousness is the immanence of an internal information form representing the fact of our internal representation of the form of some actual thing in the world. Consciousness is the immanent reality of an experience of a representational form being experienced. It becomes conscious due to the immanence common to the existence of all forms.

The focus of attention program is essentially a specialized program that actively monitors things in the simulation and encodes specific information being represented and the fact it's being represented. This information of representational forms in our simulation being actively focused on and monitored is our experiences of those forms. And the immanence of these experiences is our consciousness of the representational forms. The reality of these focus of attention forms is they are experiences and immanence makes this experience pop into reality and manifest as consciousness. Consciousness is the immanence of the specialized focus of attention program recording the fact that things are being experienced in our simulation of them.

Everything in the universe has the common active ingredient of consciousness in the immanence of its information forms and its experiences of them but everything is not fully conscious in the sense we are. Existence manifests immanence only through the specific actual forms it appears within. So whatever that form is, existence manifests it as the real actual thing it is the information of, and only that. The real actual thing the focus of attention program is is the fact a particular experience is taking place, and the reality something is being experienced is the consciousness of that experience of what is being experienced.

Most information in the universe is computed by the running programs of the inanimate things of the world, and so the appearance of

existence within their forms makes them the real inanimate and unconscious things of the world. However the appearance of immanence in the forms computed by our focus of attention subroutine on representations in our simulation gives them the reality of conscious experience, because these are forms encoding not things but the experiences of things. Thus the reality of these recursive forms is things being experienced, rather than just things, and immanence makes that experiencing conscious because that is the reality of the focus of attention forms. Consciousness is the immanence of a recursive computational process.

This little program of the focus of attention is what people tend to think of as their I or conscious self because it's a concentration of consciousness that can even be self-aware as it roams around the simulation experiencing things within it.

This focus of attention program operates like an adjustable spotlight. It has a strong central focus of attention but also considerable peripheral consciousness continually on the look out for subsequent areas of interest to turn its attention to. And the intensities and breadths of both areas are also adjustable to some degree. This program can also be turned off as in dreamless sleep. In this state the programs maintaining the simulation are still running and all the data is still there but is not brought into consciousness. The experiences of all the myriad processes of our bodies and simulation of reality are still actively occurring but the focus of attention program that registers they are occurring is turned off and so they remain unconscious.

The focus of attention is guided by a number of complex adaptive rules that won't be examined here, but it tends to focus on updates taking place in the simulation, especially those judged of particular potential importance. Movement against a background is one example; recognition of faces or animals, imagined or real, in background forms is another that has evolved because it tends to promote survival.

We experience many aspects of our simulation as the conscious experiences of an external world but we are actually only conscious of our experience of our mind's simulation of the external world rather than the external world itself. However there is sufficient logical correspondence between the external world and our simulation of it that our mind can reasonably interpret our consciousness of our internal simulated world as consciousness of the external world it simulates.

So our simulation is not just an internal programmatic model of

the information of the programs of the world. Our consciousness also experiences the immanence of the things of the world in the immanence of our simulations of them. The immanent existence of our simulation of the world that makes it conscious is the exact same immanence of existence that makes things form in the world actually real. In this way we experience the same immanence of existence of the things of the world in the immanence of our conscious representations of those things in our simulations.

This is why our consciousness of representations of things in our simulation seems like the consciousness of real actual things in the world when it isn't. This is why our brain's simulation of the world seems like a real actual world when it isn't.

Immanence is the only reasonable explanation of consciousness, because consciousness is clearly not a physical phenomenon. That's why everyone has failed to explain how it could possibly arise in a physical brain in a physical world because it just can't. But the universe is not a physical world in the traditional sense. It's actually an information universe that manifests its self-illuminating existence in the immanence of its forms. When we think it through carefully this is the only reasonable explanation of consciousness. When we recognize immanence as an intrinsic aspect of the universe, and as the active ingredient of consciousness, the Hard Problem is immediately solved.

Thus the very existence of consciousness is another conclusive demonstration that the universe can't be physical in the traditional sense because consciousness does exist and it isn't a physical phenomenon. All attempts to show how consciousness could be produced from a material universe have failed because it simply isn't possible.

Thus consciousness itself is not something mysteriously produced by human brains and shown like a spotlight onto things in the world. It's simply the intrinsic presence of the immanence of existence within all things manifesting within mind's internal representations of them as they are highlighted by the focus of attention.

This theory of consciousness can also be confirmed by the mental exercise of meditation in which the contents of consciousness are ignored and allowed to pass by freely until they largely subside. This is a simple mental exercise anyone can practice without any metaphysical or religious context.



When mind is emptied of forms in meditation consciousness itself shines brighter. Consciousness itself becomes the focus of attention. The focus of attention program focuses on nothing in particular and just experiences the pure immanence of its own existence. Though technically existence can only manifest through form as only form can be experienced, the experience of meditative immanence is simply the consciousness itself of the form of empty mind. It is as close as we can come to consciously experiencing formlessness while in human form. It's the direct experience of the immanence of reality itself, the direct experience of the universal substrate of existence.

In meditation, by ignoring mundane areas of information in the simulation, the focus of attention can also explore deeper areas of the simulation not normally brought to attention such as the underlying energetic processes of the brain's primitive central areas some thinkers call the center of being (Wilhelm, 1931). Deep meditation is as close as we can come to consciousness of the formless immanence of the sea of existence that underlies and self-manifests in all the things of the world including ourselves.

Our consciousness of a thing is our detection and experience of its immanence through its form. The particular forms of things are our mind's sampling of their data and fleshing the data out with qualia, but our consciousness of things is the immanence of their data representations in our minds.

The internal glow of existence, the immanence of things, is not something visible to the eyes but it is visible to the mind as consciousness. Consciousness is simply the direct experience of the living immanence of things configured by the structural forms of the mind that receives it. Consciousness itself is the internal glow of the immanence of things. The structural details of what is conscious, the forms of the contents of consciousness, depend on the structure of the receiving mind, but the experience of immanence, the essence of consciousness itself is universal and all events participate in the immanent existence of things but only according to their actual forms.

Though our experiences may seem to be of external things, in reality all the experiences we have of things are experiences of our own internal representations of those things in our simulation. All our experiences, even those that seem to be of external things, are actually our experiences of computations in our own brains representing those things.

The reason humans have the conscious experiences we do is because we are participating in the same fundamental experiential process of reality that all things do, namely the continual interactive recomputation of all forms into continuing existence as all forms manifest the immanence of their existence. Consciousness is our participation in the universal immanence of happening.

Existence manifests only through the actual forms it occurs within. Thus whether an experience is fully conscious in the human sense or not depends on what it's the form of. The structure of the form determines what the reality of its existence becomes because the forms are the information that thing actually is. Thus the immanence of every program in the universe is expressed only through the actual data forms of that program.

So when immanence manifests in inanimate programs those computations do pop into existence as the *experience* of themselves. But since they have no additional monitoring forms encoding the fact they popped into existence they have no way to be conscious of the fact of their existence. They have the active ingredient of consciousness in immanence and experience but no forms recording that they have it. They experience their existence in reality in the immanence of their existence, but they are not conscious of this experience because they have no secondary forms recording any context or knowledge of it. In the realest sense, they are the actual experience of their existence, but they are unconscious that they are because they have no forms encoding they are. One could almost say they are unconscious that they are conscious.

As with inanimate forms, every biological form in our bodies even down to the cellular and particle level, and those of other species as well, has the same sort of proto-consciousness in this same unconscious sense, but only the specialized forms of the focus of attention experience it in a knowable reportable sense. Consciousness is the *recursive experience* of the inner light of existence shining in our mind's internal model of reality.

One could say that all the programs of the universe have this same sort of proto-conscious of their existence because they experience the immanence of their existence. But inanimate programs lack information forms encoding the fact they are experiencing. Thus they have the necessary ingredient of consciousness but no forms to experience that they have it and so they aren't conscious of their experience. They are not conscious of their experiences; they just *are* their experiences. All forms are their experience, but the experience of the forms that monitor other forms is

the experience of consciousness of those other forms.

So for the immanence of existence to manifest as full consciousness of things it must manifest in secondary forms representing experiences of those things rather than just representing the things. Since the secondary forms encode an experience of the primary forms the immanence of their existence manifests as a conscious experience of the primary forms.

This explains why only programs with internal models of their worlds or selves actually experience consciousness. Everything in the universe has consciousness in the generic sense of xperience, but this xperience doesn't become conscious experience without specialized forms experiencing the xperience.

This is what misleads everyone, scientists and laymen alike, into believing that consciousness is something unique to human minds that is shown out onto things like a spotlight. Nothing could be further from the truth. In the same way that the ancient extramission theory explained vision in terms of eyes shining light on things (Cornford, 1997), so the theory that mind shines consciousness onto things is dead wrong. The active ingredient of consciousness is the universal immanence *within* all things. Human consciousness is simply this same universal immanence in specialized forms of mind.

The active ingredient of the generic consciousness of xperience is the same active ingredient that makes all forms actually real and present in the universe. The manifestation of the immanence of existence in external forms makes them real things in the universe. The manifestation of the immanence of existence in specialized recursive forms encoding the active experience of information forms in the simulation makes them real too, but their reality manifests as the conscious experiences of the forms representing the external things.

Thus the recognition of the immanence of existence of all things in Universal Reality provides the major paradigm shift necessary to fully explain consciousness and is the only possible rational explanation of consciousness. It's a simple and necessary addition to the Theory of Everything with great explanatory power. It's an integral part of an entirely new interpretation of science that is entirely consistent with logic and established science as well.

No longer is the universe a mechanical clockwork system in the traditional sense. It has become a living happening computational system

that actively self-manifests its existence in the immanence of all of the forms of existence that exist within it including ourselves and the forms of consciousness through which we directly experience its immanence.

## NON-HUMAN CONSCIOUSNESS

Consciousness is not either or but a part of a vast spectrum of experience across all the innumerable immanent forms of the observable universe. Every form in the observable universe continually *xperiences* its existence in the continual recomputations of every one of its subsidiary forms. To the extent a form has subsidiary forms that monitor the *xperiences* of any of its other forms it can be called conscious but consciousness must be understood to manifest only through the actual details of those specific monitoring forms and the forms they monitor.

Today many electronic systems from automobiles to industrial robots to the space station monitor ever more details of their functions and their environments, and self-monitoring is the basis of consciousness. Thus all such systems can be said to be conscious of themselves to the extent they self-monitor. The basic mechanism is the same as that of human consciousness, it's just a matter of how extensive the monitoring system is, and in what forms its results are encoded.

Thus there is no intrinsic reason that a robot with sufficiently complex self-monitoring systems and a focus of attention routine to *xperience* and report the fact of those experiences could not be considered reasonably conscious. Of course for a robot to reliably pass the Turing test of consciousness the robot would have to have a human-like simulation (Wikipedia, Turing test). This is why the Turing test is not a test of consciousness *per se*, but only of a human-like consciousness, and there are certainly all sorts of other variations of consciousness possible. They already exist in other biological species and can certainly exist in robotic and artificial intelligence systems as well.

Biological organisms typically have very complex self and world monitoring systems in their internal and external sensory systems that transmit large volumes of information through chemical gradients and nervous systems to continually refresh their simulations. Thus living beings of almost all species are clearly conscious though in all cases their consciousnesses are restricted to the actual forms of their simulations of self and environment. In all cases the details of consciousness are only

those of the actual forms involved.

Humans are essentially biological robots. If we could build a human being from scratch by assembling exact duplicates of all the cellular components of a natural human being it would certainly be conscious in the exact same sense we are, even if initially lacking in memories and a trained learning system, though those could theoretically be uploaded into the brain as instinctual software and learning routines already are by DNA (Owen, 2016).

Thus consciousness is not some mysterious separate component that must be added to a biological robot to make it conscious. It's the natural manifestation of the biological design of human beings out of natural organic chemical compounds. So an artificial being could certainly be conscious, though the structural details of that consciousness would depend completely on its design. Would it have electrical circuits that extensively reported the feelings and status of its body parts to a self-simulation it could monitor? If so it would be conscious of the feelings of those parts of its body just as biological organisms are though always according to the specific details of its particular forms.

Thus all sorts of robotic systems could potentially be constructed with consciousnesses each depending on their computational structures. This would result in all sorts of different varieties of consciousness depending on what they were conscious of and how they were conscious of it, and how they reported it to themselves and each other in what language with what terminology. However all such languages would have to be based in the universal grammar that represents the logic of things that governs computational reality at the emergent level (Wikipedia, Universal grammar).

As a matter of fact there are already many artificial systems with all sorts of what can be considered specialized and limited consciousnesses and the variety and complexity of these will certainly grow exponentially in the future. And of course there are the enormous varieties of biological organisms each with its own variety of consciousness. Even among humans there is great variation in the details and structure of consciousness that is largely unrecognized.

It is not clear exactly how much functionality consciousness adds to an organism. Massive automatic computations in the whole simulation at the unconscious level generate almost all actions independent of consciousness. Consciousness seems to function primarily as a high-level quality control system with only minimal capacity to modify

unconsciously generated actions. However the sense of self provided by consciousness clearly conveys a sense of identity and self-worth to an organism and may well heighten its adaptiveness in that respect.

This self or I associated with consciousness is a subjective I. In humans in particular the simulation also constructs an objective self that is then identified with the subjective self. This objective self is essentially the mental construct of a self as an object among the other objects in the world rather than the direct experiencer of consciousness from the inside. When the objective self is added to the mix it's experienced objectively as a self that has consciousness rather than a self being conscious.

Self-consciousness is the consciousness of the focus of attention subroutinely monitoring itself in the process of monitoring other areas of the simulation. It may also associate the objective self as having the experiences. Consciousness doesn't require self-consciousness to be conscious. All consciousness itself requires is the presence of information forms that encode experiences of things being illuminated by existence from within. This causes experience to shine with the immanence of being. This internal shining is invisible to the eye but visible to the mind as consciousness.

Thus all higher organisms are clearly conscious whether or not they are self-conscious. To imagine consciousness requires self-consciousness is fallacious. It's like saying we must be conscious we are conscious to be conscious. It's essentially saying that to be conscious we must already be conscious which is nonsensical and circular.

## **CONSCIOUSNESS AS THE PRESENCE OF REALITY**

The central experience of our existence is our consciousness in a present moment through which clock time flows and events happen. Our theory of consciousness as the presence of immanent existence reveals that our consciousness in the present moment is in fact our direct experience of the most fundamental process of the universe occurring within our own being.

We ourselves are an integral part of the universe and the fundamental process of the universe is continually happening within us and every one of our information forms as it does within everything in the universe, and our consciousness in the present moment is our direct

experience of this process occurring in specialized forms in our simulation. It is the direct experience of our active participation in the fundamental process of the universe as an integral part of the universe.

The happening of the universe in the present moment is the fundamental process that makes us alive and conscious. It's our direct experience of our program as an integral part of the universal program continually recomputing our existence in the present moment within the active presence of the universe. Happening is the fundamental process of the universe and we are right here in the middle of it experiencing it in every second of our existence because it's occurring within us as it does within everything in the universe. Consciousness is our direct experience of happening and the immanence of existence in all the forms of reality as our mind represents them in our simulation.

Realizing this is the fundamental realization of our existence. The fundamental process of the universe is not something just happening far out in the depths of intergalactic space. It is happening right here and now inside every one of us all the time, and all that needs to be done is to realize this and experience it for what it actually is.

## **THE CONSCIOUSNESS OF IMMANENCE**

All religions have their mystical traditions and in modern times many spiritual traditions have developed outside of strict religious contexts. Our new theory of consciousness leads seamlessly to a scientific theory of realization and explanation of these spiritual and mystical traditions.

The essence of realization and all mystical experiences is simply the recognition of the presence of immanence in things. While immanence exists in all things its association with particular symbols in the context of a belief system most often leads to its recognition in only the specific forms associated with that belief system such as the presence of gods or saints even when these are mental constructs that have little correspondence with objective reality. This is the source of the traditional meaning of immanence as the presence of the divine in things.

The philosophers of the ancient Indian and Buddhist traditions especially seem to have recognized the theory of immanent information forms long ago through a process of direct analysis of consciousness from

the inside (Tsunemitsu, 1962). The notion of the emptiness of all forms revealing the underlying presence of Śūnyatā or nothingness (Mu) is clearly describing the same thing we are talking about in a prescientific context (Wikipedia, Śūnyatā) (Suzuki, 1956).

And certainly the Indian and Buddhist concept of enlightenment is describing a state where the immanence of existence is directly experienced both in forms and in the underlying formlessness they arise within (Wu, 2005).

The use of psychedelic drugs may also enhance the recognition and experience of immanence. In particular LSD, mescaline and psilocybin have this effect where the common things of the world take on an enhanced reality, which is essentially the recognition of the immanence they always have but that is rarely recognized and appreciated in daily life.

However our theory defines realization as simply the understanding and direct experience of the true nature of reality without any supernatural or religious connotations. In other words realization is simply the understanding and direct experience of the immanence of existence in all things without exception.

Thus it's clear that the consciousness of immanence can be enhanced in realization experiences. In fact since all things are absolutely what they are and absolutely real because of the immanence of their existence the only limit to the experience of immanence is the capacity of the experiencer.

Normally in daily life the experience of immanence is damped down significantly by mind to enable us to concentrate on the functional details of our daily lives. Thus our consciousness is concentrated on the specific details of the contents of consciousness rather than their underlying immanence. However in extreme situations such as sudden threats or extreme sports we do experience a brightening or heightening of consciousness though this is most often accompanied by surges of adrenaline fight or flight responses which can't be maintained.

However the brightening of immanence with realization is an enhancement of consciousness without the adrenaline rush and can theoretically be maintained indefinitely. In realization experiences it's normally the distraction of the constant flow of mundane forms through mind that breaks the spell and brings mind back to its usual duller state.



This medium of existence is already being experienced by all of us all the time as the immanent reality of all the things of the world. If the information of things didn't exist in the medium of existence things simply wouldn't exist and would have neither being nor observability. Therefore the realization of existence is already with us in our experience of the actuality of the universe and all the things that populate it. It's just a matter of waking up and realizing what this really is.

We experience the immanence of existence all the time but we are not aware of what we are actually experiencing because we tend to take things for granted without realizing the true immanent nature of their existence. Only things that have existence can be experienced. Thus we never have any non-existence to compare the presence of existence with to make the immanence of existence really pop into consciousness. Yet all the while it's precisely the immanence of things that manifests as our consciousness of them.

Immanence is in one respect a simple realization. It's the simple fact that things are actually there in the here and now of the present moment. But its complete realization is subtle. Traditional science and materialistic philosophy speak of existent things but ignore the problem of what their existence really is. Universal Reality answers that the existence of things is the fact that their information forms are forms *of* existence that exist *in* an otherwise formless sea of existence. This medium of existence is the single substrate of the universe, which is what the universe actually is. Everything in the universe is a form *of* existence *within* the universal medium of existence that is the universe.

This realization is central to Universal Reality. In Universal Reality the quantum vacuum is identified as the universal sea of existence within which the observable universe of programs runs computing their data. Data appears as forms in the quantum vacuum as water waves appear as forms within an otherwise formless ocean. The information forms and programs of the universe can exist only within the quantum vacuum of existence because that is the common 'substance' of all things. It's the only locus of existence and the single substrate or medium in which the forms of things can appear and exist.

As the possible forms of water waves are determined by the nature of water, so the possible information forms of the universe are determined by the intrinsic nature of the quantum vacuum which is the virtual complete fine-tuning of the universal medium of existence in which the programs of the universe run (Owen, 2016).

Thus the fundamental realization of consciousness is the experience of the immanence of existence, both the immanence of the presence of the formless universal sea of existence within which all forms exist, and the immanence of existence manifesting in every individual form. Every form, no matter how mundane, continuously manifests the immanence of its existence that makes its information real and present in the present moment. No longer is the universe a dark dead empty material space, but a living happening presence that actively self-manifests its existence in all the information forms of the world including ourselves. And the inner light of the immanence of existence of all things manifests as our consciousness of them.

The living presence of existence continuously glows and flows with the immanence of its being within all things giving them their actual presence, life, and happening. We too exist entirely within this living sea of existence, which gives us our life, our presence in reality, and all the wonderful manifestations of the running program that we are, and which we directly experience as our true inner self if we only stop and realize it.

So the direct experience of this living immanence of existence in all things is central to realization. When immanence is truly realized it's an amazing transformative experience. The world we exist within remains exactly the same as it was before but the eyes we see it with have changed forever. We become our running information program floating in the immanent sea of existence, and we experience the living existence of the universe glowing and flowing around us and within us giving life and being to the information of ourselves and manifesting as our consciousness of the amazing world we live in.

The presence of a universal sea of existence within which all information forms and programs exist and acquire their reality is completely different from the traditional materialistic view of the universe. In the old materialistic view the universe is completely empty between instances of particulate matter. Only with the discovery of the quantum vacuum has this old view begun to change and the fact that the vacuum itself is not an empty nothingness but the source of all existence begun to be recognized.

The realization of immanence tends to arise naturally with the realization of things as their information. When things are fully recognized as only their information then the immanence of that information naturally shines forth. Imagine all the information of a thing vanishing and experience all that remains. All that is left is the immanent existence that made that information the real thing it's the information of.

The immanence of the existence of all things now begins to become clear. Suddenly we realize that if all the information of the world suddenly vanished what remains is the formless sea of existence itself in which that information appeared and became real, present and actual. That real, present, and actual absoluteness of formless existence is always there within all information forms including our selves. It is the formless sea of existence in which all things exist and we directly experience it in all the things of the world as the consciousness of those things. This is the fundamental experience of reality and this is its realization.

The concepts of Tao and Śūnyatā were ancient approaches to this realization (Legge, 2010). These were both names for the original formless substrate of reality in which all forms appeared, and the ‘emptiness’ of all the forms that appeared was a ancient philosophical concept that recognized their non-physical information nature. Thus Universal Reality seamlessly integrates these ancient philosophical concepts into its modern Theory of Everything and gives them a rational scientific basis.

There are differences of course. Taoism proposes an initial separation of the formless Tao into the fundamental forms of positive and negative or male and female, and all other forms arise from combinations of these two, as outlined for example in the hexagrams of the ‘I Ching’ (Wilhelm, 1962). In contrast in Universal Reality, the fundamental forms that arise from the formless quantum vacuum are those of the particle components, and the rules that govern them, and all the other aspects of the complete fine-tuning. However the initial concept of formlessness from which all forms arise is very similar.

There are various techniques of meditation, and direct insight, which enable the realization of the pure formless immanence of existence. Through the mental exercise of meditation one greatly reduces the appearance of forms in consciousness and more easily realizes the underlying field of immanence in which forms appear that remains as the field of consciousness itself. The experience of formless immanence as pure formless consciousness is essential for realization, but forms must be dealt with in daily life so it’s also essential to realize the immanence manifested by forms in their individual existence. The realization of the immanence of both forms and formlessness is essential to the full realization of the immanence of existence and its experience as consciousness itself (Suzuki, 1956).

Existence, the quantum vacuum, is the universe itself and is the

fundamental reality. It's the absolute formless substrate of being within which all the information programs and forms of the universe appear and become real, actual and present. And it's the dynamic, living happening in which all the information programs of the universe compute and evolve according to the innate fine-tuning rules of the quantum vacuum of existence.

Every one of us experiences this at every moment of our lives as our own reality, life, actions, and consciousness. It's simply a matter of realizing what we are already experiencing. We are not material objects *in* a physical universe, we are integral aspects *of* a universe of immanent existence and the fundamental processes of this universe are active within us in every moment and *are* our very existence. The universe continually computes the forms of our existence in the universal sea of immanent existence.

## **THE REALIZATION OF CONSCIOUSNESS**

Consciousness itself is simply the immanent presence of reality itself. It's the here now living presence of the immanence of existence that radiates within the forms of all actual things. The essential component of human consciousness is common to the existence of everything in the universe. Human consciousness is simply the presence of immanent reality within the running program of our simulation of ourselves within the world.

Once the immanence of existence in all things is realized, the true nature of consciousness becomes clear. Consciousness is not something generated in our brains and shown out onto the things of the world like a spotlight, it's the immanent self-manifesting existence of those things into reality, or more precisely the immanent self-manifesting existence of our internal simulations of those things in the process of being actively focused on.

The information forms of our simulation of reality, like all forms in the universe, manifest the immanence of existence. It's the immanence of special forms encoding the fact we are experiencing forms representing other forms that we experience as consciousness. All the forms of our brain's simulation of reality manifest the immanence of their reality, but that reality remains unconscious until the special forms of the focus of consciousness encode the fact those forms are being actively

experienced. It's the immanence of these recursive forms that manifests as consciousness.

Forms only manifest their immanence through their actual forms. Thus for immanence to manifest as conscious experience its form must encode an *experience* of a thing rather than just a thing itself. It must encode the information of a particular form being focused on in the simulation.

This top-level brain function is what is normally called consciousness, but all the forms of the simulation share the essential ingredient of consciousness because all forms share the immanence of existence. It's just that this immanence is only recognized in a reportable form by other forms specific to that purpose. Thus everything in the universe shares immanence, which is the essence of consciousness, but only specifically designed forms that monitor other forms being experienced are able to report the presence of those forms as the consciousness of them. This is the understanding of the consciousness of humans and other species.

The contents of our consciousness are a mixture of forms of the external world and of our interactions with it. Ultimately we have no direct experiences of the individual things of the external world but only of our internal simulations of them. However to the extent our internal representations are consistent with the logic of the actual world we have direct knowledge, though not experience, of the external world. And of course the immanence of the forms of our simulation is the same immanence of all the external information forms of the universe. This explains why our simulations of things seem like real things, they seem like real things because they share the immanence of real things that makes them real.

So our consciousness of things is actually our consciousness of our brain's representations of them. Our consciousness of a fox is the immanence of a relatively very concise representation whereas the immanence of the information of the actual fox is the actual living fox and consists of the complete information of its entire actual running program down to the cellular and elementary particle level details. So we are always conscious of our encoded experiences and thoughts of external things rather than the entirety of the things themselves.

For the true nature of consciousness to be realized a clear distinction must be made between consciousness itself and the contents of consciousness. The *fact of consciousness itself* is due entirely to the self-

manifesting immanent presence of all information forms and is thus a basic attribute of reality itself. It's generated by the immanent existence of things rather than something being produced by human brains. The only aspect of consciousness unique to human and other brains is the presence of specialized focus of attention forms within which the common immanence of all forms manifests as consciousness.

The essential active ingredient of consciousness exists in everything in the universe in the immanence of its existence that gives it reality. But for immanence to manifest as consciousness in a biological entity, that being must have the necessary cognitive structures to register immanence as immanence, to register it as consciousness. The specific forms of the contents of consciousness depend on the perceptual and cognitive structures of the biological entity but the fact of consciousness itself, that those contents are conscious, is due to their immanence.

Consciousness in the simulation is exactly analogous to existence in the external world. The immanence of existence makes things actually real in the real actual world. Likewise the immanence of existence makes things conscious in the simulation. The immanence of existence makes the specific forms in which it manifests real things in the world. The forms of the things in the world given existence become the real things of the world. The forms of experiences in the simulation given existence become the real experiences of consciousness. The exact same process is at work making all forms the actual real things they represent, be that the forms of things or the forms of experiences.

When information forms appear within the immanent existence of the external world they become the real things of the world. When information forms appear within the immanent existence of our simulation they become our consciousness of our mind's representations of the things of the world. It's exactly the same fundamental process of the universe working both inside and outside our brains. It's our mind's participation in the fundamental process of the immanent existence of the entire universe.

Thus the realization of the true nature of consciousness is that consciousness itself is the immanent existence of the forms of things that makes them real and actual in the observable universe at work in the forms of our focus of attention in our simulation. Consciousness itself is the immanence of existence. It's the continual happening of the immanent existence of the universe manifesting within us as it manifests in all things.

## CONCLUSION

The universe is not physical in the sense that has been traditionally assumed but consists of information forms continually being recomputed by happening. However this doesn't change anything except our understanding and the universe is still exactly the same as it always was. We just now glimpse its true fundamental nature which is the same immanence of existence that makes all the forms in the universe the real and actual things they are the forms of.

When we understand and experience the universe in this entirely new way the nature of consciousness itself naturally emerges as the presence of the immanence of existence in our own being, in specialized neural structures that are encoding the representation of other things in our mind's simulation of reality. Consciousness isn't just the immanence of the information representing things in our minds, but the fact that information is actively being experienced by our focus of attention subroutine. It's the immanence of the forms encoding the presence of representational forms in the simulation whose immanence manifests as our consciousness of the representational forms that we interpret as our consciousness of the things those representational forms represent in the world.

So Universal Reality's new theory of consciousness provides a clear scientific explanation of the fundamental nature of consciousness itself and even leads to a scientific theory of realization as understanding and directly experiencing the immanence of things, and of the ubiquitous formlessness in which they arise. From this insight methods of brightening consciousness and realization naturally follow as we observe the forms of consciousness in our minds, and the formless presence of immanent consciousness when we empty our minds in meditation.

In a fundamental sense then all that exists is the essence of consciousness because all that exists is the universal sea of existence we call the universe and the myriad forms of existence that arise within it, and the essence of existence is also the essence of consciousness. The immanence of their existence makes all forms that exist the real things they are the information forms of.

The immanence of existence in the forms of things of the world makes them the real things of the world because that is the information of

their forms. Likewise the immanence of existence in specialized forms encoding the presence of representational forms in the simulation manifests as the consciousness of those representational forms because that is what they are the forms of.

Consciousness is simply the immanent existence of specialized recursive forms that monitor the representational forms of our simulation of ourselves within the world. They are forms representing the experience of other forms, and their reality is the consciousness of the forms being experienced.



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# ABOUT THE AUTHOR

Edgar L. Owen was born April 1st, 1941 and quickly realized that reality is not as it appears to be. A child prodigy, he entered the University of Tulsa aged 15 and received a B.S. with honors in science and mathematics with a minor in philosophy at 18 before completing several more years of graduate study in physics and philosophy.

In the early 60's he moved to the Haight-Ashbury in San Francisco where he hung out with notables from the Beat Generation and conducted an intense personal study of the nature of mind and consciousness. From there he traveled to Japan where he lived for three years studying Zen and Buddhist philosophy while subsisting as a ronin English teacher.

Upon returning to the US he began a career in computer science writing numerous programs in artificial intelligence, simulations, graphics, and cellular automata while designing and managing advanced computer systems for the New York Federal Reserve Bank and AT&T. He then left the corporate world to start his own software business marketing his own CAD programs, which he ran for a number of years. Currently he owns a premier Internet gallery of fine Ancient Art and Classical Numismatics at [EdgarLOwen.com](http://EdgarLOwen.com).

Deeply immersed in nature since childhood, and always considering it the ultimate source of his inspiration and knowledge of reality, he has served as Chairman of his local Environmental Commission and organized several campaigns to protect the local environment and its wildlife.

Over the last several years he has worked to combine and organize the results of a lifetime of study of the various aspects of reality into a single coherent Theory of Everything. He now spends most of his time exploring the wonderful awesome mystery of reality and how it can be experienced more fully and deeply and enjoying his existence within it.

Edgar currently lives in Northern NJ in a big old house on top of a hill where he communes with nature and enjoys the company of his wild visitors including the occasional human. Edgar is currently single and can be contacted at [Edgar@EdgarLOwen.com](mailto:Edgar@EdgarLOwen.com).

Edgar L. Owen was born April 1st, 1941 and quickly realized that reality is not as it appears to be. A child prodigy, he entered the University of Tulsa aged 15 and received a B.S. with honors in science and mathematics with a minor in philosophy at 18 before completing several more years of graduate study in physics and philosophy. \_\_\_\_\_ continued on back flyleaf



Consciousness Explained is a groundbreaking new theory that presents an entirely new understanding of consciousness. Based solidly in modern physical, cognitive, and information science and in carefully analyzed direct experience, it provides a convincing explanation of what consciousness really is. Concise, accessible, and to the point it clearly explains consciousness in the context of reality itself.

Our consciousness in a present moment through which time flows is the fundamental experience of our existence. But exactly what consciousness is and how it can arise from a physical universe has long been an unsolved mystery that has baffled generation after generation of philosophers and scientists. Though many have tried science itself has ultimately had nothing meaningful to say about either the nature of consciousness or the present moment in which it occurs.

The fundamental problem of consciousness is that it's obviously not physical in the traditional sense we ascribe to the universe, and in this contradiction is the key to explaining its true nature. But when we step back and carefully reconsider the fundamental nature of reality we quickly discover that it simply can't be physical in the ordinary sense. In fact all the evidence suggests that it's actually a computational structure and that its apparent physical nature is an adaptive interpretation of its true information nature produced by our mind's internal simulation of reality.

Thus to solve the mystery of consciousness we must first demonstrate how and why the universe seems physical even though it's actually computational. And then we must discover a new model of the fundamental nature of reality that is naturally compatible with the observed nature of consciousness and from which consciousness naturally emerges.

This book does just that. It offers a convincing science compatible explanation of consciousness with the added benefit of shedding light on the true nature of reality as well. And finally it explains how the true fundamental nature of reality is actually being experienced as consciousness in every moment of our lives and how we can realize this more deeply and completely. All and all this is a book impossible to ignore which is sure to have a lasting impact on the study of both consciousness and reality for years to come.

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