

The Underlying Truth of You and the Story of Reality

The you that you think of as you is not you.

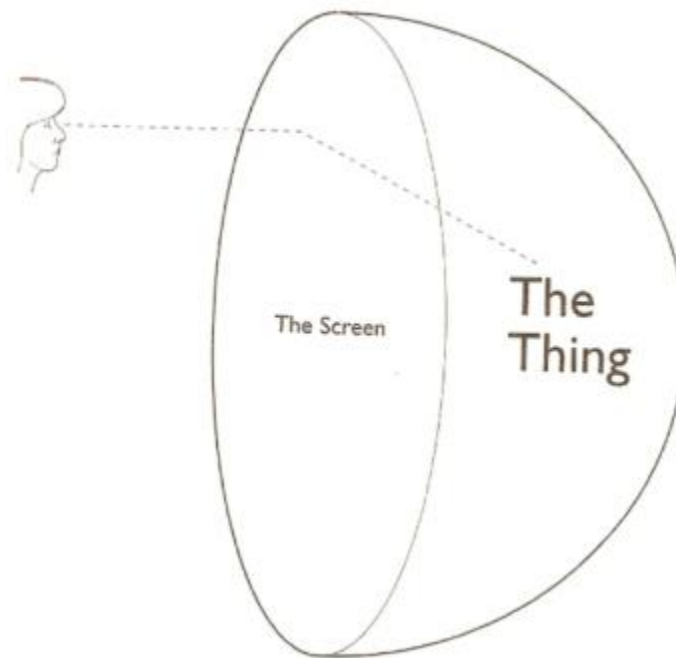
The you that thinks of you as you is not you.

It's just the character the underlying truth of you is dreaming into brief existence.

Enlightenment isn't in the character; it's in the underlying truth.

-Jed McKenna

The only way to understand the nature of the underlying truth of you is to understand that the world you perceive is just like a computer-generated virtual reality, like depicted in the movie the Matrix. The underlying truth of you is what is creating and perceiving the images of that virtual reality, and your character is your avatar in that virtual reality. A story can be told about the nature of that virtual reality, but no story can be told about the nature of the underlying truth. Your character in the virtual reality is like an actor on a stage and all human drama is being enacted on the stage by your and other characters. In the sense of a computer-generated virtual reality, the stage is just like a computer screen that displays all the projected and animated images of the virtual reality, which the underlying truth of you is both creating and perceiving from its own point of view.



The Observer, the Observer's Holographic Screen, and its Object of Perception

The underlying truth of you can only be understood as consciousness itself, but to fully understand what consciousness is, it's necessary to understand what consciousness isn't. At the most ultimate level of existence, you are nothing but consciousness. The bottom line is that consciousness isn't something that it can perceive. Consciousness is

what perceives things. The best way to understand this strange state of affairs is with the idea that everything consciousness can perceive is like something that's being displayed in a computer-generated holographic virtual reality. Everything consciousness can perceive is like a form of information that is being displayed on a computer screen.

The underlying truth of you is dreaming that virtual reality world into brief existence, which includes your character as the central form of information that appears in that virtual reality. This dreaming process is just like the projected and animated images of a virtual reality world that is being displayed on a computer screen. The dreaming process has both creation and perception aspects. The only reason this dreaming process appears to be confusing to you is because of the tricky way in which both the creation and perception aspects of the dreaming process arise from the underlying truth of you.

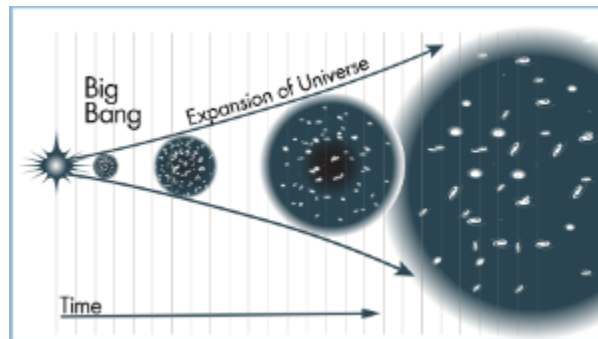
The explanation for the dreaming process that's being presented here is a scientific explanation that's based on the most advanced scientific knowledge that's currently available. If you really understand what science is telling us, then it's possible to unravel the mystery, and this tricky dreaming process becomes scientifically understandable.

The first question is, what exactly is the underlying truth of you? This question does not really have a good answer except in terms of negation. At a conceptual level, we can only say what it isn't, not what it is. The best way to describe the underlying truth of you is as the void. The void cannot really be conceptualized, but can best be thought of as an empty space of potentiality. The potentiality of the void can best be understood as pure undivided awareness or undifferentiated consciousness. Since this awareness is undivided, it is also called One or nondual. Since this awareness is unlimited, it is also called infinity. Since this awareness is timeless and unchanging, it is also called eternity.

The void of pure nondual awareness is the underlying truth of what you really are, which can also be called pure undivided and unlimited being. Since this being is timeless in nature and does not change, it can also be called the primordial nature of existence. It is what exists when all change comes to an end. It is what exists when time comes to an end. It is what exists when all separation, division and limitation comes to an end. It is what exists when the virtual reality world it dreams into brief existence comes to an end. Separation, division, limitation and change only apply at the level of the virtual reality.

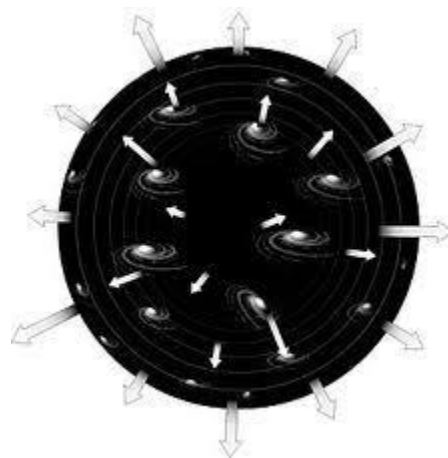
How exactly is the virtual reality world created and perceived? This is where modern science can supply some answers. The void, as an empty space of potentiality, has the potential to express energy. The best way to understand how the void expresses energy is with the concept of dark energy that gives rise to the accelerated expansion of space. Observations of the universe tell us that we live in an expanding universe, where space appears to expand away from our own point of view in an accelerated way. The farther out we look into space, the faster space appears to expand away from our own point of

view. This accelerated expansion of space requires energy, which is called dark energy. In relativity theory, as formulated by Einstein's field equations for gravity, dark energy is called a cosmological constant that gives rise to the accelerated expansion of space.



Accelerated Expansion of the Universe

Imagine that space is expanding like a balloon being blown up. From the point of view of an observer at the center of the balloon, the surface of the balloon is expanding away from the observer. If the balloon's expansion is accelerated, the surface of the balloon expands away from the observer faster the larger the balloon becomes in size. In relativity theory, the surface of the balloon is an event horizon called a cosmic horizon. At the event horizon, space expands away from the central point of view of the observer at the speed of light, and since nothing can travel faster than the speed of light, nothing is observable to the observer beyond the limits of its cosmic horizon. Blowing up the balloon in this accelerated way requires energy, which is the nature of dark energy.

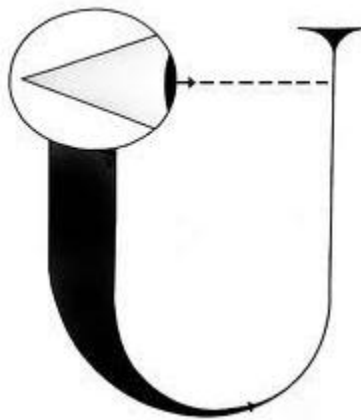


Accelerated Expansion of Space

The surface of the balloon is the observer's cosmic horizon that arises due to the expression of dark energy and the accelerated expansion of space. The accelerated expansion of space is always relative to the central point of view of the observer.

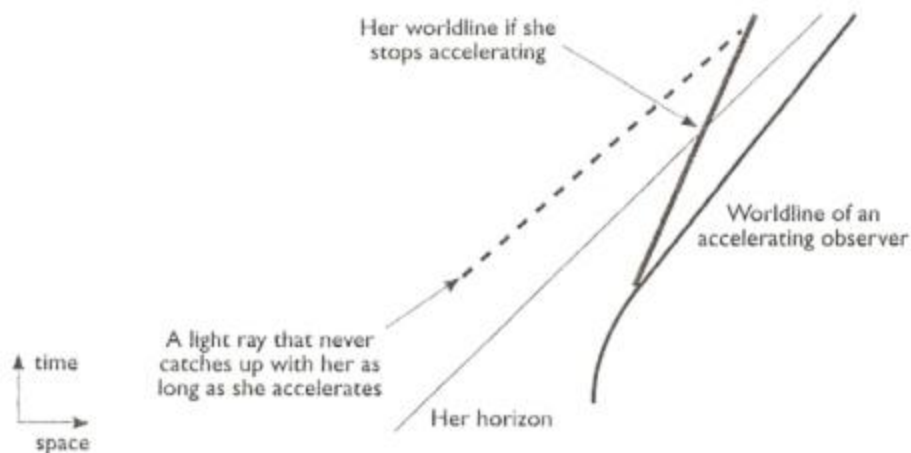
The surface of the observer's event horizon is what allows for a computer-generated virtual reality world to be created. The two dimensional surface of the observer's event horizon is just like a computer screen. When that two dimensional surface encodes information, just like a computer screen that encodes bits of information on pixels, the observer's virtual reality world appears to come into existence. Everything the observer can perceive in its own virtual reality world is a form of information that is encoded on its own computer screen as those forms are projected like images to the observer's central point of view and are animated in the flow of energy that flows through the computer.

In no significant way is the virtual reality world the observer perceives different from the projected and animated images of a computer-generated virtual reality being displayed on a computer screen. Everything the observer can perceive in its own virtual reality world is a form of information that can be reduced to bits of information encoded on the screen. Those forms are projected like images from the screen to the observer's central point of view and are animated in the flow of energy that flows through the computer.



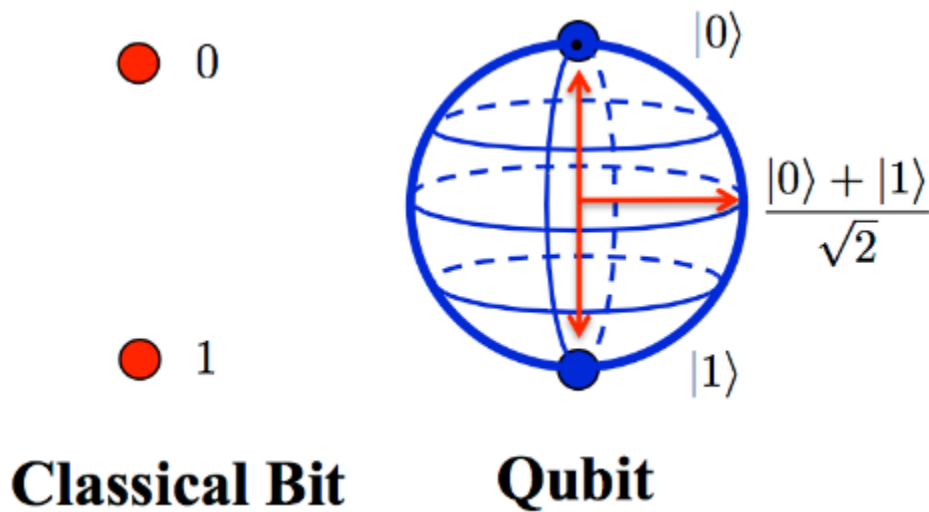
Universal Observer

Although this seems like a far-fetched idea, this is exactly what the holographic principle of quantum gravity is telling us about the nature of the physical universe. Everything that is perceivable in the physical universe is reducible to qubits of information encoded on a holographic screen. That holographic screen always arises as an event horizon due to the accelerated motion of an observer in its own accelerated frame of reference. Every accelerating observer has its own event horizon that limits its observations of things in three dimensional space due to the limitation of the speed of light as a means of information transfer in three dimensional space. The accelerating observer's event horizon is a two dimensional surface of space that limits its ability to observe things in three dimensional space. With the holographic principle, we understand that everything the observer can observe in three dimensional space is reducible to qubits of information encoded on the two dimensional surface of the observer's event horizon.



Accelerating Observer's Event Horizon

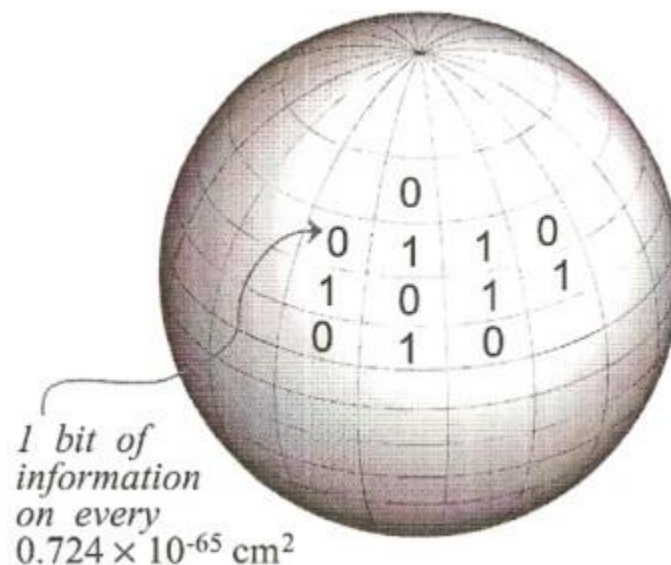
With the holographic principle, the information for everything observable in the physical universe is encoded on an accelerating observer's event horizon in terms of quantized bits of information, which are called qubits. A qubit is mathematically represented by a matrix, which is a two dimensional array of numbers. That two dimensional array of numbers must be encoded on a two dimensional surface of space, which naturally arises as an event horizon due to an observer's own accelerated motion.



Qubit of Information Encoded on the Surface of a Planck-size Event Horizon

Encoding qubits of information on an accelerating observer's event horizon in this way is called the holographic principle of quantum gravity. Everything an observer can observe in its own holographic world is a form of information that can be reduced to qubits of information encoded on its own holographic screen that arises as its event horizon due

to its own accelerated motion. In effect, the accelerating observer is creating its own quantum computer that gives rise to the appearance of its own computer-generated virtual reality world. The quantum computer is created due to the observer's own accelerated motion that gives rise to its event horizon that becomes its holographic screen when qubits of information are encoded on its horizon. Everything observable in the observer's own holographic world is a form of information that is reducible to qubits of information encoded on its own holographic screen. Those forms are projected like images from the observer's screen to its central point of view. Even the animation of those images arises from the energy of the observer's own accelerated motion.



Holographic Principle

There are several aspects of the mystery that we need to unravel to scientifically understand the nature of this creation and perception process. Creation by its very nature implies the expression of energy and the encoding of information. How is energy fundamentally expressed? The answer from modern physics is the expression of dark energy and the accelerated expansion of space. It is the void, as an empty space of potentiality, that has the potential to express dark energy in this fundamental way. The accelerated expansion of space always appears to expand relative to the central point of view of an observer. What exactly is the observer?

In some mysterious way, the void, which can only be understood as an empty space of pure undifferentiated consciousness, differentiates itself into the central point of view of the observer whenever dark energy is expressed and space appears to expand relative to the observer's central point of view. The perceiving consciousness of the observer's own individual point of view is divided from the undifferentiated consciousness of the

void whenever dark energy is expressed and the observer's own holographic world appears to come into existence. That holographic world is always defined on the observer's event horizon, which only arises due to the accelerated expansion of space that always expands relative to the observer's central point of view.

Everything that the observer can observe in its own holographic world is reducible to qubits of information encoded on the observer's own event horizon that becomes its holographic screen when its horizon encodes qubits of information. Just as the void is the source of the energy that underlies the accelerated expansion of space that gives rise to the observer's event horizon, the void is also the source of the encoding of qubits of information on the observer's event horizon that becomes its holographic screen.

Only the void has the potential to express dark energy through the accelerated expansion of space that always expands relative to the observer's central point of view, which gives rise to the observer's cosmic horizon, and only the void has the potential to encode qubits of information on the observer's cosmic horizon.

Most importantly, the void is the source of the observer itself. In some mysterious way, the undifferentiated consciousness of the void has the potential to differentiate itself into the individual perceiving consciousness of the observer at the central point of view of its own holographic world whenever dark energy is expressed, space expands relative to the observer's central point of view, information is encoded on the observer's cosmic horizon, and the observer's holographic world appears to come into existence.

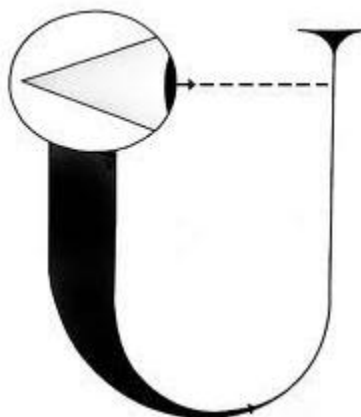
The holographic principle is not a theory of everything or even a theory of quantum gravity. The holographic principle as implemented by a matrix model is a mechanism that constructs a three dimensional holographic world. That holographic world is naturally constructed as an observer enters into an accelerated frame of reference and its event horizon arises in space, and as qubits of information are encoded on the two dimensional surface of its event horizon. This construction process only requires the notion of the accelerated motion of an observer, the invariance of the speed of light as the maximal rate of information transfer in three dimensional space, and the idea of entropic information, which is inherent in a matrix model. A matrix model is the most general way to construct a holographic world and does not require the assumption of unitary time evolution. In general, the only valid definition of time in a dynamically curved space-time geometry with gravity is the observer's own proper-time.

The holographic principle reformulates quantum theory in an observer centric and dependent way since it tells us that the observer is at the central point of view of its own holographic world and that the appearance of its holographic world is dependent on its own accelerated motion. The appearance of its holographic world is understood in terms of images displayed on its holographic screen that arises as an event horizon due

to its accelerated motion. The images of its own holographic world that are perceived by the observer can always be reduced to qubits of information encoded on its own holographic screen. This way of understanding quantum theory is a radical transformation of our understanding of the physical reality of the observable world that we perceive. If we really want to get our understanding of the observable world correct, we first have to get our understanding of the observer of that world correct. We have to begin with a correct understanding of the observer. The existence of the observer must come first since the observable world the observer perceives can only appear to come into existence when the observer enters into an accelerated frame of reference.

In reality, there is no objective physical reality of the world out there, only a holographic world that appears to come into existence whenever the observer enters into an accelerated frame of reference and its event horizon arises that acts as its holographic screen when its horizon encodes qubits of information. Instead of an objective physical reality of the world that the observer can perceive, there is only a subject-object relation of perception that arises as the observer perceives objects of perception in its own holographic world. Those objects of perception are all forms of information that can be reduced to qubits of information encoded on its own holographic screen.

In reality, the observer's holographic world is no more real than the projected and animated images of a computer-generated virtual reality. The observer itself creates the quantum computer that gives rise to the appearance of its own holographic virtual reality with its own accelerated motion. The quantum computer is created due to the observer's own accelerated motion that gives rise to its event horizon that acts as its holographic screen when the horizon encodes qubits of information. In reality, that holographic world only appears to exist in the eye of the beholder.

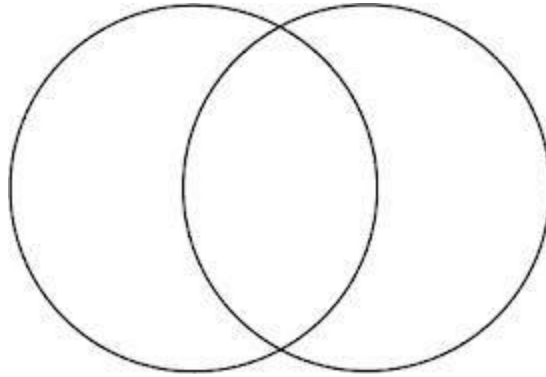


Universal Observer

There are still a number of loose ends that we need to tie together to scientifically explain how the observer's holographic world is created and perceived. To be clear

about things, these scientific explanations are a story, and that's all we're really doing is telling a story about how an observer's own holographic virtual reality world is created.

How do we explain a consensual reality shared by many observers, each present at the central point of view of its own holographic world? The answer is information sharing. When holographic screens overlap like a Venn diagram, they can share information.



Information Sharing Among Overlapping Holographic Screens

How do we explain the laws of physics that appear to govern events in a holographic world? The holographic principle gives a very straightforward scientific explanation in terms of the laws of thermodynamics, which are very general statistical rules that explain how things behave when things are at thermal equilibrium. At thermal equilibrium, the equipartition of energy tells us that all things move around in a random way due to the randomizing effect of thermal energy, which is called heat. Heat is nothing more than the random thermal motion of things, which we recognize in terms of the temperature of things. Hot things move around faster than colder things. Hot things also radiate away more thermal radiation than colder things, which is why they feel hot.

In the conventional physical description of things, we take all things to be composed of point particles, like the electrons that orbit the atomic nucleus of an atom. The atomic nucleus in turn is taken to be composed of other point particles called quarks. Even what we call thermal radiation is taken to be point particles of electromagnetic radiation that are called photons. Inside the atomic nucleus are point particles of the strong and weak nuclear forces, which are called gluons and W and Z particles. The whole conventional physical description of the world is based on these ideas of point particles.

Underlying the idea of thermal equilibrium and the equipartition of energy is the idea of dynamical degrees of freedom. If we're talking about particles that exist at points of space and move through space over the course of time, those dynamical degrees of freedom can be considered to be the point particle's position coordinates in space and its velocity or momentum through space over the course of time. This is the way the laws of thermodynamics are usually formulated in a conventional physical description of

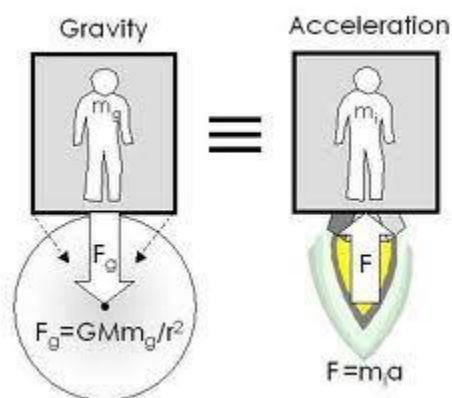
the world in terms of point particles that exist at points in space and move through space over the course of time, whether those point particles are matter particles like the electron or particles of electromagnetic radiation like the photon. In quantum field theory, these point particles are understood as quantum excitations of an underlying quantum field. The photon is a quantum excitation of the electromagnetic field, as formulated in terms of Maxwell's field equations for electromagnetism, and the electron is a quantum excitation of the electron field as formulated by Dirac's field equations.

The big problem with this conventional point particle physical description of the world is that we have to assume a background space-time geometry within which the particles can occupy position coordinates in space and move through space over the course of time. This is a problem because of the nature of gravity. Einstein's theory of gravity tells us that the nature of the gravitational force is nothing more than the dynamical curvature of a space-time geometry, which is mathematically formulated in terms of Einstein's field equations for the space-time metric. The space-time metric is a measurement of the dynamical curvature of a space-time geometry, which is the nature of a gravitational field that gives rise to the force of gravity, just as the electromagnetic field gives rise to the electromagnetic force. The big problem is that in order to formulate Maxwell's field equations for the electromagnetic field, we have to assume a background space-time geometry within which the photon as a point particle can occupy position coordinates in space and move through space over the course of time, while Einstein tells us that the nature of the gravitational field is the dynamical curvature of that space-time geometry.

This is the basic reason why the quantization of the electromagnetic force as formulated by Maxwell's field equations for the electromagnetic field are not consistent with the idea of gravity as formulated by Einstein's field equations for the space-time metric. In order to quantize the electromagnetic field and have an idea of the photon as the quantum particle of the electromagnetic field, which is a point particle that occupies a point in space and moves through space over the course of time, we have to assume the whole thing takes place in some fixed background space-time geometry, like gravity-free flat Minkowski space, but that is not consistent with the idea of gravity as the dynamical curvature of that space-time geometry. At the quantum or point particle level, the ideas of gravity and electromagnetism, as formulated by field theories, are not consistent.

The whole problem goes back to what we're assuming to be the fundamental dynamical degrees of freedom at the quantum level. Gravity and electromagnetism are not consistent with each other if we assume that the fundamental dynamical degrees of freedom at the quantum level are point particles, for the simple reason that point particles have to occupy points in space and move through space over the course of time in some fixed background space-time geometry, which contradicts the whole idea of gravity as the dynamical curvature of a space-time geometry.

This problem goes back to the fundamental principle of equivalence that Einstein used to formulate the theory of gravity in terms of field equations for the space-time metric. The principle of equivalence tells us that the force of gravity that any observer perceives is always equivalent to the observer's own accelerated motion. An accelerating observer always observes events that the observer will recognize as the force of gravity.



Principle of Equivalence

The principle of equivalence is telling us that every accelerating observer is creating its own dynamically curved space-time geometry, which is the nature of the force of gravity perceived by the observer, due to its own accelerated motion. The observer creates its own space-time geometry when it creates its own holographic world. That holographic world is created due to the observer's own accelerated motion that gives rise to its event horizon that becomes its holographic screen when the horizon encodes qubits of information. We really don't need the whole formalism of relativity theory to understand the nature of the observer's event horizon, only the ideas of the observer's accelerated motion and the constancy of the speed of light as a means of information transfer in three dimensional space. The observer's event horizon then naturally arises as a two dimensional bounding surface of space that limits its observations of things in three dimensional space. With the holographic principle, we understand that everything the observer can observe in its own three dimensional holographic world can be reduced to qubits of information encoded on its own two dimensional holographic screen. In effect, the observer is creating its own quantum computer that gives rise to the appearance of its own holographic world due to its own accelerated motion.

The important thing to recognize is that the accelerating observer is creating its own holographic world, which is characterized by a dynamically curved space-time geometry, which is the nature of the force of gravity perceived by the observer in that holographic world. The problem with quantum field theory as a description of the world is that we're assuming that all observers observe the same universe. That assumption is inherent in the idea of a fixed background space-time geometry within which point particles can

occupy position coordinates in space and move through space over the course of time, which is the only possible way in which quantum field theory can be formulated. The problem with quantum field theory is that there is no force gravity in a fixed background space-time geometry since gravity is the dynamical curvature of a space-time geometry.

What if every observer observes its own universe from the central point of view of that universe? This sounds absurd, but this is exactly what the holographic principle is telling us. Different observers can only share a consensual reality to the degree their respective holographic screens overlap like a Venn diagram and share information.

What exactly is the observer? The observer is nothing more than a point of view that arises at the center of its own holographic world. The observer is observing events in its own holographic world. Those observable events are being displayed on the observer's own holographic screen that encodes information for all those events. The perception of an event is like an image projected from the observer's screen to its own point of view at the center of its own holographic world. In the sense of an object of perception, all perceivable objects are forms of information encoded on the screen. If that screen is like a computer screen that encodes bits of information, all perceivable objects are reducible to bits of information, which John Wheeler called "It from bit".

What exactly does relativity theory tell us about the observer? Relativity theory doesn't attempt to explain what the observer is, only that the observer is at the central point of view of its own coordinate system, which is a frame of reference. If that frame of reference is characterized by accelerated motion, which is called an accelerated frame of reference, the observer observes effects of gravity occurring in a dynamically curved space-time geometry. One of those effects of gravity is the observer's event horizon, which limits the observer's observations of events in space. The observer's event horizon is a two dimensional bounding surface of space that limits its observations of events in three dimensional space. We really don't need the whole formalism of relativity theory to understand the nature of an event horizon. We only need the concepts of an observer that undergoes accelerated motion and the invariance of the speed of light, which is the maximal rate of information transfer in three dimensional space. A light ray that originates on the other side of the observer's event horizon can never reach the observer's point of view as long as the observer continues to undergo accelerated motion along its world-line, and so nothing is observable beyond its event horizon.

Once we have an observer in an accelerated frame of reference and the observer's event horizon, which naturally arises as a bounding surface of space due to the observer's own accelerated motion, we can then construct the holographic principle. The basic idea is that the observer's event horizon acts as its holographic screen that displays images of everything the observer can perceive in its own holographic world. How are those images constructed? The images are all forms of information that can be

reduced to bits of information encoded on the observer's event horizon. These bits of information are not classical bits in the sense of a classical computer, but are quantized bits of information in the sense of a quantum computer, which are called qubits.

The way the holographic principle solves the problem of the fundamental dynamical degrees of freedom for a holographic world at the quantum level is to assume that these fundamental dynamical degrees of freedom are qubits of information encoded on a holographic screen that arises as an event horizon in an observer's accelerated frame of reference. The number of qubits of information encoded for a holographic world, which are the fundamental dynamical degrees of freedom for that holographic world, are given in terms of the surface area of the observer's event horizon as $n=A/4\ell^2$, where the Planck area is defined as $\ell^2=\hbar G/c^3$. It is as though each Planck area on the observer's event horizon encodes a single qubit of information, like pixels on a computer screen that encode bits of information in a binary code of 1's and 0's.

This encoding of qubits of information on an event horizon is more complicated than the way a classical computer encodes information because the qubits are all entangled with each other. Quantum entanglement is a result of the way information is encoded on the two dimensional surface of the observer's event horizon in a rotationally invariant way, which results from the way qubits are mathematically represented on that surface by matrices, which are two dimensional arrays of numbers.

The holographic principle tells us that a Planck-size event horizon is the smallest event horizon that can be created since it encodes a single qubit of information, which is the smallest amount of information that can be measured. This explains why the Planck length is the smallest distance scale that can be measured. Larger event horizons encode more qubits of information, but always in terms of an integral number of Planck areas. It is as though each Planck area on the event horizon encodes a single qubit of information, like pixels on a computer screen. The basic idea of the holographic principle is the number of qubits of information encoded on the two dimensional surface of an observer's event horizon is given in terms of the surface area, A , of the event horizon and the Planck area, $\ell^2=\hbar G/c^3$, as $n=A/4\ell^2$. These qubits of information are the fundamental dynamical degrees of freedom for the observer's own holographic world.

A qubit is mathematically represented by a two dimensional array of numbers called a matrix, like a Pauli spin matrix, which is an $SU(2)$ matrix. The eigenvalues of the matrix give a mathematical representation of information encoded in a binary code, like a spin variable that can only be observed to be in either a spin up or spin down state, but this information is encoded on the surface of a 2-sphere in a rotationally invariant way since the $SU(2)$ matrix also gives a mathematical representation of rotational symmetry on the surface of the 2-sphere. At the level of qubits, what we call quantum entanglement is a mathematical representation of this rotational invariance.

Since qubits of information are encoded in terms of matrices, which are two dimensional arrays of numbers, this information must be encoded on a two dimensional surface of space. Where does that two dimensional surface of space come from? The answer is the two dimensional surface of space is the observer's event horizon that arises due to its own accelerated motion, limits its observations of events in space, and acts as its holographic screen when that horizon encodes qubits of information. Everything the observer can observe in its own holographic world is a form of information encoded on its own event horizon that acts as its holographic screen. The holographic principle is simply a statement that everything the observer can observe in its own holographic world can be reduced to qubits of information encoded on its own event horizon that arises due to its own accelerated motion and acts as its holographic screen.

The equipartition of energy tells us that at thermal equilibrium, each fundamental dynamical degree of freedom carries the same amount of thermal energy. Where does this thermal energy come from? The answer is that this thermal energy comes from the observer's own accelerated motion. If the observer accelerates with an acceleration, a , that thermal energy is given in terms of the Unruh temperature of the observer's event horizon as $E=kT=\hbar a/2\pi c$. The accelerating observer is itself creating its own thermal energy, and at thermal equilibrium, each qubit of information, which is a fundamental dynamical degree of freedom for the observer's own holographic world, carries the same amount of thermal energy given in terms of the observer's own acceleration.

We now have all the pieces of the puzzle to explain how the laws of physics arise in an observer's holographic world. The laws of thermodynamics tell us that $\Delta E=T\Delta S$, where holographic entropy is given in terms of the surface area of the observer's event horizon as $S=kn=kA/4\ell^2$, and the Unruh temperature of the observer's event horizon at thermal equilibrium is given in terms of the observer's acceleration as $kT=\hbar a/2\pi c$. The laws of thermodynamics simply say that $\Delta E=kT\Delta n$, where the fundamental dynamical degrees of freedom for the observer's holographic world are defined in terms of the number of qubits of information encoded on the observer's event horizon, which is proportional to the surface area of the event horizon. At thermal equilibrium, each qubit of information encoded on the event horizon carries the same amount of thermal energy given in terms of the observer's own acceleration. A change in the surface area of the observer's event horizon implies a change in the number of qubits of information encoded on the event horizon, which implies a change in energy for the observer's holographic world.

Thermodynamics tells us that a change in energy implies a change in entropy, which the holographic principle tells us implies a change in the surface area of the observer's event horizon, which implies a change in the space-time geometry of the observer's holographic world. This chain of events is how Ted Jacobson derived Einstein's field equations for gravity from the laws of thermodynamics. Einstein's field equations are not

really fundamental, but are more like an effective field theory that describes gravitational events in the observer's holographic world when things are near thermal equilibrium.

The holographic principle demonstrates that the laws of physics in a 3+1 dimensional space-time geometry can be reduced to the way qubits of information are encoded on an observer's holographic screen that arises as an event horizon in its accelerated frame of reference and to the thermal energy inherent in that accelerated motion. This is exactly what Ted Jacobson demonstrated when he derived Einstein's field equations for the space-time metric from the laws of thermodynamics. Jacobson only had to assume the laws of thermodynamics, that entropy is given in terms of a holographic entropy that only depends on the surface area of the observer's event horizon, $S = kn = kA/4l^2$, and the thermal energy inherent in the temperature of the observer's event horizon at thermal equilibrium is given in terms of the observer's acceleration, $kT = \hbar a/2\pi c$. The holographic nature of entropy is best understood in terms of the number of qubits of information encoded on the surface of the observer's event horizon, which is called a matrix model.

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} = 8\pi GT_{\mu\nu} - \Lambda g_{\mu\nu}$$

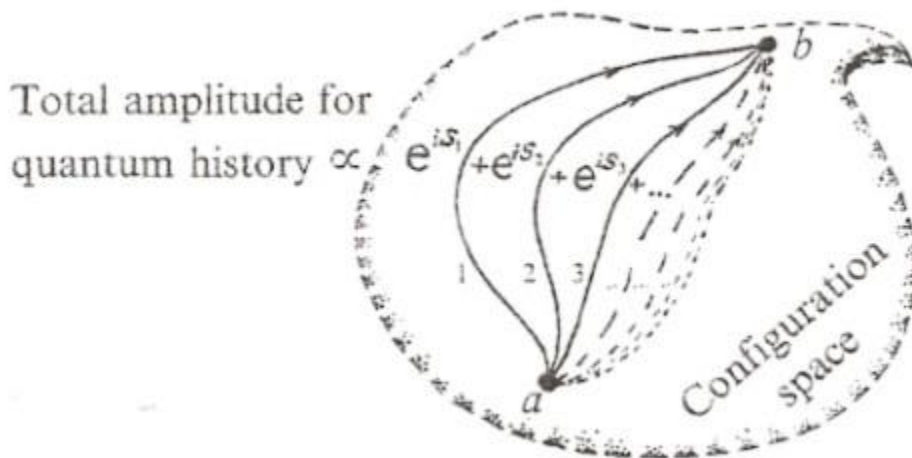
Einstein's Field Equations for the Space-time Metric

This way of deriving Einstein's field equations from the laws of thermodynamics tells us that Einstein's field equations for gravity only have the validity of thermodynamic equations of state. Once we have Einstein's field equations, then all the usual quantum field theories of the standard model of particle physics, which include the field theories for the electromagnetic and nuclear forces, can be derived using the usual unification mechanisms of super-symmetry and extra compactified dimensions of space. At the level of field theory, the final result of unification looks like 11-dimensional super-gravity. With unification, all particle spin arises from super-symmetry, and all particle charges arise from quantized momentum in extra compactified dimensions. The electromagnetic and nuclear fields arise as extra components of the space-time metric, and all point particles are understood as quantum excitations of the fields. This also tells us that all the usual quantum field theories of the standard model of particle physics are only valid as thermodynamic equations of state or as effective field theories.

Field theories are not incorrect, but they only have the approximate validity of thermodynamic equations of state. Einstein's field equations for gravity, Maxwell's field equations for electromagnetism and Dirac's field equations for the electron can all be understood as quantum theory at the level of first quantization. The idea of the second quantization of field theories inherent in quantum field theory is only valid for small

quantum fluctuations around thermal equilibrium, but it makes no sense to quantize gravity in flat, gravity-free Minkowski space when Einstein's field equations for gravity must represent the dynamical curvature of space-time geometry.

It's worth a brief review of how we got here. The idea of first quantization is based on the idea of a point particle that moves along some path through a space-time geometry. In quantum field theory, that space-time geometry is taken to be flat, gravity-free Minkowski space. The idea of first quantization is to sum over all possible paths that the point particle can follow through that space-time geometry and to weight each path with a probability factor, $P = \exp(iA/\hbar)$, where the particle action is given in terms of the particle's kinetic and potential energy as $A = \int dt(KE - PE)$, and where the integral is along the particle's path. The time variable in the integrand is the same time variable assumed for unitary time evolution, where the particle's wave-function is assumed to evolve in time in terms of the Hamiltonian operator as $\psi(t) = \exp(-iHt/\hbar)\psi(0)$. The Hamiltonian operator is composed of kinetic and potential energy parts as $H = KE + PE$. The sum over all possible paths or path integral formulation for quantum theory directly follows from unitary time evolution of the wave-function, and is a way to construct the wave-function.



Quantum State as the Sum over all Possible Paths

The wave-function is a field that obeys a field equation, which is how quantum theory is understood at the level of first quantization. The path integral constructs a wave-function that is a field that obeys a wave equation. The classical path of the particle is understood as the path of least action that results from minimizing the particle action and is like the shortest possible distance between two points in a curved space-time geometry. The second quantization procedure is to sum over all possible configurations of the field and to weight each possible field configuration with the same kind of probability factor, $P = \exp(iA/\hbar)$, but now the field action is written in terms of the field. Just as a particle action gives rise to classical equations of motion when minimized, a

field action also gives rise to classical field equations when minimized, but those field equations are really wave equations that give a representation of quantum theory at the level of first quantization. The whole idea of quantum field theory is based on the idea of the second quantization of fields that arise from a first quantization procedure. The problem is we have to begin with the assumptions of unitary time evolution and that a particle moves along some path through gravity-free Minkowski space, which is the only space-time geometry in which the assumption of unitary time evolution is valid. Only in Minkowski space is there a notion of time translation invariance that allows a time variable to be defined that all observers agree upon. The holographic principle totally reverses this process of quantization in that all field theories arise as thermodynamic equations of state from the way qubits of information are encoded on a holographic screen that arises as an event horizon due to an observer's own accelerated motion.

Instead of quantum field theory, which assumes that point particles are the quantum level at which the fundamental dynamical degrees of freedom for the world are defined, the holographic principle tells us that the fundamental dynamical degrees of freedom for a holographic world are defined at the quantum level of qubits of information encoded on a holographic screen, which always arises as an event horizon due to an observer's own accelerated motion. Quantum field theories for the electromagnetic and nuclear forces, like Einstein's field equations for gravity, only have the approximate validity of thermodynamic equations of state, and are all deducible from the holographic principle. Qubits of information encoded on a holographic screen are more fundamental than point particles that appear to occupy position coordinates in space and move through space over the course of time. Qubits of information encoded on a holographic screen are even more fundamental than the space-time geometry of that holographic world.

Even more fundamental than that holographic world is the observer itself that creates and perceives its own holographic world due to the observer's own accelerated motion that gives rise to its event horizon that becomes its holographic screen when its horizon encodes qubits of information. Everything the observer can perceive in its own holographic world is a form of information that can be reduced to qubits of information encoded on its own holographic screen. Those forms are projected like images from its own screen to its own point of view at the center of its own holographic world and are animated in the flow of energy that arises from its own accelerated motion.

What exactly is an observation or an observable event? At the level of point particles, quantum theory tells us the wave-function for a point particle is a probability amplitude that specifies the probability that the particle can be observed at some point in space at some moment in time. All wave-functions, including the wave-functions we call quantum fields, are probability amplitudes. The classical path of the particle, as specified in terms of the path of least action in a sum over all possible paths, is only the most likely path in the sense of quantum probability. The way this works for the ordinary quantum theory of

point particles is the wave-function for the particle is specified in terms of the position, x , and time, t , coordinates of the particle, and the particle's momentum, p , and energy, E , as $\psi(x,t)=A\exp(i(px-Et)/\hbar)$. The exponential of an imaginary quantity specifies wave action in terms of Euler's formula, as $\exp(i\theta)=\cos\theta+i\sin\theta$. The particle's momentum gives the wave-function a wavelength as $p=h/\lambda$, and the particle's energy gives the wave-function a wave frequency as $E=hf$. A is a probability amplitude. The quantization of energy and momentum only results from imposing periodic boundary conditions. This kind of wave-function specifies the quantum probability for a particular position state of the particle. The most general wave-function for the particle is a sum over all possible position states, which is called a Fourier series. This sum over all possible position states results in a wave-function that typically is peaked at some particular position. This kind of wave-function is called a wave-packet. This peaking of the wave-function at a particular position allows us to assign the particle a classical position in space at some moment in time, but that classical position is only the most likely position in the sense of quantum probability. There is always some uncertainty in the position of the particle, which corresponds to some uncertainty in the particle's momentum, and is reflected by the uncertainty principle as $\Delta x\Delta p\geq\hbar$. This is simply a consequence of wave motion.

The most general wave-function is a sum over all possible position states of the particle, which is an entangled wave-function. Quantum entanglement means that this sum over all possible position states, where each position state is weighted with a probability amplitude that represents wave motion, is a probability amplitude that specifies the quantum probability with which the particle can be measured as some particular position in space. When the particle is actually observed at some particular position of space, this entangled wave-function collapses into a particular position state for the particle. The entangled wave-function for the particle becomes disentangled as it collapses into a particular position state for the particle. This collapse of the wave-function is called quantum state reduction, and is how measurement is understood in quantum theory.

With the holographic principle, we no longer talk about a wave-function for a particle that appears to occupy a particular position coordinate in space at a moment of time, but instead talk about a holographic screen that encodes qubits of information for everything an observer can observe in its own holographic world. The qubits of information are entangled because they arise as the eigenvalues of a matrix. The observer's holographic screen is its event horizon that arises due to the observer's own accelerated motion, which becomes its holographic screen when its horizon encodes qubits of information. That information is entangled because the qubits are entangled.

When the observer observes something in its own holographic world, like a point particle that appears to occupy a particular position coordinate in space at a moment of time, information becomes disentangled. What we call the collapse of the wave-function at a point particle level corresponds to the disentanglement of information on the

observer's holographic screen whenever the observer observes something in its own holographic world. In the sense of a computer-generated virtual reality, the observer's observation of something in its own holographic world is like the projection of an image from its own holographic screen to its own point of view. The observer's observation of something requires the disentanglement of the information encoded on its holographic screen. That entangled information is encoded in terms of qubits, which must become disentangled whenever the observation of something occurs.

The holographic principle goes a long way toward clearing up the mystery called the qualia problem. At the level of point particles, when we measure a particle's wavelength, we're measuring a mathematical quantity. The problem is that is not how we observe things. We do not directly observe the wavelength of light. We observe the color of light, which is a quality of light. Observing the color of light is not the same as measuring a mathematical quantity, like the wavelength of light. Color is a quality, not a quantity.

How does the holographic principle clear up the qualia problem? The answer is that the point particle formulation of quantum theory is not really fundamental. What we call a point particle can be reduced to qubits of information encoded on a holographic screen. When we observe light, we're not really observing a point particle called a photon that is characterized by a wave-function. We're observing the way qubits of information are encoded on a holographic screen. When we make an observation of light, we observe the quality of light, like its color, and not a quantity, like its wavelength. That quality of light is perceived as qubits of information encoded on the holographic screen become disentangled and the image of the form of something is projected from the screen to our own point of view, like the images of a virtual reality displayed on a computer screen.

The mystery of the qualia problem is inherent in the way those images are projected. We don't just have consciousness in the sense of perceiving consciousness that arises at our own point of view, but we also have consciousness in the sense of illuminating consciousness. We not only perceive things with our perceiving consciousness, but we also illuminate things with our illuminating consciousness, which can be called the light of consciousness. It is our own illuminating light of consciousness that allows us to project the images of things to our own point of view. Inherent in the way we project the images of things is our perception of the quality of things. The quality of things is inherent in the light of consciousness, which is the solution to the qualia problem.

The whole concept of time and motion in theoretical physics is based on circular reasoning, or even worse, logical contradictions. The most fundamental theory we have of space and time is relativity theory, as formulated by Einstein's field equations for the space-time metric, but even in relativity theory, there is no real understanding of the nature of time. We have to begin with the assumption that every observer carries with itself its own sense of proper-time, which is the only invariant quantity in relativity theory.

One observer's proper-time is then related to another observer's proper-time due to their relative motion, as in the effect of time dilation. The observer's own proper-time can only be understood in terms of a clock that the observer carries with itself. The operation of this clock is based on some kind of periodic motion. The most sophisticated notion of this periodic motion is a light clock, where a light ray bounces back and forth between two mirrors. The problem is that we have to assume periodic motion in the sense of the observer's own clock to explain the nature of proper-time, which we then use to explain the nature of all other motion. This is nothing more than a case of circular reasoning. Without the periodic motion of the observer's own clock, there is no notion of the observer's own proper-time that allows us to explain the nature of all other motion.

The situation in quantum theory is even worse. Quantum theory is based on the notion of unitary time evolution, where the wave-function for anything we want to measure, like the position of a point particle, is assumed to evolve in time as $i\hbar\partial\psi(t)/\partial t = H\psi(t)$, where H is the Hamiltonian operator that represents the total energy of the system of interest. The problem is when that system is the entire universe, which is characterized by a space-time geometry. The problem is the force of gravity, which in relativity theory is understood as the dynamical curvature of that space-time geometry. Quantum theory in the sense of unitary time evolution can only be formulated in gravity-free, flat Minkowski space, where there is a notion of time translation invariance, and so a time variable can be defined that all observers will agree upon. In a dynamically curved space-time geometry with gravity, there is no notion of time translation invariance, and so there is no universally valid definition of time that all observers will agree upon. Every observer only knows about its own proper-time. The idea of unitary time evolution as a defining principle of quantum theory is not logically consistent with the idea of gravity and breaks down in a dynamically curved space-time geometry with gravity.

What is the solution to this problem? The answer is found in the principle of equivalence that tells us that the force of gravity as perceived by any observer is equivalent to the observer's own accelerated motion. As we'll come to understand, the observer's own motion is relative to the motionless void. That's how the observer's event horizon arises that becomes its holographic screen when its horizon encodes qubits of information. All notions of time and motion in the observer's holographic world, as animated images of that world are displayed on the observer's holographic screen, arise from the observer's own motion relative to the motionless void. That's how the notion of time arises.

The idea of quantum field theory as an effective field theory or thermodynamic equation of state goes a long way toward explaining how the physical world is created from the void. At the initial moment of the big bang creation event, all energy was in the form of dark energy that gives rise to the accelerated expansion of space that always expands relative to the central point of view of the observer. This expression of dark energy arises from the void, which has the potential to express dark energy as space appears

to expand relative to the observer's central point of view, which also gives rise to the observer's cosmic horizon. The encoding of qubits of information on the observer's horizon allows the observer's holographic world to appear to come into existence. The encoding of information on the observer's cosmic horizon also arises from the void, which has the potential to encode qubits on the observer's cosmic horizon.

At the initial moment of the big bang event, all energy was in the form of dark energy. How do we explain the emergence of other forms of energy in the observer's holographic world, like mass energy? The answer is found in quantum field theory, which we can understand as an effective field theory that describes thermodynamic events in the observer's holographic world when things are near thermal equilibrium.

Early in the history of the universe, dark energy was very hot because the observer's holographic world was very small. This is the result of a large cosmological constant that gives rise to a small radius to the observer's cosmic horizon. The smaller the radius to the observer's cosmic horizon, the hotter the effect of dark energy, since the Unruh temperature of the cosmic horizon is given in terms of its radius as $kT = \hbar c / 2\pi R$. In the sense of quantum field theory, very hot dark energy can give rise to high energy photons that can create electron-positron pairs and proton-antiproton pairs.

The electrons and protons are initially massless, just like the photon, but as the universe expands and cools, the electrons and protons develop mass through the Higg's effect. The Higg's effect is an example of spontaneous symmetry breaking that gives masses to all the matter particles as the universe expands and cools. This effect is like a phase transition that results in the spontaneous magnetization of a magnet as the spin variables within the magnet begin to align with each other, which naturally happens as the temperature of the magnet cools. Just as the holographic principle tells us that all matter is reducible to qubits of information and is not really fundamental, the Higg's mechanism tells us that mass is not fundamental, but spontaneously emerges in the universe as the universe expands and cools. The universe cools in temperature as the universe expands in size, which happens as the cosmological constant transitions to a lower value and the radius of the observer's cosmic horizon increases in size.

The universe cools in temperature as it expands in size, which is a natural result of the cosmological constant transitioning to a lower value and the radius of the observer's cosmic horizon increasing in size. As the universe cools in temperature, the Higg's effect gives mass to all the matter particles through a process of spontaneous symmetry breaking. This mechanism also explains the second law of thermodynamics. As the universe expands and cools, heat tends to flow from hotter to colder objects because the hotter objects radiate away more heat. This naturally happens as the cosmological constant transitions to a lower value and the radius of the observer's cosmic horizon increases in size, which gives the cosmic horizon a lower Unruh temperature.

As heat flows in a thermal gradient, entropy or disorder tends to increase. An increase in entropy is understood in terms of a larger surface area of the cosmic horizon that encodes more qubits of information. As heat flows, information becomes disordered due to the randomizing effects of thermal radiation and random thermal motion that occurs at thermal equilibrium. This flow of heat in a thermal gradient and increase in entropy as heat flows and things approach thermal equilibrium is the essence of the second law of thermodynamics, which explains the normal flow of energy through the observer's holographic world. This normal flow of energy as heat flows in a thermal gradient also explains the nature of time's arrow, which is always directed in the direction of increasing disorder. Ultimately, when the cosmological constant transitions to its final value of zero and the radius of the observer's cosmic horizon increases in size to infinity, the universe becomes infinite in size and comes to thermal equilibrium at a final temperature of absolute zero. This is called the heat death of the universe, in which the flow of all energy comes to an end and even the flow of time comes to an end.



Normal Flow of Thermal Energy Through the Observer's Holographic World

There is one last puzzle about how the physical world is created that quantum field theory can solve. Very hot dark energy can give rise to high energy photons that can create electron-positron pairs and proton-antiproton pairs, but how do we end up with a universe that's full of electrons and protons? What happens to all the positrons and antiprotons? The answer is found in the quantum field theory of the weak nuclear force, which naturally exhibits a kind of spontaneous symmetry breaking called parity or chiral symmetry breaking. Parity refers to the handedness of spin $\frac{1}{2}$ matter particles, like the electron and proton, which can spin in either a right-handed or left-handed spin state as they're observed to spin in either a spin up or spin down state. Parity or chirality refers to symmetry under mirror reflection, in which right-handedness and left-handedness become interchanged. The weak nuclear force breaks this symmetry. The weak nuclear force allows protons to decay into positrons and antiprotons to decay into electrons at

very high energies. Due to chiral symmetry breaking, there is a difference in the decay rates, which allows more antiprotons to decay into electrons than protons that decay into positrons, and so as more antiprotons decay, we end up with more protons and electrons than antiprotons and positrons. As the universe expands and cools, the protons become more stable, and so that's the kind of universe we end up with.

The universe as we know it would not be possible without the expansion and cooling of the universe, which allows heat to flow from hotter to colder objects. The universe can only expand and cool due to the accelerated expansion of space that arises from the expression of dark energy, which allows the universe to expand in size and cool as the cosmological constant transitions to a lower value and the observer's cosmic horizon increases in radius. That's also how more qubits of information are encoded for the universe as the observer's cosmic horizon increases in surface area. This expansion and cooling of the universe is the only reason we have the formation of stars, planets, galaxies and life-forms within the universe. This formation only occurs because of the tendency for bound states to form as heat flows from hotter to colder objects. As hotter objects radiate away their heat into colder space, the random thermal motion of their constituent particles slows down and the particles are more likely to bind together. For example, protons and electrons bind together into hydrogen atoms under the influence of the electromagnetic force, hydrogen atoms clump together into gas clouds that then collapse into stars under the influence of the gravitational force, and stars begin to burn their nuclear fuels and radiate heat as hydrogen atoms fuse together into helium atoms under the influence of the strong nuclear force. None of this would be possible without the expansion and cooling of the universe that is a direct consequence of the expansion of space. Even what we call a particle in space can be reduced to qubits of information encoded on an observer's cosmic horizon, which again is a direct consequence of the expansion of space. All this formation of objects within the universe is only appearing to happen in the universe because space is expanding and information is being encoded.

There is strong scientific evidence that the energy that energizes the big bang creation event and puts the "bang" in the big bang is dark energy. Dark energy is the energy of the accelerated expansion of space, which in Einstein's field equations for gravity is represented by a cosmological constant. This idea is incorporated in the theory of inflationary cosmology, which makes exquisitely precise predictions for the observed pattern of the background cosmic microwave radiation left over from the big bang. The cosmic microwave radiation is the thermal radiation of the big bang event, which has cooled due to the expansion of the universe and has come into thermal equilibrium, which makes it a form of black-body radiation. This is different from sunlight, which is not at thermal equilibrium. Sunlight is the thermal energy of the sun that has to flow from the hot sun to cold outer space before it can come into thermal equilibrium. Along the

way, sunlight makes a pit-stop at planet earth. The thermal energy of sunlight, as it flows from the hot sun to cold outer space, is the energy that energizes all life on earth.

Inflationary cosmology assumes that the accelerated expansion of space is the energy that energizes the big bang event. This naturally happens as the cosmological constant transitions to a lower value. Unfortunately, inflationary cosmology is flawed because it's based on quantum field theory, and can never be a fundamental theory since quantum field theory only has the validity of a thermodynamic equation of state, which can never really describe how things happen when things are not at thermal equilibrium. In spite of this flaw, the predictions are very good, most likely because the cosmic microwave radiation is at thermal equilibrium. The upshot is this is strong evidence for dark energy or the accelerated expansion of space as the energy that energizes the big bang event.

The nature of qubits of information encoded on the surface of an event horizon that acts as the observer's holographic screen also explains the puzzle of quantum entanglement that Einstein called spooky action at a distance. We imagine that we have two particles with entangled spin states, so that the total spin adds up to zero. This means if the first particle spins up, the second particle must spin down, and vice versa. When those two particles appear in the space-time geometry of the observer's holographic world and appear to become separated in space, the measurement of the spin state of the first particle instantaneously determines the spin state of the second particle, no matter how far apart the particles have appeared to become separated in space. There is really no puzzle here in terms of the holographic principle, since the appearance of both particles in the observer's space-time geometry can be reduced to qubits of information encoded on the observer's own holographic screen, and the qubits are inherently entangled until the observer makes an observation of its own holographic world, at which time the qubits become disentangled and the separated particles appear to take on definite spin states. This solves the mystery of spooky action at a distance because observation is never really a local phenomena, but rather a holistic phenomena that encompasses an observer's entire world as an observer observes events in its own holographic world.

The holographic principle solves all these puzzles because the essential nature of the dynamical degrees of freedom for a holographic world are not particles defined in a space-time geometry, as assumed by quantum field theory, nor even the nature of the gravitational field as defined in a curved space-time geometry. The fundamental nature of the dynamical degrees of freedom for a holographic world are qubits of information encoded on a holographic screen that arises as an event horizon in an observer's accelerated frame of reference. At thermal equilibrium $\Delta E = kT\Delta n$, and the equal partition of energy tells us that each qubit carries the same amount of thermal energy given in terms of the observer's acceleration as $E = kT = \hbar a / 2\pi c$. The thermal entropy of that holographic world is given in terms of the surface area of the observer's event horizon

as $S=kn=kA/4t^2$. When we add dark energy and the accelerated expansion of space to the holographic principle, all the mysteries of the world have a natural explanation.

This tells us that at a foundational level, physics is not really fundamental. The laws of physics are like the computational rules that govern the operation of a quantum computer that gives rise to the appearance of the observer's own computer-generated virtual reality. That quantum computer is created when the observer enters into an accelerated frame of reference and its event horizon arises that acts as its holographic screen when the horizon encodes qubits of information.

The holographic principle tells us that the observer must come first. First the observer comes into existence, and then its holographic world appears to come into existence due to its own accelerated motion that gives rise to its event horizon that acts as its holographic screen when qubits of information are encoded on its horizon. The observer's holographic screen is displaying images of everything the observer can observe in its own holographic world. All the information for all those things can be reduced to qubits encoded on the screen. This gives an observer-centric and observer-dependent description of the observable reality of the observer's own holographic world. In no significant way is this description of the observer's own holographic world different from a computer-generated virtual reality. The observer itself creates the quantum computer that gives rise to the appearance of its own holographic world whenever the observer enters into an accelerated frame of reference.

The odd thing about this explanation is that there really is nothing inside a holographic world. Everything that an observer can perceive in its own holographic world is like the projection of a holographic image from its own holographic screen to its own point of view at the center of that holographic world. The observer's holographic screen arises as an event horizon in its accelerated frame of reference when the horizon encodes qubits of information. Even the animating energy that animates those holographic images arise from the observer's own accelerated motion. In reality, there is nothing inside the event horizon and nothing outside the event horizon. Things only appear to exist inside the event horizon because of the holographic projection of images of that holographic world from the observer's holographic screen to its central point of view.

Remarkably, this is exactly the nature of our world. Evidence from measurements of the background cosmic microwave radiation tells us the world we perceive is asymptotically flat. An asymptotically flat world is like escape velocity, for which the total energy is zero. Escape velocity is defined for a particle that escapes away from a gravitational field when the particle has just enough positive kinetic energy to overcome the negative potential energy of gravitational attraction. When the particle reaches infinity, its motion comes to an end and the force of gravity also comes to end, which means its total energy is zero. For escape velocity, $E=KE+PE=0$. An asymptotically flat universe has a

total energy of zero, like escape velocity. This is possible since the negative potential energy of gravitational attraction can exactly cancel out all forms of positive energy, like mass energy, kinetic energy and dark energy. That's the nature of a holographic world, in which everything exactly cancels out to zero. There really is nothing inside a holographic world since that world is only a holographic projection of images.

The holographic principle tells us that everything an observer can perceive in its own holographic world is a form of information that can be reduced to qubits of information encoded on its own holographic screen. The observer not only perceives the form of all things, which are projected like images from its own screen to its own point of view at the center of its own holographic world, but also perceives the flow of energy that animates the form of all things. That animating energy can be understood as the energy of the observer's own accelerated motion that also gives rise to its event horizon that becomes its holographic screen when the horizon encodes qubits of information.

These forms of information not only include microscopic things, like point particles, but also macroscopic things, like living bodies. How do we understand the nature of a living body? Just as the science of modern physics allows us to understand the nature of point particles at the quantum level of quantum field theory, the science of modern biology also allows us to understand the nature of living bodies at a biological level.

The essential nature of a living body is as a coherently organized form of information that holds together and self-replicates its form in a recognizable way as the form is emotionally animated. There are several big ideas in the above sentence that we need to unpack in order to scientifically understand the nature of a living body, including the concepts of coherent organization, the self-replication of form in a recognizable form, and the nature of the emotional animation of forms. We already understand what a form of information is from the holographic principle. All forms of information can be reduced to qubits of information encoded on the observer's own holographic screen.

The key idea is that we have to understand these concepts in terms of the observer, which can only be understood as the perceiving consciousness present at the central point of view of its own holographic world. That holographic world only appears to come into existence due to the observer's own accelerated motion that gives rise to its event horizon that becomes its holographic screen when its horizon encodes qubits of information. This is already telling us that the emotional animation of biological forms can only arise from the energy of motion of the observer's own accelerated motion.

What gives rise to the coherent organization of forms and to the self-replication of forms as recognizable forms? What allows a coherently organized form to self-replicate its form and hold together in a recognizable way over a sequence of observable events?

The answer to these questions is found in the science of thermodynamics, which spans the whole spectrum of science from the microscopic quantum level of point particles to the macroscopic level of living biological bodies to the universal level of a holographic world. The two key ideas of thermodynamics are the flow of energy and the encoding of information. We understand the flow of energy in terms of the flow heat, as heat flows from hotter to colder objects. The temperature of objects is a concept that really only applies at thermal equilibrium. Temperature is a measure of the thermal energy of random thermal motion. At the level of point particles and atomic theory, this thermal energy is the random thermal motion of the point particles like the electrons and atomic nuclei that bind together to form atoms. Objects only appear to have a temperature at thermal equilibrium due to the random thermal motion of the point particles within the objects. Even the nature of heat or thermal radiation is understood as the random thermal motion of photons that are also understood as point particles. The atoms inside the objects are radiating away photons. The hotter the object, the faster the point particles move. Heat tends to flow from hotter to colder objects because hotter objects tend to radiate away more heat in the form of thermal radiation or photons.

The concepts of thermodynamics only apply at the level of thermal equilibrium when we can discuss the motion of things in terms of random thermal motion. This is purely a statistical description. The first key idea of thermodynamics is the concept of the flow of heat as described above. The second key idea of thermodynamics is the concept of the encoding of information. The holographic principle tells us the encoding of information occurs on an observer's holographic screen in terms of qubits. The concept of entropy represents the total number of qubits of information encoded for a holographic world, but only applies when that information is maximally disordered at thermal equilibrium. Information becomes maximally disordered at thermal equilibrium due to the random thermal motion of things. In the point particle description of the world, we think of point particles as the fundamental dynamical degrees of freedom for the world at the quantum level, but the holographic principle tells us that even point particles can be reduced to qubits of information encoded on a holographic screen. With the holographic principle, we understand the fundamental dynamical degrees of freedom for a holographic world at the quantum level are the qubits of information encoded on a holographic screen.

The equipartition of energy tells us that at thermal equilibrium, each fundamental dynamical degree of freedom carries the same amount of thermal energy, which essentially defines temperature as $E=kT$. This relation actually applies both at the level of qubits and at the level of point particles. The conservation of energy in the setting of the equipartition of energy requires that $\Delta E=T\Delta S$. This is easiest to understand in terms of the holographic principle, where the number of qubits of information encoded for a holographic world is given in terms of the surface area of the observer's event horizon as $n=A/4\ell^2$. At thermal equilibrium, when all information becomes maximally disordered

due to the random thermal motion of things, entropy is given as $S=kn$, which tells us that $\Delta E=kT\Delta n$. This makes sense at thermal equilibrium when each qubit of information carries the same amount of random thermal energy.

The second law of thermodynamics tells us that as heat flows from hotter to colder objects, entropy tends to increase because things tend to become more disordered. Disorder is simply a consequence of the random thermal motion of things that can be understood at either the level of qubits of information or point particles. The easiest way to understand the second law of thermodynamics is in terms of thermal radiation, which is best understood in terms of the radiation of photons. Hotter objects, which are composed of faster moving point particles, tend to radiate away more heat in the form of photons. The energy of each photon is quantized in terms of its wave frequency as $E=hf$. Hotter objects radiate away more heat in terms of higher energy photons with a higher wave frequency. That heat in turn is absorbed by colder objects as heat tends to flow from hotter to colder objects. The colder objects also radiate away heat as photons, but with a lower photon energy due to a lower wave frequency. Since there is a net conservation of energy, the colder objects end up radiating away more photons than the hotter objects. At thermal equilibrium, the photons are randomly radiated away into space from all objects, but as heat tends to flow from hotter to colder objects, this radiation and dispersion of energy results in a net increase in disorder since the colder objects end up randomly radiating away a larger number of lower energy photons into space than the number of higher energy photons radiated away from hotter objects.

Thermodynamics explains the nature of the flow of heat from hotter to colder objects and the disordering of information that results from the random thermal motion of things, which leads to thermal equilibrium, but how do we explain the coherent organization of forms of information that are able to hold together and self-replicate their forms in a recognizable way over a sequence of observable events? The basic problem is that coherent organization does not occur at thermal equilibrium, where things are maximally disordered due to the random thermal motion of things. Coherent organization of form is a non-thermal equilibrium process. The problem we have to confront is to understand how forms become coherently organized when things are not at thermal equilibrium, and so the laws of thermodynamics can be of limited value.

The best way to approach this problem is in terms of the flow of heat from hotter to colder objects even when things are not exactly at thermal equilibrium. The flow of heat tends to randomize information and disorder things due to the random thermal motion of things, but there is a counterbalancing effect that tends to maintain the organization of things. At the level of point particles, this counterbalancing effect can be understood as the organizing effect of attractive potential energy that tends to hold things together into bound state, like the attractive electromagnetic potential energy of a negatively charged electron orbiting a positively charged atomic nucleus in the bound state of an atom, or

the attractive gravitational potential energy of a planet orbiting a star in the bound state of solar system. At the level of qubits of information encoded on a holographic screen, this counterbalancing effect can be understood as the nature of quantum entanglement.

The standard model of particle physics, as formulated by quantum field theory, tells us that point particles tend to bind together under the influence of attractive forces, like the attractive electromagnetic force between oppositely charged electrons and atomic nuclei in atoms, or the attractive strong nuclear force between quarks in the atomic nuclei, or the attractive gravitational force between all matter and energy. At the level of qubits of information encoded on a holographic screen, these attractive forces can be understood in terms of quantum entanglement. Qubits encoded on a two dimensional holographic screen are mathematically represented by two dimensional arrays of numbers called matrices. Qubits are like spin variables, which are inherently entangled because they arise from the eigenvalues of the matrices. The matrices not only encode information in terms of qubits, but also give a mathematical representation of rotational symmetry on the surface of a 2-sphere. At the level of a qubit, quantum entanglement is a mathematical representation of rotational invariance on the surface of a 2-sphere.

The important thing about entangled spin variables is that they tend to either align or anti-align together over a sequence of observational events. A spin $\frac{1}{2}$ variable can only be observed to point up or down, but when spin variables are entangled, they tend to either align or anti-align together over a sequence of observational events. This natural tendency for the alignment of spin variables is the mechanism by which a magnet becomes spontaneously magnetized as all the microscopic spin variables inside the magnet tend to either align or anti-align. The microscopic spin variables also carry electric charge and so have intrinsic magnetic moments due to their spin, which can add together into a macroscopic magnetic field when the entangled spin variables align. The bottom line is that attractive forces, like the force of gravity, are a natural consequence of encoding entangled qubits of information on the surface of a holographic screen.

For the purpose of simplicity, let's limit the discussion of the nature of bound states to the level of point particles and the attractive potential energy between point particles that leads to the formation of bound states. Bound states of point particles naturally form because of the attractive potential energy of attractive forces between point particles. However, there is always a balance between the kinetic energy of the point particles and the attractive potential energy of attractive forces. If the point particles have too much kinetic energy, they overcome the force of attraction, and fly apart. The amount of kinetic energy that's required to overcome the force of attraction is called escape velocity, just like a rocket ship with escape velocity that is able to escape away from the earth's attractive gravitational force. If the kinetic energy of the particle or rocket ship is greater than the potential energy of attraction, the particle or rocket ship escapes away.

The reason this is important is because of thermodynamics and the random kinetic energy particles obtain due to the temperature of things, which represents the random thermal motion of things. If the temperature is too hot and the particles have too much kinetic energy due to their random thermal motion, they are able to overcome the attractive potential energy that tends to bind the particles into bound states. Bound states between particles cannot form if things are too hot and there is too much kinetic energy of random thermal motion. If the temperature is too hot, the particles tend to have escape velocity, and bound states cannot form. As the temperature is lowered, the kinetic energy of random thermal motion is also lowered, and at some point the particles no longer have escape velocity. That's when the particles can bind together into bound states. The point at which the particles no longer have escape velocity is called the critical temperature, at which point bound states are able to form.

Bound states not only include microscopic objects, like atoms and molecules, but also macroscopic objects, like magnets, planets, stars, and living biological bodies. The formation of a macroscopic object always occurs in a phase transition characterized by a critical temperature at which the phase transition occurs. A good example is water. If the water temperature is too hot, the water molecules have too much kinetic energy of random thermal motion, and the water molecules take the form of water vapor. As the water temperature is lowered below the critical temperature of the condensation point of water, the water molecules no longer have escape velocity and condense into the form of liquid water. As the water temperature is lowered below the critical temperature of the freezing point of water, the water molecules freeze into a crystal structure and take the form of frozen ice. Both the condensation and the freezing of water are only possible due to the organizing effect of the attractive potential energy between water molecules.

The formation of the bound states of living biological bodies is significantly different from the formation of the bound states of physical macroscopic objects, like a magnet or a piece of ice, but some of the same ideas of critical phenomena that occur in phase transitions still apply. Instead of the idea of a critical temperature, there is the idea of a critical balance between the randomizing effect of the flow of random thermal energy that tends to disorganize things and the organizing effect of attractive potential energy inherent in bound states that tends to maintain the coherent organization of things.

The key thing about biology is the way living biological bodies are able to maintain this balance in favor of the organizing effect of attractive potential energy. The important point about the formation of living biological bodies is that this formation cannot occur at thermal equilibrium. Living biological bodies can only form in a non-thermal equilibrium setting. Thermal equilibrium means that everything is at the same temperature, while non-thermal equilibrium means that there is a temperature gradient in which heat can flow from hotter to colder objects. Non-thermal equilibrium also means that there is a source of organizing attractive potential energy that living biological bodies can feed on.

Living biological bodies can only form because they feed off of a source of organizing attractive potential energy. Living biological bodies have to feed off of a source of organizing attractive potential energy so that they can maintain the critical balance between the randomizing effect of the flow of random thermal energy that tends to disorganize the body and the organizing effect of attractive potential energy that tends to maintain the coherent organization of the body in favor of the organizing effect of attractive potential energy. Life is simply not possible unless living biological bodies are able to feed off of a source of organizing attractive potential energy.

As heat flows in a thermal gradient, there is always a balance between the randomizing effect of the flow of random thermal energy that tends to disorganize things and the attractive potential energy inherent in bound states that tends to maintain the coherent organization of things. For a living biological body, life is not possible unless the body is able to feed off of a source of organizing attractive potential energy that maintains the balance in favor of the organizing effect of attractive potential energy.

The big question is where can a body find the attractive potential energy it needs to feed on in order to survive? This is a question about how the body is able to maintain its own coherent organization in the form of a bound state that is able to self-replicate its form in a recognizable way. The answer for the bodies that we call animals is that the body finds that organizing attractive potential energy in other bodies. The biological body of an animal can only survive if it feeds on other biological bodies. The animal has to eat other bodies to survive. Survival means the self-replication of the form of the body as a recognizable form, which requires the maintenance of the coherent organization of the form of the body as a recognizable bound state. The biological body of an animal can only maintain its coherent organization if it feeds on other biological bodies, since that is how that body maintains the critical balance between the randomizing effect of the flow of random thermal energy that tends to disorganize the body and the organizing effect of attractive potential energy that tends to maintain the organization of the body in favor of the organizing effect of attractive potential energy. Eating other bodies is the only mechanism by which organizing attractive potential energy is added to the body.

The situation for the biological bodies we call plants is somewhat different. A plant can absorb high energy photons that arrive from the sun and convert some of the energy of the photons into the energy of carbohydrate molecules through the biological process of photosynthesis. Through this mechanism, the carbohydrate molecules store attractive potential energy in chemical bonds. That energy can be released as heat when the carbohydrate molecule is burned, and some of that heat energy can be utilized to perform useful work, like the heat of a steam engine that can be used to turn a wheel. In the process of first storing useful energy through the process of photosynthesis and then burning that energy to perform useful work, heat must flow in a thermal gradient. For the plant, the source of that thermal gradient is the hot sun that creates the high

energy photons absorbed by the plant. The plant converts some of that photon energy into the energy of carbohydrate molecules through the process of photosynthesis. The heat released when the carbohydrate molecule is burned eventually makes its way into cold outer space. In the process of heat flowing in this thermal gradient, things tend to eventually become more disordered as heat flows from hotter to colder objects due to the disordering effect of the random flow of thermal energy. This disordering effect of the random flow of thermal energy is what is called an increase in entropy, which underlies the eventual disorganization of all organized forms of information.

How then is it possible for the plant to maintain its coherent organization in the form of a biological body that is able to self-replicate its form in a recognizable way? The answer is that the plant is able to maintain its coherent organization through the performance of useful work as carbohydrate molecules are burned and heat is released, like a steam engine that can perform useful work as the flow of heat is used to turn a wheel. The performance of useful work is how the plant maintains its coherent organization, but before that useful work can be performed, the plant must store some of the energy of high energy photons that arrive from the hot sun in the form of carbohydrate molecules through the process of photosynthesis. Heat released when carbohydrate molecules are burned eventually makes its way into cold outer space. In the process, there is a net increase in entropy or disorder due to the disordering effect of the random flow of thermal energy, and the second law of thermodynamics is not violated.

The reason the second law of thermodynamics is not violated is because we cannot consider the plant to exist in isolation. We have to consider the plant together with its environment, which doesn't just include the plant's ecosystem on planet earth, but also the hot sun and cold outer space. The plant's environment is really the entire universe. Even as the plant is able to maintain its coherent organization in the form of a biological body that's able to self-replicate its form in a recognizable way through the performance of useful work, the total system of the plant and its environment become more disordered with an increase in entropy. This increase in entropy arises because a larger number of lower energy photons are eventually radiated into cold outer space than arrive from the hot sun. A larger number of lower energy photons are randomly radiated away and dispersed throughout the entire universe, which results in a net increase in entropy or disorder for the entire universe. This increase in entropy is purely a quantum effect, since the energy of a photon is given in terms of its wave frequency as $E=hf$. As heat flows in a thermal gradient from hotter to colder objects, energy becomes randomly dispersed into lower and lower frequencies, which results in a net increase in entropy.

The story for the biological body of an animal that eats other biological bodies is very similar to the story for the body of a plant. The only significant difference is that the body of a plant can eat photons through the process of photosynthesis, while the body of an animal must eat other bodies. Eating other bodies is the only mechanism available to

the animal by which organizing attractive potential energy is added to its body. That addition of organizing attractive potential energy to the body is necessary so that useful work can be performed, which is how the body maintains its coherent organization.

At the level of thermodynamics, this is all we can say about how a biological body is able to maintain its coherent organization and self-replicate its form as a recognizable form. A body must keep the balance between the randomizing effect of the flow of random thermal energy that tends to disorganize the body and the organizing effect of attractive potential energy that tends to maintain the organization of the body in favor of the organizing effect of attractive potential energy by adding attractive potential energy to the body through a process of eating other bodies. That's really what life is all about.

To go further in this analysis, we'll have to understand the nature of biological bodies in biological terms, specifically in terms of Darwinian evolution, natural selection, and the survival of the fittest body. There is one last possible connection with thermodynamics. The survival of the fittest bodies may ultimately come down to nothing more than the most efficient mechanisms that transfer thermal energy down a thermal gradient. The fittest bodies that are most likely to survive may be those bodies that most efficiently transfer heat down a thermal gradient as heat flows from hotter to colder objects, which is only about the flow of heat from the hot sun to cold outer space, and is ultimately about the flow of heat as the universe expands in size and cools due to the expansion of space. The only reason we have a hot sun in the sky and cold outer space is because space is expanding in the universe due to the accelerated expansion of space, which allows heat to flow from hotter to colder objects as the universe expands in size.

The evidence for this idea is found in all regions of the earth where vegetated regions remain cooler than non-vegetated regions. Vegetated regions remain cooler because vegetated regions are more efficient at transferring heat from the hot sun to cold outer space. This efficiency of heat transfer may be what the survival of the fittest body is all about. Living bodies may just be the most efficient mechanisms that transfer heat.

At the level of animals, biological bodies only survive because they eat other biological bodies. Darwinian evolution and natural selection are all about the survival of the fittest body. Darwinian evolution and natural selection are about designing those bodies that are best able to survive. Darwinian evolution allows for the genetic diversity of bodies, and natural selection selects those bodies for survival that are most fit for survival. The bodies that are fittest and best able to survive are the bodies that are selected for by natural selection. Body survival only means the coherent self-replication of the form of the body or sexual reproduction of the form of the body. Body survival is really nothing more than the self-replication of the form of the body in a recognizable form or the sexual reproduction of the form of the body, both of which require the maintenance of the coherent organization of the form of the body as a recognizable form of information.

The coherent self-replication and sexual reproduction of the form of the body is only possible because the biological bodies of animals eat other biological bodies. That is the only way biological bodies of animals can survive. Eating is necessary to survive so that energy is available for the body to perform useful work that maintains the coherent organization of body structures. In a similar way, not being eaten is necessary to survive so that the body can maintain the coherent organization of body structures.

The way the body survival of animals works is through the expression of emotions and the pleasure-pain principle. At the level of eating, the body expresses a desire to eat when it wants to eat another body. The problem is that the desire to eat another body is in conflict with the fear of being eaten by another body. When the body expresses the desire to eat another body, the body moves toward the other body. When the body expresses the fear of being eaten by another body, the body moves away from the other body. At the level of the expression of fear and desire, emotional expressions are all about movement toward and movement away, which are in conflict with each other.

Darwinian evolution and natural selection have designed the expression of emotions to promote the survival of the fittest body. The way this works is through the pleasure-pain principle, which underlies the expression of the primitive emotions of the desire to eat and the fear of being eaten. The satisfaction of the desire to eat feels good, since eating maintains body structures and promotes body survival, while the manifestation of the fear of being eaten feels bad, since being eaten disrupts body structures and threatens body survival. The pleasure-pain principle underlies the survival of the fittest body in that satisfying the desire to eat is pleasurable and promotes body survival, while manifesting the fear of being eaten is painful and threatens body survival. That's how Darwinian evolution and natural selection have designed the expression of the emotions of fear and desire along the lines of the pleasure-pain principle, which serves no other purpose other than the survival of the fittest body.

The expression of the emotions of fear and desire are body survival emotions, pure and simple. They serve no other purpose. The bodies that are best able to express the emotions of fear and desire are the bodies that are best able to survive. These primitive survival emotions not only include the desire to eat and the fear of being eaten, but also desire for sexual reproduction. That's what the survival of the fittest body is all about.

The human animal is a social animal, so in addition to the primitive survival emotions of the desire to eat, the fear of being eaten, and the desire for sexual reproduction, social emotions are also expressed within the context of a social group. These social emotions include expressions like shame and guilt, anger, resentment and hatred, and emotional attachments. Shame and guilt are expressions of the fear of being rejected by the social group for actions that are not acceptable to the social group, which is a movement away from others that defends body survival by bringing those socially unacceptable actions

to an end. Anger, resentment and hatred are movements against others, either within one's own social group or in other social groups that are perceived to be a threat to the survival of one's own body or to one's own social group. Like the expression of primitive survival emotions, the expression of social emotions within a social group or against other social groups only serves the purpose of defending the survival of the body.

Even emotional attachments are body survival emotions, since the immature body of an infant cannot fend for its own survival and must emotionally attach its body to the body of its caregiver in order to survive. Like all social emotions, the expression of emotional attachments only serves the purpose of defending the survival of the body.

All of these body survival emotions are designed to defend the survival of the body through the process of Darwinian evolution and natural selection that selects those emotional expressions that are best able to defend the survival of the body. That's what the survival of the fittest body is all about. At an emotional level, the defense of body survival is only an emotional mechanism that maintains the coherent organization of the body and allows the form of the body to become coherently self-replicated in form in a recognizable way over a sequence of observable events.

The next question we naturally have to ask is who exactly is recognizing the form of the body as the body becomes coherently self-replicated in form in a recognizable way over a sequence of observable events? Who exactly is the observer? Is the body its own observer? This is where the holographic principle can give some fundamental answers.

The holographic principle tells us that the form of the body is a form of information that appears in an observer's holographic world. That holographic world only appears to come into existence due to the accelerated motion of the observer that gives rise to its event horizon that becomes its holographic screen when its horizon encodes qubits of information. Everything the observer can observe in its own holographic world is a form of information that can be reduced to qubits of information encoded on its own holographic screen. The observer itself can only be understood as the perceiving consciousness that arises at the central point of view of its own holographic world.

The holographic principle is telling us in no uncertain terms that the body is most definitely not its own observer. The perceiving consciousness of the observer cannot arise within the holographic world that the observer perceives. The perceiving consciousness of the observer must have its own source of consciousness that is beyond the holographic world it perceives. That source of perceiving consciousness is called the void, which is the underlying truth of what you are and what everyone is.

A peculiar aspect of living in a holographic world is the nature of personal self-identification. Perception always occurs in a subject-object relation, where the true nature of the subject is the observer, which is the perceiving consciousness present at

the central point of view of its own holographic world, while all the observer's objects of perception are forms of information that appear in its holographic world. The observer perceives both the forms of things, which are projected like images from its own holographic screen to its point of view at the center of its own holographic world, and also the flow of energy that animates those forms. Just as the observer's holographic screen arises as an event horizon due to its own acceleration, the animating flow of energy also arises from the observer's own accelerated motion. That accelerated motion gives rise to the expression of emotional energy that animates the form of the observer's own body. The observer's body is just a form of information that appears in its holographic world, but its body is animated by the flow of emotional energy that arises from the observer's own accelerated motion. The expression of the emotional energy that animates the form of its body relative to the form of other things that appear in its holographic world is what makes the observer emotionally identify itself with the form of its body, which is called personal self-identification.

As the observer perceives the flow of emotional energy that emotionally animates the form of its body relative to the form of all other things that appear in its holographic world, the observer feels emotionally self-limited to that personal form, which makes the observer emotionally identify itself with that personal form. When the observer emotionally identifies itself with its body and takes itself to be its body, it is as though its body is the subject in the subject-object relation of perception. The observer's body is taken to be the perceiving subject, and all other objects that appear in the observer's holographic world are perceived as objects of perception.

In reality, the observer itself is the subject, and its body is just another object of perception that appears in its holographic world among all the other objects of perception, but when the observer emotionally identifies itself with its body and takes itself to be its body, it is as though its body is the perceiving subject and everything else that appears in its holographic world is an object of perception. The only thing that makes the observer's body different from all other forms is that its body is the central form and is always emotionally animated relative to the other forms, which creates feelings of self-limitation and leads the observer to identify itself with its body. This strange state of affairs is called personal self-identification, which gives rise to the observer's experience of self and other. The observer's experience of self and other within its holographic world is only possible because the observer emotionally identifies itself with the emotionally animated form of its body that appears as the central form of information within its own holographic world.

This explanation for personal self-identification is not new. The basic idea for this explanation was given in the 1950's, 60's and 70's by a group of psychoanalysts, who called the explanation object relations theory. In the 1990's, the neuroscientist Antonio Damasio gave a similar explanation based on the findings of neuroscience. The linguist

Noam Chomsky understands the nature of language in a similar way. The basic idea is that perception always occurs in a subject-object relation, where the true nature of the subject is the observer and the object of perception is whatever the observer observes. When the observer emotionally identifies itself with its body, it is as though its body is the perceiving subject. The observer's body is always emotionally related to all other objects that appear in its world. The observer's perception of the emotional energy that animates the form of its body relative to all other forms is what makes the observer feel emotionally self-limited to that personal form and emotionally identify itself with its body. Personal self-identification can only happen as the observer perceives the flow of emotional energy that animates its body in relation to the form of all other things that appear in its world, which leads the observer to emotionally identify itself with the form of its body. With personal self-identification, there is a mistaken assumption that the source of the observer's consciousness is its character that appears in the holographic virtual reality world that it perceives, which is logically impossible.

To paraphrase Shakespeare, nothing is good or bad except thinking makes it so. Inherent in every thought is an emotion. All emotional expressions are body survival emotions that defend the survival of the body. When we express fear and desire, our bodies are moving toward those things that promote body survival or moving away from those things that threaten body survival. Even emotional attachments are body survival emotions, since the immature body of a child cannot fend for its own survival and must emotionally attach itself to the body of its caregiver in order to survive. Nature has designed the expression of our emotions along the lines of the pleasure-pain principle. Whatever promotes body survival feels good and whatever threatens body survival feels bad. In the sense of Darwinian evolution and the survival of the fittest body, natural selection has selected those emotions that best defend the survival of the body. When we judge things to be good or bad, we are only judging things in terms of the survival of our own body. When we construct a personal self-concept, we are conceptualizing ourselves in terms of our own body, and that self-conceptualization is emotional in nature, which inherently is all about defending the survival of our own body. That's how we judge things to be good or bad, which leads to feelings of emotional self-limitation to the emotionally animated form of the body and personal self-identification.

Darwinian evolution and natural selection have designed the expression of our emotions along the lines of the survival of the fittest body. When we're defending ourselves, we're really only defending the survival of our body or our body-based personal self-concept. The way the survival of the fittest body works is through the pleasure-pain principle that operates as we express fear and desire. Whatever promotes body survival as a desire is satisfied feels good, and rewards us with pleasure for defending body survival. Whatever threatens body survival as a fear is manifested feels bad, and punishes us with pain for failing to defend body survival. Even our emotional attachments to others

are self-defensive, since the immature body of a child cannot fend for its own survival and must emotionally attach itself to the body of its caregiver in order to survive.

All we're really doing as we express desire is to pursue pleasure as we move toward the things that make us feel good, and all we're really doing as we express fear is to avoid pain as we move away from the things that make us feel bad. When we express fear and desire and defend ourselves, we're under the sway of the pleasure-pain principle. We're able to express our own individual will in our own unique way because we can focus our attention and express our emotions in our own unique way, but when we feel compelled to express fear and desire in defense of the survival of our body as though our existence depends on it our individual will becomes hijacked by Darwinian evolution.

This system of reward and punishment is how nature has designed the expression of our emotions to force us to defend the survival of our body, which leads to feelings of emotional self-limitation to the emotionally animated form of the body and personal self-identification. Once we emotionally identify ourselves with the form of the body, we feel compelled to continue to express these self-defensive emotions as though our existence depends on it. When we conceptualize ourselves in terms of our own body, we're defending our body-based personal self-concept, which is the nature of the ego.

The important point to realize is that we have become conditioned to defend the survival of our own bodies as though our existence depends on it by Darwinian evolution, natural selection, and the survival of the fittest body. This conditioning doesn't occur over a single life-time, but over millions of life-times. That's how Darwinian evolution and natural selection have designed the expression of our emotions to defend the survival of our bodies. That's what the expression of fear and desire are all about. That's what the pleasure-pain principle is all about, which rewards us with pleasure when we defend body survival and punishes us with pain when we fail to defend body survival. That system of reward and punishment is how we have become conditioned.

When we focus the attention of our consciousness on appearing to live an embodied life in the world we perceive, we energize that embodied life with the expression of our emotions. We have the freedom to focus our attention in our own unique way, which leads to the expression of our emotions in our own unique way, which we call free will. The problem is that we are under the sway of Darwinian evolution and natural selection in the sense of the survival of the fittest body. We are under the sway of the pleasure-pain principle. When we express fear and desire, we are pursuing pleasure and avoiding pain. Whatever we do that promotes body survival as a desire is satisfied feels good, and rewards us for defending the survival of the body, while whatever we do that threatens body survival as a fear is manifested feels bad and punishes us for not defending the survival of the body. Our free will has become hijacked by Darwinian evolution to force us to focus the attention of our consciousness only on defending body

survival, as though our existence depends on it, as we express fear and desire in the pursuit of pleasure and the avoidance of pain, which creates feelings of emotional self-limitation to the body and leads us to emotionally identify ourselves with the body.

Once we emotionally identify ourselves with the emotionally animated form of the body, we're screwed. We feel compelled to continue to express fear and desire in the defense of body survival as though our existence depends on it. In reality, our existence does not depend on body survival, but the only way we can become aware of this fact of existence is if we become enlightened.

The only thing that is lacking in this explanation for personal self-identification is an understanding of the true nature of the observer. The holographic principle tells us the observer can be nothing more than the perceiving consciousness that arises at the central point of view of its own holographic world. That holographic world can only appear to come into existence when the observer enters into an accelerated frame of reference and the observer's event horizon arises that acts as its holographic screen when the horizon encodes qubits of information. Even the flow of emotional energy that animates the observer's body arises from its own accelerated motion.

Why should we accept the validity of the holographic principle? There are a number of puzzles in theoretical physics that physicists have not been able to solve, but all these puzzles have a natural solution in terms of the holographic principle once it's understood in terms of the consciousness of the observer. All the pieces of the scientific puzzle fit together perfectly in terms of the holographic principle, which is an argument for its essential correctness. All the mysteries of physics have a perfectly natural explanation once we accept that the consciousness of the observer is the most fundamental aspect of the explanation. It's hard to envision how all the pieces of the scientific puzzle could fit together so perfectly if the holographic principle was not fundamentally correct.

The other argument for the essential correctness of the holographic principle is that it's totally consistent with what enlightened beings tell us about the nature of reality and the world. Again, it's hard to envision how this could be possible if the holographic principle was not fundamentally correct, as long as it's understood in terms of the consciousness of the observer, which is the most fundamental aspect of the explanation. The fact that the holographic principle allows us to perfectly fit together all the pieces of the scientific puzzle and do so in a way that is totally consistent with what enlightened beings tell us about the nature of reality and the world cannot just be some random coincidence. That's why at some fairly deep level this explanation must be fundamentally correct.

Everything we can perceive is imaginary in the sense that everything perceivable is composed of images, like the animated images of a movie projected from a computer screen to the point of view of an observer. The projected images are reducible to bits of

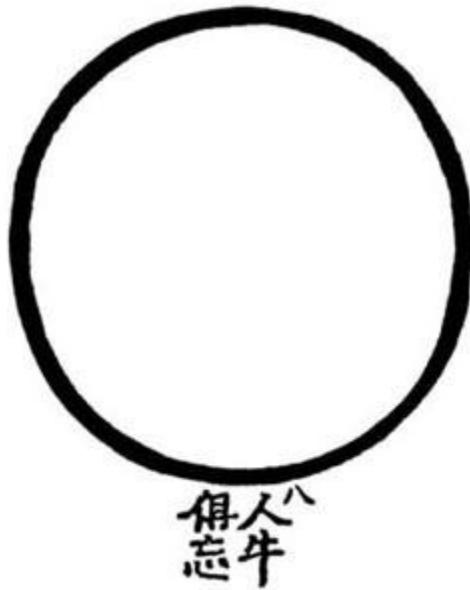
information encoded on the screen and are animated in the flow of energy. Every observer has its own point of view and its own screen, but when those screens overlap like a Venn diagram, they can share information, and so different observers can observe similar things, just from different points of view. This explains the nature of consensual reality shared by many different observers, each present at its own point of view.

An interesting phenomena is what's called disconnection syndromes. When information is not shared between different observers, an observer can observe the form of things without sharing those observations with other observers. This is the nature of personal imagination. An example of personal imagination is dreaming sleep. When we dream during sleep, all external sensory inputs are disconnected from the dreaming mind, and so dreams are a personal experience. Daydreams are another example. Thinking about ourselves in a personal way is another example. When we think about ourselves in a personal way, we take ourselves to be a person. When we emotionally identify ourselves with a personal form, we are disconnecting ourselves and feel disconnected.

When people take LSD and other hallucinogens, they often have an experience of what's called cosmic consciousness. Although this kind of experience can be very moving and can be transformative of consciousness, it is not an experience of the ultimate nature of reality, which is literally the absence of all experiences. LSD doesn't stimulate brain activity. LSD shuts down brain activity so that we can directly see what's out there without the interference of brain activity. Meditation does the same thing. Brain activity filters and distorts what we see by processing the information. Shutting down brain activity allows us to see the nature of things directly without that processing. There is an evolutionary body survival value in seeing things in a certain way, which is why our brains have evolved to see things that way. If we all had an experience of cosmic consciousness all the time, our bodies wouldn't survive for very long. This shutting down of brain activity with meditation or ingestion of LSD and other so-called hallucinogens has been demonstrated with MRI scans. The experience of cosmic consciousness is not really a hallucination, but a direct experience of seeing what's actually out there without the interference of evolution, which is only concerned with the survival of the body. In order for our bodies to survive, our brains have to block out the experience. With an experience of cosmic consciousness, we feel connected to all things.

At the Darwinian level of natural selection, it seems that the expression of emotions is predetermined, but there's an aspect of free will that arises from the freedom the observer has to undergo its accelerated motion in its own unique way that leads to the emotional animation of its body. The expression of free will arises from the way the observer can focus the attention of its consciousness, which it can focus on things in its own unique way and which allows its emotions to be expressed in its own unique way.

The observer is nothing more than a point of perceiving consciousness that arises at the central point of view of its own holographic world, and all the images of its holographic world are displayed on its own holographic screen that arises in a void of nothingness. The observer's holographic screen is the boundary of its own holographic world. That boundary is an event horizon that arises due to the observer's own accelerated motion, which limits its observations of things in space and becomes its holographic screen when its horizon encodes qubits of information. That holographic world only appears to come into existence due to the observer's accelerated motion. In reality, there is nothing inside that holographic world and nothing outside that holographic world. There only appears to be something inside the observer's holographic world due to the holographic projection of images from its own holographic screen to its point of view at the center of that holographic world.



Nothingness

The observer's accelerated motion is not really along an accelerating world-line that it follows within its space-time geometry. The observer's space-time geometry is only a perceivable aspect of the holographic world it perceives that only appears to come into existence when it enters into an accelerated frame of reference. The observer's accelerated motion is relative to nothingness, which is inherently motionless. The observer's event horizon is arising within that nothingness.

What exactly is this nothingness? Theoretical physics really has no explanation for the nature of this all-pervading nothingness, which physics simply calls the void or vacuum state. In terms of the holographic principle, this mysterious all-pervading nothingness is not a space-time geometry. The perceived space-time geometry of the observer's

holographic world is a holographic effect that can be reduced to qubits of information encoded on the observer's own holographic screen. Like everything else that it can perceive, the space-time geometry the observer perceives in its own holographic world is a holographic effect that only appears to come into existence due to the observer's own accelerated motion relative to that motionless nothingness.

Where does the observer come from? The answer is the observer comes from the same nothingness within which it undergoes accelerated motion. The observer's motion is relative to that motionless nothingness, which is also the source of the observer. If we think of the observer as a presence of individual consciousness at the central point of view of its own holographic world, then that nothingness can be understood as a void or empty space of pure undivided or undifferentiated consciousness. In some mysterious way, the individual consciousness of the observer, present at the central point of view of its own holographic world, is dividing or separating itself from its undivided source of pure undifferentiated consciousness, which is only understandable as a void of absolute nothingness. When the observer begins to move with accelerated motion relative to the motionless void, the observer's holographic world appears to come into existence. At the level of existence of the observer and its holographic world, the observer must come first. First the perceiving consciousness of the observer comes into existence, and then the holographic world the observer perceives appears to come into existence as the observer enters into an accelerated frame of reference. What exists prior to the existence of the observer and its holographic world? What exists when the observer's acceleration comes to an end and its holographic world disappears from existence?

What happens when that accelerated motion comes to an end? In relativity theory, the end of accelerated motion is called a freely falling frame of reference. In an ultimate freely falling frame of reference, the observer no longer has an event horizon, and therefore no longer has a holographic screen that displays images of its own holographic world. The concept of time only applies at the level of the space-time geometry of that holographic world. The observer's perception of that holographic world is like the perception of the projected and animated images of a computer-generated virtual reality. The observer's experience of time can only arise from the animation of that holographic world in the sense of the animation of the projected images of a virtual reality. In an ultimate state of free fall, the animation of the observer's holographic world comes to an end, which means the experience of time also comes to an end as the observer's own holographic world disappears from existence from its own point of view.

What happens to the observer when its experience of time comes to an end and its own holographic world disappears from existence from its own point of view? The answer is the individual consciousness of the observer returns to and dissolves back into its undivided source of pure undifferentiated consciousness, like a drop of water that dissolves into the ocean. This experience of the dissolution of individual consciousness

into undivided consciousness is called spiritual enlightenment. Individual being dissolves into undivided being. Enlightened beings describe the experience of becoming enlightened as a state of free fall in which they fall into the void and their individual consciousness dissolves back into its source of pure undivided consciousness.

Spiritual enlightenment is a timeless state of being. The experience of time only applies at the level of the observer perceiving the animation of its own holographic world as the images of that world are projected from its holographic screen to its point of view at the center of that world and are animated in the flow of energy through that world. The animation of the observer's holographic world only arises from its own accelerated motion relative to the motionless void, which is how its event horizon arises that acts as its holographic screen. The observer's own accelerated motion is the nature of the energy that animates its own holographic world.

When its accelerated motion comes to an end, the observer's experience of time also comes to an end. When its accelerated motion comes to an end, the observer no longer has an event horizon that acts as its holographic screen, its observations in space become unlimited, but it perceives nothing as its holographic world disappears from existence. When its accelerated motion comes to an end, the observer's individual consciousness, present at the central point of view of its own holographic world, dissolves back into its source of pure undivided consciousness, like a drop of water that dissolves back into the ocean. Individual being dissolves back into undivided being. This is exactly how enlightened beings describe the experience of spiritual enlightenment.

Spiritual enlightenment is only about discovering the true nature of our existence. At the level of being an observer of our own world, which is the level of individual existence, we can only know ourselves to be a presence of consciousness at the central point of view of that world. The only true thing we can ever know about ourselves at the level of being an observer of our own world is our own sense of being present as we perceive that world, which is the sense of I-Am-ness. That's where we have to focus our attention if we really want to awaken to the truth of what we really are.

We have to begin the awakening process by shifting the focus of our attention away from the world we perceive and refocusing our attention on our own sense of beingness. We do this because we see that the world we perceive is an illusion, like a virtual reality game that we're playing on a computer screen, and we see our character in that virtual reality world is an illusion of what we really are. When we withdraw our attention away from the world we perceive, we also withdraw our investment of emotional energy in that world that emotionally animates our character in that world. We do that because we see the whole thing is an illusion, and we lose interest in paying attention to an illusion. That's how we stop animating the illusion.

Ultimately, at the level of being a moving point of consciousness at the center of the world we perceive, when we withdraw all emotional energy away from that world, we stop moving. We not only stop emotionally animating our character, but ultimately, we stop animating the world that our character appears to live within. When we completely withdraw our attention away from that world, our accelerated motion relative to the motionless void comes to an end. We enter into an ultimate state of free fall, and the holographic world we perceive disappears from existence from our own point of view. If we remain aware of our own beingness while we fall into the void, our individual being dissolves back in the undivided being of the void, and we become aware of the true nature of our existence as that pure undivided, unlimited and timeless being.

Everything we perceive is imaginary. Even space and time are imaginary. The space and time we perceive, like everything else, is no more real than the projected and animated images of a holographic movie that's being displayed on a computer screen.

Enlightened beings tell us that the only thing that's really real is our own being, which really isn't a thing. It's the nothingness of consciousness. Even our individual being, in the sense of being a presence of consciousness at a point of view, is not really real. Only the unlimited being of the void is real. Enlightened beings also tell us that we can only discover the truth of what we really are if we look within. We can't discover that truth by looking outward, since everything we can perceive when we look outward is imaginary. We have to look within, into the emptiness of our own being.

When we look outward, whatever we perceive is limited because our perceptions are limited by an event horizon. That limitation of perception is what makes whatever we perceive imaginary, like the projected and animated images of a holographic movie that's being displayed on a screen. All limited existence is imaginary. Only unlimited being is real. Unlimited being is not perceivable because it is the source of perception. When we look within, into the inner emptiness of our own being, we're looking into that unlimited being, which we will never perceive because it's unperceivable. We can only be that unlimited being, but to be it, we have to become willing to be nothing. The secret of becoming nothing is doing nothing and knowing nothing. When we do nothing, the holographic movie we're perceiving is no longer animated or projected, and disappears from existence from our own point of view. That's when our limited being returns to and dissolves back into unlimited being. We become that infinite nothingness.

At the end of the day, there is no energy out there other than the energy that we are expressing due to our own motion as a point of consciousness relative to the motionless void. We can only become nothing if we become willing to do nothing, and that means we have to stop moving. That's the meaning of the gateless gate. We have to become motionless to pass through the gateless gate and to become the motionless void. In the process of becoming motionless, everything we perceive disappears from existence.

The void is not a part of the universe. The universe is created within the void. The void is like an empty space of potentiality. That potentiality is undifferentiated consciousness, which has the potential to create energy in the sense of dark energy, which is the accelerated expansion of space, as reflected by the cosmological constant of Einstein's field equations for gravity. That expansion of space always expands relative to the central point of view of an observer, which is the individual perceiving consciousness of its own holographic world. The holographic principle tells us the observer's holographic world is defined in terms of the information encoded on its own cosmic event horizon.

As the void expresses dark energy through the accelerated expansion of space, the individual consciousness of the observer is differentiated from the undifferentiated consciousness of the void, the observer's own cosmic horizon arises and encodes information for its own holographic world, and that world appears to come into existence. The appearance of that world is really no different than the projection of images from a computer screen to the point of view of the observer, just like in a computer-generated virtual reality, like the Matrix. The projected images can all be reduced to information encoded on the screen. The energy that animates the images arises from dark energy, which is also how the screen arises as a cosmic event horizon.

When we tap into the energy of the void, we are not really tapping into the energy of the universe, but what is beyond the universe. In reality, there really is no universe. There is no spoon as the Matrix says, because what we call the universe is only a holographic projection and animation of images from a screen to the point of view of an observer. Just as the point of view of the observer and the observer's own holographic screen both arise within the void, that projection and animation of images also occurs within the void. As observers present at our own individual points of view, we only share a consensual reality because our respective holographic screens overlap like a Venn diagram and share information, just like computer screens connected by the internet.

This is the best way to understand what's really going on here. When we tap into the dark energy of the void, we're tapping into the energy of the accelerated expansion of space, which is not actually occurring within the universe, but is what is giving rise to the appearance of the universe. In a very real sense, the expression of dark energy is what creates the quantum computer that encodes qubits of information on an event horizon that gives rise to the appearance of a computer-generated virtual reality. The expression of dark energy not only creates the quantum computer, but also energizes its operation.

What we call the laws of physics are like the operating system of the quantum computer. This can only appear to happen because space is expanding away from our own point of view in an accelerated way due to the expression of dark energy, which gives rise to our own cosmic event horizon that becomes our own holographic screen when the horizon encodes qubits of information. That's how our own quantum computer

is created, which taps into a computer network shared by many other observers due to the overlapping of their respective holographic screens and information sharing.

At the end of the day, the only part of it that's really real is our own consciousness. Ultimately, only the undifferentiated consciousness of the void really exists. That is what exists when everything else disappears from existence. When we totally withdraw our attention away from the world we perceive and withdraw our investment of energy in that world, we stop expressing energy and our own holographic world disappears from existence from our own point of view. There's nothing mysterious about this process. It happens each night when we fall into a deep sleep. The only tricky part of the process, in the sense of becoming spiritually enlightened, is remaining aware of our own being as our own holographic world disappears from existence. We have to become aware of the nothingness of our own being. We can only do that if we stop emotionally identifying ourselves with something we perceive in that world. We have to remain aware of our own being while we stop moving and the world we perceive disappears from existence.

Spiritual enlightenment is described as a return to the Source. It is the individual being and consciousness of the observer that is returning to its Source of pure undivided being and consciousness. The Source is not only the source of all the information and energy that characterize the observer's own world and the source of the laws of physics that govern events in that world, but also the source of the observer's own individual being and consciousness. The observer's individual being and consciousness is divided from the Source when the observer's holographic world appears to come into existence, which can only happen due to the observer's own accelerated motion. When that accelerated motion comes to an end in an ultimate state of free fall, the observer's individual consciousness must return to the undivided consciousness of its Source. That return is described as a dissolution, like a drop of water that dissolves into the ocean. The observer's return to the Source is the nature of spiritual enlightenment, which is the only way the observer can become free from the illusion of duality.

The nature of the illusion of duality is the experience of self and other that an observer can only experience in its own holographic world. The observer only has an experience of self and other when the observer emotionally identifies itself with the emotionally animated form of a person that appears in that holographic world due to the observer's perception of emotional feelings of self-limitation to that personal form. That personal form appears as the central form of the observer's body in its own holographic world. As that personal form is emotionally animated relative to all other forms that appear in its holographic world, the observer has the experience of self and other. This experience of self and other only becomes possible when the observer emotionally identifies itself with the form of its body, which is the central form that appears in its holographic world. When that personal self-identification comes to an end, the observer's experience of self and other also comes to an end, and the illusion of duality comes to an end.

The observer lives in a state of emotional bondage due to its state of emotional self-identification with the emotionally animated form of a person that appears in the holographic world it perceives. The observer falsely identifies itself with the central form of a person that appears in its own world due to its perception of emotional feelings of self-limitation to that personal form. When the observer returns to the Source and discovers the truth of its own existence as pure undivided, unlimited and formless being and consciousness, it becomes free from this state of emotional bondage. Only consciousness itself has real being, the sense of I-Am-ness, the sense of being present. Even that sense of I-Am-ness is not the ultimate state of existence that can only be described as pure undivided, unlimited, timeless being. The forms that appear in a holographic virtual reality are unreal, no more real than projected and animated images of a holographic world, and have no being. In the immortal words of the Bhagavad Gita: *The unreal has no being; the real never ceases to be.*

What is the nature of God? The world we perceive is built upon three fundamental ingredients: information, energy and consciousness. Perception of the world always occurs in a subject-object relation as an observer perceives its objects of perception. In physics, we call the perceiver the observer and call the objects of perception the observables. Modern physics tells us the observables are constructed out of nothing more than information and energy. Spirituality tells us that the observer is nothing more than a focal point of consciousness. The individual spirit is present as a presence of individual consciousness at the central point of view of the holographic world that it perceives. That holographic world only appears to come into existence due to its own accelerated motion as a point of consciousness relative to the motionless void, which is how all energy arises. That accelerated motion gives rise to its own event horizon that acts as its holographic screen that displays all images of its own holographic world as qubits of information are encoded on the horizon. The perception of time, as an aspect of the space-time geometry of that holographic world, can only arise from the animation of that world, which fundamentally arises from the observer's own accelerated motion.

The holographic world we perceive is just like a computer-generated virtual reality that consists of nothing more than forms of information encoded on a holographic screen that are projected like images from the screen to our point of view and are animated in the flow of energy that arises from our own accelerated motion. At the level of individual being, we can only know ourselves to be a point of consciousness at the center of our own holographic world. When we undergo the experience of spiritual enlightenment, we know that the source of our individual being is an ocean of pure undivided being. That ocean of pure undivided being can only be described as a void of absolute nothingness.

Spirituality tells us that what we call God is the Source of all information, energy and consciousness. Take away all that information, energy and consciousness, and what remains? The answer is nothing. What we call God is that ultimate nothingness, which

is the Source of everything, including our own individual consciousness. That absolute nothingness is only describable as a void of pure undifferentiated consciousness.

When one becomes spiritual enlightened, one sees things from the highest possible level of consciousness. One not only sees the nature of one's own world from the highest possible level of consciousness, like the projected and animated images of a virtual reality movie that's being displayed on a computer screen as those images are projected to the point of view of the observer, but one also sees the nature of the observer from the highest possible level, which is the perspective of the silence, darkness, deepness and emptiness of the void. One sees that one's world only appears to come into existence because of the motion of the observer's point of view relative to the motionless void. One sees that it is the observer's own motion that allows that world to become emotionally animated. One sees that it is the light of consciousness that is being focused onto that world through the observer's own point of view that allows that world to be illuminated and perceived as all the images of that world are projected from the observer's own screen to its own point of view. One sees this from the highest possible perspective of the silence, darkness, deepness and emptiness of the void.

Incredibly, this whole scenario is described in the first few lines of Genesis:

*In the beginning God created the heaven and the earth
And the earth was without form and void
And darkness was upon the face of the deep
And the Spirit of God moved upon the face of the waters
And God said 'Let there be light'; and there was light
And God saw the light, that it was good
And God divided the light from the darkness*

The face of the deep is a holographic screen and the Spirit of God moving over the face of the deep is the observer moving in an accelerated frame of reference, which is how the screen arises as an event horizon. The waters refer to the void as an ocean of undifferentiated consciousness, which is also called the deep. The ocean is motionless, and the observer is moving relative to the motionless ocean, which is how the surface of the ocean arises as an event horizon. The face of the deep is a surface of the ocean, which arises as an event horizon due to the motion of the observer relative to the motionless ocean. The observer as a moving point of consciousness must divide and separate itself from the motionless ocean of consciousness for this creation to occur.

The light Genesis refers to is the light of consciousness, which is the light by which the observer's world must be illuminated for that world to be perceived. The darkness refers to the void. To illuminate and perceive its own world, the observer must divide itself from its source, which is the void, which also divides the light of consciousness from the

darkness of the void. Genesis describes the observer as a point of consciousness that must move in relation to its own holographic screen for that screen to display all the projected and animated images of its world, which are called forms. A form is a form of information encoded on the screen that is projected to the central point of view of the observer like a projected image. Forms are images projected from the screen, which are illuminated as the light of consciousness is divided from the darkness. The forms are animated due to the energy that arises from the motion of the observer. The observer is creating the holographic screen with its own motion and is perceiving the forms as they're illuminated, animated and projected like images back to itself. That's how the observer's own holographic world is created. Why does this creation occur? For no other reason than it can and it feels good. Creation is the potentiality of the void.

This hierarchy of consciousness is represented by the symbolism of the All-Seeing-Eye:



All-Seeing-Eye

In terms of the symbolism of the All-Seeing-Eye, the central eye represents the observer, which is the perceiving consciousness of the individual spirit present at the central point of view of its own holographic world; the triangle represents the hierarchy of consciousness, with the source of consciousness, which is the undifferentiated consciousness of the void that is the one source of all individual spirits, at the apex or highest possible level of consciousness; the rays emanating from the central eye represent the light of consciousness that illuminates the observer's own holographic world; and the encompassing circle represents the boundary of that holographic world, which is the observer's event horizon or holographic screen. That boundary only arises due to the observer's own accelerated motion relative to the motionless void.

When one becomes spiritually enlightened, one no longer has the perspective of the individual consciousness of the observer at the central point of view of one's own world, but one's perspective ascends to the highest possible level of consciousness as the ascended perspective of the undifferentiated consciousness of the void. This highest possible level of consciousness is described in the Bhagavad Gita:

*In the knowledge of the Atman, which is a dark night to the ignorant,
The recollected mind is fully awake and aware.
The ignorant are awake in their sense life, which is darkness to the sage*

In the language of Advaita Vedanta, Atman refers to the presence of individual consciousness at the center of its own holographic world, which one becomes aware of from the ascended perspective of Brahman when one becomes enlightened. Brahman refers to the undifferentiated consciousness of the void. In other words, when one becomes enlightened, Brahman becomes aware of Atman.

This ascended perspective is also described in the Tao Te Ching:

*In the silence and the void
Standing alone and unchanging
Ever present and in motion
I do not know its name
Call it Tao*

Tao refers to the Atman, which is the presence of individual consciousness of the observer at the central point of view of its own holographic world that is in a state of perpetual motion relative to the motionless void. The silence and the void refers to the ascended perspective of Brahman.

The Tao Te Ching describes that this ascended perspective only becomes possible when one becomes desireless, which is the ultimate state of becoming motionless. As long as one continues to express desires through one's own continued motion relative to the motionless void, one will perceive the manifestations of one's own holographic world. Only when one becomes desireless and motionless can one see the mystery of one's own individual consciousness from the ascended perspective of the darkness and the deepness of the undivided Source of consciousness:

*Ever desireless, one can see the mystery
Ever desiring, one can see the manifestations
These two spring from the same source
This appears as darkness
Darkness within darkness
The gate to all mystery*

The Tao Te Ching describes the path of return:

Tao in the world is like a river flowing home to the sea

Returning is the motion of the Tao

*It returns to nothingness
It leads all things back to the great oneness*

Mu-mon describes the gateless gate paradox:

*The great path has no gates
Thousands of roads enter it
When one passes through this gateless gate
One walks the universe alone*

Passing through the gateless gate can only happen when one becomes motionless in an ultimate state of free fall. Enlightened beings describe this experience as falling into the void and the dissolution of their own individual consciousness into the undifferentiated consciousness of the void, like a drop of water that dissolves back into the ocean. After this dissolution experience, when one again perceives one's own holographic world, one knows that one is all-one. One is truly alone in one's own world.

Chuang Tzu describes that the enlightened man remains unknown, has no-self, and is nobody. When one becomes enlightened, one no longer perceives things from the dualistic perspective of self and other, but from the ascended perspective of one undivided consciousness. Perfect virtue is the virtue of becoming desireless and motionless, which produces nothing:

*The man of Tao remains unknown.
Perfect virtue produces nothing.
No-self is true self
And the greatest man is nobody*

The Buddha succinctly stated the nature of spiritual enlightenment:

Truly, I have attained nothing from total enlightenment

The Bhagavad Gita describes that the true nature of one's own reality and existence is as consciousness itself, and not the holographic world one perceives, which in reality is no more real than the projected and animated images of a virtual reality being displayed on a computer screen, which is unreal. Only consciousness itself has timeless being:

The unreal has no being: the real never ceases to be

*Never the spirit was born
The spirit shall cease to be never
Never was time it was not
End and beginning are dreams*

The Tao Te Ching describes that freedom from desire is the only path to enlightenment, which results in formless being:

*Without form there is no desire
Without desire there is tranquility
Therefore the sage seeks freedom from desire*

Being at-one with the Tao is eternal because there is no place for death to enter:

*Being at one with the Tao is eternal
And though the body dies, the Tao will never pass away
Because there is no place for death to enter*

Adapted from the teachings of Nisargadatta Maharaj:

*To be born means to create a world around yourself as the center.
You are that point of consciousness.
By your movement the world is ever created.
Stop moving and there will be no world.*

*Nothing perceivable is real. Only the onlooker is real, call him Self or Atman.
That which makes you think that you are a human is not human.
It is a dimensionless point of consciousness.*

All you can say about yourself is I Am.

At the root of my being is pure awareness, a speck of intense light. This speck, by its nature, radiates and creates pictures in space and events in time.

Even the sense I Am is not continuous, though it is a useful pointer; it shows where to seek, but not what to seek.

The Supreme reality is the void beyond being and non-being, beyond consciousness.

The Supreme state is the very center of consciousness and yet beyond consciousness.

The center of consciousness is That which cannot be given name and form, for it is without quality and beyond consciousness. It is a point in consciousness which is beyond consciousness. It is an opening in the mind, a void, through which the mind is flooded with light. It is but an opening for the light of consciousness to enter the mental space.

To the mind the light of consciousness appears as darkness. It can be known only through its reflections. The highest state of awareness is to be the point of light tracing the world.

Beyond the highest state of awareness is to be the source of light.

The person is never the subject. You can see a person, but you are not the person. You are always the Supreme, which appears at a given point of time and space as the witness, a bridge between the pure awareness of the Supreme and the manifold consciousness of the person.

The objects in the world are many, but the eye that sees them is one. The higher always appears as one to the lower and the lower as many to the higher.

In ignorance the seer becomes the seen and in wisdom he is the seeing.

When you refuse to open your eyes, what can you be shown?

You see yourself in the world, while I see the world in myself. To you, you get born and die, while to me, the world appears and disappears. It is your imagination that misleads you. There is a deep contradiction in your attitude which you do not see.

The source of consciousness cannot be an object in consciousness. To know the source is to be the source. When you realize that you are not the person, but the pure and calm witness, and that fearless awareness is your very being, you are the being.

Give attention to the witness to break the spell of the known, the illusion that only the perceivable world is real.

To become free your attention must be drawn to the witness.

I see only consciousness, and know everything to be but consciousness, as you know the pictures on the cinema screen to be but light.

It is enough to shift attention from the screen onto oneself to break the spell.

The world you can perceive is a very small world, entirely private. The world is but a reflection of imagination. Take it to be a dream and be done with it. What you call survival is but the survival of a dream. By forgetting who you are and imagining yourself a mortal creature you create so much trouble for yourself that you have to wake up, like from a bad dream.

Some go on a journey and come back, some never leave. What difference does it make since they travel in dreamlands, each wrapped up in his own dream. Only the waking up is important.

Once you have seen that you are dreaming, you shall wake up, but you do not see because you want the dream to continue. A day will come when you long for the ending of the dream. You become willing to pay any price. The price will be dispassion and detachment, the loss of interest in the dream.

What you call survival is but the survival of a dream.

Death is preferable to it. There is a chance of waking up.

As life before death is but imagination, so is life after death. The dream continues.

There is no such thing as a separate person. Everything is the cause of everything. Everything is as it is because the entire universe is as it is.

The universal trend towards balance, harmony and unity, at every moment, whatever is happening, is always for the best.

The law of balance rules supreme.

Every action creates a reaction, which balances and neutralizes the action. There is a continuous canceling out, and in the end it is as if nothing happened.

All appearance and disappearance presupposes a change against a changeless background.

There must be a source from which all flows, a foundation on which all stands.

Consciousness itself is the source of everything.

*At the root of all creation lies desire.
The projecting power is imagination prompted by desire.
Desire and imagination foster and reinforce each other.*

Desire for embodied existence is the root-cause of trouble.

*All that is, lives and moves and has its being in consciousness.
I Am in and beyond that consciousness.
I Am in it as the witness. I Am beyond it as Being.*

*Before the mind happens, I Am.
Before all beginnings, after all endings, I Am.
All has its being in the I Am that shines in every living being.*

*The dreamer is one.
I Am beyond all dreams.
I Am the light in which all dreams appear and disappear.*

You must realize yourself as the silent witness of all that happens. Your consciousness raised to a higher dimension, from which you see everything much clearer.

Awareness comes as if from a higher dimension.

The witness that stands aloof is the watchtower of the real, the point at which awareness, inherent in the unmanifested, contacts the manifested.

Find the immutable center where all movement takes birth. Be the axis at the center, not whirling at the periphery. Nothing stops you except fear. You are afraid of impersonal being.

If you desire nothing, then you are as good as dead, or you are the Supreme.

Self-identifications are patently false and the cause of bondage.

*You create bondage when you desire and fear and identify yourself with your feelings.
You identify yourself with your desires and become their slave.
Your bonds are self-created as chains of attachment.*

Your attachment is your bondage.

*There is trouble only when you cling to something.
It is your desire to hold onto it that creates the problem. Let go.
When you hold onto nothing, no trouble arises.*

Cut the knot of self-identification.

*Freedom means letting go.
Spiritual maturity lies in the readiness to let go of everything.*

Liberation is never of the person, it is always from the person.

One becomes self-conscious only when caught in the conflict between pleasure and pain, which demands choice and decision. The personal self by its very nature is constantly pursuing pleasure and avoiding pain. The ending of this pattern is the ending of the self. The ending of the self with its desires and fears enables you to return to your real nature.

As long as you are locked up with your mind and ego, you cannot go further. Were you really at war with your ego, you would question its reality. You don't question because you are not really interested. You are moved by the pleasure-pain principle, fear and desire, which is your ego. You are going along with your ego, not fighting against it. You are not even aware how totally swayed you are by personal considerations. Be in revolt against your ego, for the ego narrows and distorts. It is the worst of all tyrants. It dominates you completely.

As long as you take yourself to be a person, a body and a mind, separate from the stream of life, having a will of its own, pursuing its own aims, you are living merely on the surface and whatever you do will be short-lived and of little value, mere straw to feed the flames of vanity.

Ego is in resistance until the very end.

In the end you get fed up with the waste of time and energy.

When you refuse to play the game, you are out of it.

The world is but a mistaken view of reality, unreal to its core.

The world is but a show, glittering and empty. It is there as long as I want to see it and take part in it. When I cease caring, it dissolves. It has no cause and serves no purpose. It appears exactly as it looks, but there is no depth in it nor meaning.

As long as you believe that only the perceivable world is real you remain its slave.

Once you realize that there is nothing in this world which you can call your own, you look at it from the outside as you look at a play on the stage or a picture on the screen. To know the picture as the play of light on the screen gives freedom from the idea that the picture is real. In reality I only look. Whatever is done is done on the stage.

Joy and sorrow, life and death, they are real to the man in bondage.

To me they are all in the show, as unreal as the show itself.

To the Self the world is but a passing show. The world just sprouts into being out of nothing and returns to nothing. As long as the Self is merely aware, there is no problem.

You can stop it any moment by switching off attention.

You make it possible by giving it attention.

My life is a succession of events just like yours. Only I Am detached and see the passing show as a passing show, while you stick to things and move along with them.

There is no such thing as an expression of reality. Neither action nor feeling nor thought express reality. I know that life itself is only a make-believe.

I just watch events happening, knowing them to be unreal.

Externalization is the first step in liberation. Step away and look. Separate yourself and watch. The physical events will go on happening, but in themselves they have no importance.

Seeing that you are not the person you take yourself to be, step out and look from the outside.

It is disinterestedness that liberates.

If you lose interest, you break the emotional link that perpetuates the bondage.

The unreal appears to be real only because you believe in it. You impart reality to it by taking it to be real. Doubt it and it ceases.

If you seek reality you must set yourself free of all patterns of thinking and feeling. Even the idea of being human should be discarded. Abandon all self-identifications, abandon all self-concern, abandon every desire. Stop thinking of achievement of any kind. You are complete here and now. You need absolutely nothing.

Nothing stands in the way of your liberation here and now except for your being more interested in other things. You must see through them as mere mental errors.

As long as you are interested in your present way of living, you will shirk from the final leap into the unknown.

Moments when one feels empty and estranged are desirable moments, for it means the soul has cast its moorings and is sailing for distant places.

The search for reality is the most dangerous of all undertakings for it will destroy the world in which you live.

As long as there is the sense of identity with the body, frustration is inevitable. It is because of your illusion that you are the doer.

As long as you have the idea of influencing events, liberation is not for you. The very notion of doership, of being a cause, is bondage.

There is no such thing as free will. Will is bondage. You identify yourself with your desires and become their slave.

To imagine that you are in control is the aberration of the body-mind. There is a universal power that is in control. The illusion of personal control is in the mind only. Stand without desire and fear, relinquishing all control. This is the shortest way to reality.

*Some unknown power acts and you imagine that you are acting.
You are merely watching what happens.*

*You must begin by being the dispassionate observer.
Then only will you realize your full being.*

*Only in complete self-negation is there a chance to discover our real being.
The urge must come from within as a wave of detachment.*

The way to truth lies through the destruction of the false. To destroy the false you must question your most inveterate beliefs.

Of these the idea that you are the body is the worst.

Destroy the wall that separates; the I-am-the-body idea.

*Investigate your world, apply your mind to it, examine it critically.
Scrutinize every idea about it.
Everything must be scrutinized and the unnecessary ruthlessly destroyed.
There cannot be too much destruction.
For in reality nothing is of value.*

Everything is a play of ideas. In the state free from ideation nothing is perceived. The root idea is I Am. It shatters the state of pure consciousness and is followed by the innumerable sensations and perceptions, feelings and ideas which in their totality constitute God's world. The I Am remains as the witness, but it is by the will of God that everything happens.

We have enclosed ourselves in a cloud of personal desires and fears, images and thoughts, ideas and concepts.

You can only start from where you are. You are here and now. You cannot get out of here and now. You are aware of thinking, feeling, doing. You are not aware of your being. You can only be aware of your being here and now.

Wherever you go, at all times, you carry with you the sense of being present and aware, here and now. It means that you are independent of space and time. Space and time are in you, not you in them. It is only your self-identification with the body, limited in space and time, that gives you a sense of limitation. In reality, you are limitless.

Struggle to find out what you are in reality. To know what you are you must first investigate and know what you are not. Discover all that you are not: body, feelings, thoughts, time, space, this or that. Nothing, concrete or abstract, which you perceive can be you. The very act of perceiving shows that you are not what you perceive. The clearer you understand that on the level of mind you can be described in negative terms only the quicker will you come to the end of your search and realize that you are the limitless being.

*All limited existence is imaginary.
Even space and time are imaginary.
Pure being, filling all and beyond all, is not limited.
All limitation is imaginary.
Only the unlimited is real.*

The witness is both real and unreal, the last remnant of illusion, the first touch of the real. The moment you say I Am, the entire universe comes into being.

Your world is created with the emergence of the I Am idea. In your world everything has a beginning and an end. Timeless being is entirely in the now.

Once you are well established in the now, you have nowhere else to go.

*From my point of view everything happens by itself, quite spontaneously.
I do nothing. I just see them happen.*

What begins and ends is mere appearance. The world can be said to appear but not to be. It is your memory that makes you think that the world continues. Memory creates the illusion of continuity. I see the world as it is, a momentary appearance in consciousness.

You are the source of reality, a dimensionless center of perception that imparts reality to whatever it perceives, a pure witness that watches what is going on and remains unaffected.

It is only imagination and self-identification with the imagined that encloses and converts the inner watcher into a person.

Feelings, thoughts and actions race before the watcher in endless succession.

The person is merely the result of a misunderstanding.

In reality there is no such thing.

In reality there is no person, only the watcher identifying itself.

I am like a cinema screen, clear and empty.

The pictures pass over it and disappear, leaving it as clear and empty as before.

The screen intercepts and reflects the pictures. These are lumps of destiny, but not my destiny; the destinies of the people on the screen.

The character will become a person when he begins to shape his life instead of accepting it as it comes-identifying himself with it.

All this I perceive quite clearly, but I am not in it.

I feel myself as floating over it, aloof and detached.

There is also the awareness of it all and a sense of immense distance as if the body and the mind and all that happens to them were somewhere far out on the horizon.

To myself I Am neither perceivable nor conceivable.

There is nothing I can point out and say "this I am".

Delve deeply into the sense I Am and you will discover that the perceiving center is universal. All that happens in the universe happens to you, the silent witness. Whatever is done is done by you, the universal and inexhaustible energy.

There can be no universe without the witness, no witness without the universe.

Be aware of being conscious and seek the source of consciousness.

In pure being consciousness arises.

In consciousness the world appears and disappears.

Consciousness is on contact, a reflection against a surface, a state of duality.

The center is a point of void and the witness a point of pure awareness; they know themselves to be as nothing.

But the void is full to the brim.

It is the eternal potential as consciousness is the eternal actual

The totality of all mental projections is the Great Illusion.

When I look beyond the mind I see the witness.

Beyond the witness is infinite emptiness and silence.

As long as you are engrossed in the world, you cannot know yourself. To know yourself, turn your attention away from the world and turn within.

Turn within. I Am you know. Be with it all the time, until you revert to it spontaneously. There is no simpler and easier way.

Know yourself as you are. Stay with the sense I Am.

Everyone sees the world through the idea one has of oneself. As you think your Self to be, so you think your world to be. If you imagine your Self as separate from the world, the world will appear as separate from you and you will experience desire and fear. Your own creative power projects on it a picture and all your questions refer to the picture.

Your questions are about a non-existing person. Realize that whatever you think yourself to be is just a stream of events; that whatever happens, comes and goes, is not real; that you alone are, the changeless among the changeful. Separate the observed from the observer and abandon false identifications. Be a fully awakened witness of the field of consciousness.

Whatever you perceive is not you. It is there in the field of consciousness, but you are not the field and its contents.

To realize that is the end of all seeking. You come to it when you see all you think yourself to be as mere imagination and stand aloof in pure awareness. It is not difficult but detachment is needed. It is the clinging to the false that makes the truth so difficult to see. Discard what is not your own until nothing is left which you can disown. You will find that what is left is nothing.

In reality nothing happens. Nothing happens to space itself. In pure consciousness nothing ever happens. Onto the screen of the mind destiny forever projects its pictures, and thus illusion constantly renews itself. The pictures come and go as light intercepted by ignorance. See the light and disregard the pictures.

You can spend an eternity looking elsewhere for truth, all in vain. You must begin in yourself, with yourself. Realize that your world is only a reflection of yourself. All you need is to stop searching outside what can only be found within.

Dive deep into yourself and find the source from where all meaning flows. It is not the superficial mind that can give meaning. You are not what you think yourself to be. You cannot think yourself to be what you have not experienced. You are the perceiving point, the nondimensional source of all dimensions, which is as nothing and yet the source of everything. You can know what you are not, but you cannot know your real being. You can only be what you are.

In reality there is only the source, dark in itself, but making everything shine with the light of consciousness.

*Unperceived, it causes perception. Being nothing it gives birth to all being.
It is the immovable background of motion.*

*The Supreme state neither comes nor goes. It is.
It is a timeless state, ever present.*

In the timeless state there is no Self, no I Am, no witness.

*Awareness is beyond all.
Awareness is primordial; it is the original state.
Awareness is undivided, aware of itself.*

Death gives freedom. To be free in the world you must die to the world.

I Am dead already. Physical death will make no difference. I Am timeless being.

The realized man is beyond life and death. Life and death appears to him but a way of expressing movement in the immovable, change in the changeless. He has died before his death and he saw that there was nothing to be afraid of. The moment you know your real being you are afraid of nothing.

*Do nothing. There is nothing to do. Just be.
To be, you must be nobody.
You make yourself mortal by taking yourself to be a body.
That which is alive in you is immortal.*

*Reality is essentially alone.
To know that nothing is, is true knowledge.*

*For the path of return naughting oneself is necessary.
My stand I take where nothing is.
To the mind it is all darkness and silence.
It is deep and dark, mystery beyond mystery.
It is, while all else merely happens.
It is like a bottomless well, whatever falls into it disappears.*

First we must know ourselves as witnesses only, dimensionless and timeless centers of observation, and then realize that immense ocean of pure awareness.

*On the surface of the ocean of consciousness, names and forms are transitory waves.
Only consciousness has real being, not its transformations.*

As long as you are enmeshed in the tribulations of a particular personality, you can see nothing beyond it. Ultimately you will come to see that you are neither the particular nor the universal. You are beyond both.

The witness-consciousness is the reflection of the real in the mind. The real is beyond.

The witness is the door through which you pass beyond.

*The door that locks you in is also the door that lets you out.
I Am is the door. Stay with it until it opens. It is always open, but you are not at it.*

*Between desires and freedom from all desires is an abyss which must be crossed.
Cross the door and go beyond.*

Go back to that state of pure being, the I Am in its purity before it became contaminated with false self-identifications. Abandon them all. Focus the mind on pure being. In it all disappears: myself, the life I live, the world around me. Only peace and unfathomable silence remains.

The experience of the inner void is an explosion into reality.

Realization is in discovering the source and abiding there.

*By itself nothing has existence
Your true home is in nothingness.*

The timeless and spaceless reality is undifferentiated, the infinite potentiality, the source. It cannot be perceived, but can be experienced as ever witnessing the witness, perceiving the perceiver, the origin and end of all manifestation, the root of time and space.

Realization is sudden and irreversible. You rotate into a new dimension.

There is no journey to Supreme reality. One is undeceived only.

You see everything as it is. The world of illusions is left behind.

-Nisargadatta Maharaj

Adapted from the teachings of Osho:

We call Buddha the awakened one. This awakening is really the cessation of inner dreaming. When there is no dreaming you become pure space. This non-dreaming consciousness is what is known as enlightenment.

If you go on inquiring 'Who am I?' you are bound to come to the conclusion that you are not. This is an inquiry to dissolve. There is no answer. Only the question will dissolve. There will be no one to ask 'Who am I?' And then you know.

When the 'I' is not, the real 'I' opens. When the ego is not, you are for the first time encountering your being. That being is void.

You fall into an abyss, and the abyss is bottomless: you go on falling. That is why Buddha has called this nothingness emptiness. There is no end to it. Once you know it, you also have become endless. At this point Being is revealed: then you know who you are, what is your real being, what is your authentic existence.

*The inner emptiness itself is the mystery.
When the inner space is there, you are not.
When you dissolve, the inner emptiness is there.
When you are not, the mystery will be revealed.
You will not be a witness to the mystery, you will be the mystery.*

-Osho



Other testimonies:

*Life is but a walking shadow, a poor player
That struts and frets his hour upon the stage
And then is heard no more. It is a tale
Told by an idiot, full of sound and fury,
Signifying nothing*

*We are such stuff
As dreams are made on, and our little life
Is rounded with a sleep*

*To die, to sleep
To sleep: perchance to dream: ay, there's the rub;
For in that sleep of death what dreams may come
When we have shuffled off this mortal coil.*

*To be, or not to be, that is the question
-Shakespeare*

We are not human beings having a spiritual experience; we are spiritual beings having a human experience.

-Pierre Teilhard de Chardin

He must dare to leap into the Origin so as to live by the Truth and in the Truth, like one who has become one with it. He must become a pupil again, a beginner; conquer the last and steepest stretch of the way, undergo new transformation. If he survives its perils then is his destiny fulfilled; face to face he beholds the unbroken Truth, the Truth beyond all truths, the formless Origin of origins, the Void which is the All; is absorbed into it and from it emerges reborn.

-Eugen Herrigel

I discovered the secret of the sea in meditation upon a dewdrop

-Kahlil Gibran

"I cannot live with myself any longer". This was the thought that kept repeating itself in my mind. Then suddenly I became aware of what a peculiar thought it was. Am I one or two? If I cannot live with myself, there must be two of me: the 'I' and the 'self' that 'I' cannot live with. Maybe, I thought, only one of them is real.

I was so stunned by this strange realization that my mind stopped. I was fully conscious, but there were no more thoughts. Then I felt drawn into what seemed like a vortex of energy. It was a slow movement at first and then accelerated. I was gripped by an intense fear, and my body started to shake. I heard the words 'resist nothing', as if spoken inside my chest. I could feel myself being sucked into a void. It felt as if the void was inside myself rather than outside. Suddenly, there was no more fear, and I let myself fall into that void.

I knew that something profoundly significant had happened to me. I understood that the intense pressure of suffering that night must have forced my consciousness to withdraw from its identification with the unhappy and deeply fearful self, which is ultimately a fiction of the mind. This withdrawal must have been so complete that this false, suffering self immediately collapsed, just as if a plug had been pulled out of an inflatable toy. What was left was my true nature as the ever-present 'I am': consciousness in its pure state prior to identification with form. Later I also learned to go into that inner timeless and deathless realm that I had originally perceived as a void and remain fully conscious.

-Eckhart Tolle

When the joy of my own emptiness began to wane I decided to rejuvenate it by spending some solitary time gazing into my empty self. Though the center of self was gone, I was sure the remaining emptiness, the silence and joy, was God Himself. Thus on one occasion, with full hedonistic deliberation, I settled myself down and turned my gaze inward. Almost immediately the empty space began to expand, and expanded so rapidly it seemed to explode; then, in the pit of my stomach I had the feeling of falling a hundred floors in a non-stop elevator, and in this fall every sense of life was drained from me. The moment of landing I knew: When there is no personal self, there is also no personal God. I saw clearly how the two go together-and where they went, I have never found out.

-Bernadette Roberts

Now she's in freefall. At the precise moment of impact, the planet will disappear, and nothing will take its place. Her freefall won't end, but it will no longer feel like falling because there will no longer be anything to reference it against. This is where dual awareness ends. From then on she will live in boundless awareness, never again able to differentiate between self and non-self. Abiding non-dual awareness.

Truth is one, is non-dual, is infinite, is one-without-other. Truth is dissolution, no-self, unity. There's nothing to say about it, nothing to feel about it, nothing to know about it. You are true or you're a lie, as in ego-bound, as in dual, as in asleep.

The truth of the situation is that eventually, there's nothing. Infinity. Eternity. The void.

Like a child flicking a switch that turns the world off like a light. What can you say when the thing that ends isn't within a context, but context itself?

There is the place where all the paradoxes disappear and where no questions remain, but there's no point trying to describe this place.

That's where I am now. Empty space is my reality. The void. No-self. I abide in non-dual, non-relative awareness.

Come see for yourself.

-Jed McKenna

The I Am in movement creates the world; the I Am at peace becomes the Absolute.

-Nisargadatta Maharaj



Do not try to bend the spoon. That is impossible. Only try to realize the truth.

What truth?

There is no spoon.

Then you'll see it is not the spoon that bends, but only yourself.

Excerpts from Jed McKenna:

Battling past the ego to get to the truth has been at the heart of countless spiritual teachings. Ego-death as a means to no-self is what this journey is all about. Anyone headed for truth is going to get there over ego's dead body or not at all.

Spiritual enlightenment is self-defeating. It is a battle we wage upon ourselves. Truth is a uniquely challenging pursuit because the very thing that wants it is the only thing in the way of it. It's a battle we must die to win. The great enemy is the very self that wages the war. When self is destroyed, who wins?

Enlightenment is untruth-unrealization, and self is an untruth. Despite the apparent paradox, being enlightened means there's no one left to be enlightened.

Spiritual awakening is about discovering what's true. Anything that's not about getting to the truth must be discarded. Truth isn't about knowing things. It's about unknowing. It's not about becoming true, it's about unbecoming false so that all that's left is truth.

The process of awakening looks like it's about destroying ego, but that's not really accurate. You never completely rid yourself of ego-the false self-as long as you're alive, and it's not important that you do. What matters is the emotional tethers that anchor us to the dreamstate; that hold us in place and make us feel that we're a part of something real. We send out energetic tendrils from the nexus of ego like roots to attach ourselves to the dreamstate, and to detach from it we must sever them. The energy of an emotion is our life force, and the amount of life force determines the power of the emotion. Withdraw energy from an emotion and what's left? A sterile thought. An empty husk. In this sense, freeing ourselves from attachment is indeed the process of awakening, but such attachments aren't what we have, they're what we are.

All attachments to the dreamstate are made of energy. That energy is called emotion.

All emotions, positive and negative, are attachments. Humans are emotion-based creatures and all emotions derive their energy from one core emotion; fear. Fear cannot be confronted or slain because it is fear of nothing, of no-self. The desire to slay fear is itself a fear-based emotion. Fear can only be surrendered to; the thing feared, entered.

It is the emotional energy of fear that erects and maintains the egoic shell.

We are madly, desperately, insanely afraid of the truth, and it is that fear that walls us off from our unbounded nature.

Fear of what? Fear of no-self. The nameless, faceless dread of non-being. Not just fear of death, which anyone can deny or explain away, but fear of nothingness, which no fairytale can fix.

All belief systems are just the stories we create in order to deal with the void. Ego abhors a vacuum, so everybody's scrambling to create the illusion of something where there's nothing. Belief systems are simply the devices we use to explain away the unthinkable horror of no-self.

We erect ego to compensate for the lack of direct self-knowledge. There is no true self to perceive, there is only false self and no-self. One looks for true self and finds nothing. It's the dread of that nothingness that keeps one's attention outwardly fixed.

The wall separating the awakened and unawakened states is a force field empowered by the emotional energy of fear. Only ego death defeats the barrier because the barrier is ego itself.

The enlightened view life as a dream, so how could they possibly differentiate between right and wrong or good and evil? How can one turn of events be better or worse than another? Of what real importance is anything in a dream? You wake up and the dream is gone as if it never was. All the characters and events that seemed so real have simply vanished. The enlightened may walk and talk in the dream world, but they don't mistake the dream for reality. Members of movie audiences don't leap out of their seats to save characters in the film. If they did, they would be hauled off to the nearest mental health facility and treated for a delusional disorder.

The deepest truth of any person is no-person. You don't wake up by perfecting your dream character; you wake up by breaking free of it. There's no truth to the ego so no degree of mastery over it results in anything true. Putting attention on the ego merely reinforces it.

You, the reader, are at the exact center of the universe, your universe. It's all yours, it's all about you, and you are all alone in it. Anything that tells you otherwise is a belief, and no belief is true.

The Gita is the dialogue between the false self and the true state; the bridging of the paradigm gap. The prize to be won in this battle is not wealth or fame or power, but the transition from untrue to true, from dream to awake, from delusion to reality.

Truth is beyond opposites. Duality is a dream. The truth contains no element of the false and the false contains no truth. There is only truth and illusion, and within illusion there is only fear and denial. Fear of truth is the foundation upon which Maya's Palace of Delusion is erected. She has no power but that we give her. Denial of fear is the motivation underlying all activities in which humans engage. This is Vanity in the biblical sense: I have seen all the works that are done under the sun, and behold, all is vanity and a chasing after wind.

The only sin is ignorance. Ignorance of what? It's not the kind where you don't know something. It's the kind where you do know something that's not true. The false self is ignorance. Ego. The personality. Everything you think of as you.

Ignorance isn't an aspect of self; it's the essence of self. It's not nothing where there should be something, it's the delicate weaving of something from nothing. That nothingness woven into somethingness is what you call reality. The part you call you is ego.

Truth is, non-truth isn't. The false is purely an apparition; it exists only in the eye of the beholder. There is no true self and the false self is irrelevant, a character in a dream.

Truth doesn't need to be sought because it isn't lost. It's not at the end of some path waiting to be discovered. It's not the result of practice or growth or learning. Truth is everywhere at all times, never absent, never distant. Truth isn't the tricky thing, it's the simplest thing there is. Truth is that which cannot be simplified further.

The fact is that no amount or combination of knowledge can bring about truth realization. It's not an emotion or a state of consciousness.

Truth realization isn't a state of consciousness.

It is not possible to knowledgeably choose or want spiritual enlightenment. To desire it is to misunderstand it. Ego cannot desire egolessness. One does not undergo the process of awakening out of love for the true but out of hatred for the false; a hatred so intense that it burns everything and spares nothing.

If you want to be more true, then the way to do that is by becoming less false. Go inside yourself with the spotlight of discrimination and illuminate it. Illumination destroys it. Lies disappear when you really look at them because they never had real substance, they were only imagined.

To know the lie is to hate it; to see it is to slay it.

Enlightenment is about truth. It's not about becoming a better or happier person. It's not about personal growth or spiritual evolution. There is no higher stakes game in this world or any other, in this dimension or any other. The price of truth is everything, but no one knows what everything means until they're paying it. In the simplest terms, enlightenment is impersonal, whereas what is commonly peddled as enlightenment is personal in the extreme.

People completely in character. No inkling that things may be other than they seem. Still shackled in Plato's cave. The degree to which one is unaware of one's fraudulent nature might be considered the degree to which one is the grip of Maya, delusion, the dreamstate. Increased awakesness would naturally translate into greater dissatisfaction with fraudulence, falseness and delusion, and a corresponding desire to know what is real. Extend the line forward and it results in a complete break with ego and an awakening into one's true nature.

There's nothing wrong with being a dream character, unless it's your goal to wake up, in which case the dream character must be ruthlessly annihilated. If your desire is to become the best dang person you can be, then rejoice, you're in the right place, the dream state, the dualistic universe. If your interest is to cut the crap and figure out what is true then you're in the wrong place and you've got a very messy fight ahead and there's no point in pretending otherwise.

The end of illusion is the end of you.

Success in realizing one's true nature is absolutely assured because it's one's true nature. The greatest wonder isn't that you'll make it back, it's that you made it away. Struggling to achieve truth is as preposterous as struggling to achieve death. Neither death nor gravity, nor tomorrow's sunrise is as certain as the fact that everyone will end up fully "enlightened", regardless of the "path" they take.

Everything is in a constant process of returning to its true state. To really be 'off the path' would mean to be outside of consciousness. There is no such place.

You have to have a clear desire, a strong and specific intent. If you don't know where you're going then there's no basis for judging one direction better or worse than another.

I want to stop being a lie. I want to stop not knowing who and what and where I am. I want to stop being confused and unclear. I want to stop pretending lies are true and that I understand things when I don't. I want to stop playing make-believe and find out what's real. I want to know what's true. I will give anything to do it. I would rather be dead than continue a life of ignorance and self-deceit.

The worms won't care how your epitaph reads and the truth of you will outlive time itself.

We need the boundaries ego provides. They're a necessary part of life in the amusement park. Self is the complex, shifting set of dimensions that give us shape and form and which distinguish us from other shapes and forms. The amusement park isn't 'come as you are', it's a costume party. Who you come as doesn't matter, only that you come as someone.

Spiritual enlightenment is the state in which the self is free of all delusion, including self itself. The process of becoming enlightened is a deliberate act of self-annihilation. It is the false self that does the killing and the false self that dies; a suicide in all but the physical sense. Because there is no true self to fill the vacancy created by the passing of the false self, no self remains.

Before enlightenment I believed my ego was me, then enlightenment comes along and no more ego, only the underlying reality. Now it's after enlightenment and this ego might be slightly uncomfortable or ill-fitting at times, but it's all I've got. The idea that your ego is destroyed in the process of becoming enlightened is roughly correct, but it's not complete. Before enlightenment, you're a human being in the world, just like everyone you see. During enlightenment you realize the human being you thought you were is just a character in a play, and that the world you thought you were in is just a stage, so you go through a process of radical deconstruction of your character to see what's left when it's gone. The result isn't enlightened-self or true-self, it's no-self. When it's all over it's time to be a human being in the world again, and that means slipping back into costume and getting back on stage. Now you're actually in the audience, watching the drama. I could never mistake the play for reality again, or my character for my true state. Happily, I never know what my character is going to do or say until he does it or says it, so the whole thing stays interesting.

Even now it takes a conscious effort to maintain my false self, my dream character, to animate it, to keep it running. And this trajectory I'm on will take me as close to nonexistence as anyone can get and still have a body. In other words, I will continue to channel progressively less and less energy into my dreamstate being, my teaching will reduce down to its most refined and least tolerant form, my interest will withdraw from the world, and I will become as minimal as a person can be.

No one can say 'I am enlightened' because there is no 'I' to it. There is no such thing as an enlightened person. My personality, my ego, what appears to be me, is just an afterimage-a physical apparition based on residual energy patterns.

Ego doesn't need to be killed because it was never really alive. You don't have to destroy your false self because it's not real, which is really the whole point. It's just a character we play. What needs to be killed is that part of us that identifies with the character. Once that's done-really done, and it can take years-then you can wear the costume and play the character as it suits you, in the character but not of the character.

*There is no such thing as objective reality. Nothing can be shown to exist.
Nothing but the subjective I am is true.*

*Understanding consensual reality as a dreamstate is unbreakable. Life is but a dream.
Reality has no basis in reality.*

*The difference between us isn't that I'm enlightened and you're not. The difference between us is that I know it and you don't. I possess selfless awareness and you don't.
To me you're a minor character in my dramatic dreamscape. A semi-coherent energetic pattern making a brief appearance on the stage of my awareness.*

You're not struggling to climb from hell into heaven, you're just having an in-the-body experience. It's not evil, it's just life, and when it's over, you die, easy as falling off a log.

*We live in fear of death. We don't want to think about it, we don't want to look at it, we don't want to acknowledge that it exists. No matter how we might try to deny it, death is the fact of life. We can turn away from it, but we can't push it away. It is always with us.
Death is what's left when everything else is gone.*

Death awareness is a vehicle out of the state of death denial in which we reside.

*This isn't about death in the abstract; it's about death in the most personal, intimate sense. Death is the meaning in the dream, the dreamstate shadow of no-self.
We have taken death out of life and that allows us to live unconsciously. Death never left, we just turned away from it. If we wish to awaken-and that's a mighty big if-then we must welcome death back into our lives.*

Death awareness is the universal spiritual practice. Death always delivers. It slices through every lie, ridicules every belief, mocks every vanity and reduces ego to absurdity. Death doesn't lie. Death awareness is about life awareness and life awareness is about waking up. Death isn't morbid, fear is morbid. Death doesn't oppose life, fear opposes life.

What's more mind bending than your own looming death? What could be more devastating to ego than the contemplation of meaninglessness and insignificance, of nothingness, of no-self?

Death denial, the fear of no-self, is at the very heart of the paralysis that grips all spiritual aspirants and everyone else as well.

Death denial, in all its many forms, is the hole at the bottom of which we sit huddled and trembling, scared to death of our own lives.

Death awareness is the act of coming out of that hole and beholding the world in which we live and the creation of which we are a part. To venture out of that hole, to declare freedom from childish beliefs, to turn toward death, to look the unslayable arch-demons of futility and insignificance in the eye, this is where the journey begins, and no journey begins elsewhere.

Futility. No belief is true. Life has no meaning. Nothing we do matters. All is vanity and a striving after wind. We're going to die and it will be as if we never lived. Everything we think is true is false, all our beliefs are delusions, and everything we know is a lie. Nothing we do can make any possible difference.

The process of waking up can look a lot like a massive breakdown, a complete break from what one has assumed to be reality. That's why depression can be a perfectly rational response to a highly irrational situation, namely, life, especially when the depression revolves around futility and insignificance. You can't be much more futile or insignificant than a character in a dream. The way to defeat rational depression is not to try to turn back from it or to cling to the illusion of meaning, but to plow right on through it and see what's on the other side.

The only escape possible is one person on their own, alone, slipping off by themselves into the black. You have to go into that darkness you've spent your life avoiding and denying. You have to get to the place where you'd rather go into that blackness than continue avoiding it.

The fundamental conflict in the spiritual quest is that ego desires spiritual enlightenment, but ego can never achieve spiritual enlightenment. Self cannot achieve no-self. The fundamental conflict can only be resolved by altering the equation. It's cheating, but everyone is okay with it. Spiritual enlightenment gets redefined as something attainable by ego. Ego gets to continue the noble quest. No one gets the grail, but no one really wanted it anyway. The quest for the grail is about the quest, not the grail.

It doesn't require knowledge to be enlightened any more than it requires knowledge to obey the law of gravity or to be bathed in sunlight. Enlightenment is nothing more than truth realization.

If anything requires knowledge and effort and seemingly superhuman powers of imagination it's not truth but delusion.

Enlightenment is exactly the same for anyone, anytime, anyplace, whereas the journey to it is as unique and varied as there are people to make it, the nature of delusion, the ego, false constructs, and human nature.

For this whole dualistic universe thing to work, it's important that everyone doesn't just go wandering off; that they stay on stage and play their role. Fear is the glue that holds the whole thing together and keeps everyone in character.

The vast majority of spiritual seekers are motivated by desire so the failure of their search is a foregone conclusion, as is amply evidenced by mankind's history of near total inability to find the one thing that can never be lost. How is it possible that something as simple as seeing what is manages to elude our most devout seekers and our greatest minds? Because no one really wants what awakening really is. The true desire that drives the process of awakening is more akin to a psychotic madness—a wickedly profound and protracted crisis.

Waking up from the dreamstate is a very straightforward business. It doesn't take decades. It doesn't look like tranquility or like a calm, peaceful mind. It doesn't look like saving others or saving the world or even saving yourself. It doesn't look like a thriving marketplace where merit is determined by popular appeal or commercial success. Waking up looks like a massive mental and emotional breakdown because that's exactly what it is, the granddaddy of all breakdowns.

To move forward, you must figure out exactly what is obstructing you. Whatever it is, it isn't really there; it has no reality, no substance. It's your own creation, a phantom lurking in the shadows of your mind, a shadow demon. Your obstructions are your demons, and your demons are shadow dwellers. They live and thrive in the half-light of ignorance, so the way to slay a demon is by illuminating it with the full force and power of your focused attention; by looking at it, hard. Banish shadow with light and see for yourself that no obstruction exists, nor ever did. We create our demons and we feed them. To awaken we must slay them.

The person on a search and destroy mission must have a way of making-the subtle demonisms of life and thought-assailable. Destroying thoughts with thoughts. Seeing things clearly. Nothing false can survive illumination by a steady and focused mind.

Come up with the right question. There's always only one. All other questions are fear-based ego-sparing time-killers. Forget concepts and ideas, forget past and future, forget mankind and society, forget God and love, forget truth and spirituality. Find that one question; the exact question that ego doesn't want you to ask. Put your full attention on it. That's how progress is made. Everything else is a stall tactic.

"Who am I?" That is the question. That's the question at our very center. Life turns on that center, and everyone who is alive has one of two relationships to that center: Toward or Away. Toward is perfectly simple. Away is infinitely complex.

Stay with the question. Don't worry about the answer, just get the question right.

Examine your assumptions. Soon enough the question itself has been destroyed and, along with it, many layers of delusion.

The question itself is the obstacle to progress, not the lack of an answer. The question is the key. Once we truly understand the question, we'll have the desired answer. The desired answer is always the removal of the obstruction a correct question represents.

The answer is never the answer. It's not that I know the answers, it's that I don't know the questions. I see that the questions that haunt a mind have no reality outside of it. There's only one true answer and it lies at the exact center of the question.

You want answers, but there are no answers, just beliefs, and if you want to awaken, either within or from the dreamstate, beliefs are not your friends. They only hold you back. Demanding answers and explanations is an egoic stall tactic.

The same tactic employed by all people all the time in order to maintain the state of denial necessary to continue a meaningless existence in a fictional universe.

We are both protagonist and antagonist in this conflict, both attacker and defended. We can't win by fighting. The very thing that fights, that resists, is the thing we seek to overthrow. Only by vanquishing ego can we prevail. Only in surrender can we find victory. This is the part so few get, and fewer get beyond. If you want to say all religions and spiritual teachings share a core truth, it can only be this: Surrender is victory.

To surrender is to relinquish the illusion of control, which initiates the death part of the death/rebirth process, which is the transition from the bondage of the womb-like Segregated State to the freedom of the ever-expanding Integrated State. No faith or belief is required to accomplish this act of surrender, only clear-seeing. When one begins to understand ego and fear for what they really are, this process becomes as easy and natural as dropping a heavy weight.

The person who arrives at this point is not the person who goes beyond. In this process, resistance is conquered and non-resistance takes its place; acceptance, recognition, surrender. The segregated self is slain and the integrated self is born. To the onlooker it looks like one thing becomes the other, but to the participant it is quite unmistakably the end of one thing and the beginning of another. The necessary letting go is itself a kind of death. It is the primary death/birth process, and nothing proceeds until it happens.

Surrender follows naturally from seeing what is.

Ego is obstruction, surrender is flow. Surrender is the basis and precursor of growth. There is no growth possible within egoic constraints, only the illusion of growth. Once we free ourselves, we come into alignment.

Nothing else means anything. No amount of knowledge or understanding or spiritual experience could be of any value if you're still stuck in the segregated state. You have one goal, die to the flesh and be born of the spirit.

There is only one possible objective, you must die to be reborn, and to do that begin the process of thinking clearly and freeing your thoughts from emotion-dense clouds of self-limiting belief.

Have you already confirmed duality as truth? Have you confirmed that you are a separate physical being in a physical universe with the ability to perceive?

It's all about finding and illuminating the next obstacle to our progress. It is not concerned with finding answers, but questions. There are no answers to be found, only questions that define our limitations. Understand the question, and you destroy the limitation. It is through courageous thought and clear-seeing that delusion is destroyed.

This isn't about personal awareness or self-exploration. It's not about feelings or insights. It's not about personal or spiritual evolution. This is about what you know for sure, about what you are sure you know is true, about what 'you are' that is true. With this process you tear away layer after layer of untruth masquerading as truth. It burns bridges that can never be rebuilt, and the only real reason to do it is because you can no longer stand not to.

In the world but not of the world means that you're playing a role on the stage, but you don't confuse your role with yourself or the stage with reality. It means you know that you're playing a character. It's like lucid dreaming. You achieve normal waking consciousness within the dream so that you're in the dream but not of the dream. There's no benefit to understanding it. It's something you're familiar with because it's your reality or you're not because it isn't.

Enlightenment is comprehensive. It's an entirely different paradigm.

My reality is not your reality.

I view dualistic reality as a dream.

Every step in the process of awakening has three components: Seeing what needs to be killed, killing it, and cleaning up the mess. You must process the loss.

A step begins with seeing and understanding. That seeing and understanding becomes the very thing that destroys the thing seen and understood. But it doesn't end there. Just because you killed something doesn't mean you killed your attachment to it. Seeing the thing is the beginning of killing the thing, and killing the thing is the beginning of detaching from it.

*With every step we leave behind that which we move beyond.
The pain giving thing is the thing removed; when it's gone, so is the pain.*

The thing one leaves isn't just the prison of self but self itself, so the freedom thus won is something of a booby prize.

*Every step is a loss and as long as there's more to lose, there are more steps to take.
Everything is lost. Nothing is gained.*

How can you want nothing? Words ascribed to the Buddha are often fraudulent, but there's one very clear exception: "Truly, I have attained nothing from total enlightenment". It's not so much that he didn't gain anything as that he did gain nothing.

Waking up isn't a theoretical subject one masters through study and comprehension, it's a journey one makes, a battle one fights.

All we're really talking about is unbelieving what is untrue, not seeing what is not really there, getting back to our clean uncontaminated uncorrupted state.

The idea of the individual self, valid and separate, unravels very quickly under any serious scrutiny. All beliefs do. What takes time and effort is to put the idea of self under such scrutiny and make sense of what's left after the belief is gone.

All beliefs, all concepts, all thoughts, they're all false. If you're going for the truth, you're not taking any of them with you. Nothing that says two, not one, survives.

Self is an untruth.

From the unawakened side, the gate blocking one from enlightenment is enormous and impassable. Delusion fills one's entire field of view because it resides prior to perception. Once delusion has been destroyed, we can see it never really existed.

Whenever you're sure you've arrived, there is always further.

The word further is like a talisman, a power object. We must pull it out and gaze upon it after every battle, every time we think we must be done, that we must, at last, have arrived. As much as it may seem otherwise, there is always further.

When you reach the top, keep climbing.

*The price of truth is everything. The price of truth is nothing.
This is another way of stating the gateless gate paradox.*

There is nothing to learn, nothing to know, nothing to practice, nothing to become.

Why is nothingness better than somethingness? Why is unity better than duality? Why is truth better than the lie? Why is the infinite better than the finite? Why is awake better than dreaming? Our fragile little bubbles are what let us float around in the infinite, able to enjoy the experience of somethingness-good and bad-where only nothingness exists. The bubble is a magnificent amusement park and leaving it is a damn silly thing to do unless you absolutely must.

The dreamstate is a big amusement park and I would never encourage anyone to try to escape. That would be as absurd as suggesting that you commit suicide for your own good.

Enlightenment is literally the biggest nothing of all time. Enlightenment is life-negative. Spiritual enlightenment is pointless and meaningless, and should only be sought by those who have absolutely no choice in the matter.

Who wants to spend the rest of their life tumbling through infinite space?

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