The Ten Bulls of Zen Reframed: The True Nature of the Search

In Zen Flesh, Zen Bones, the Ten Bulls are a depiction of the awakening process in that they give a roadmap to enlightenment. This roadmap is remarkably detailed in that it gives a thorough depiction of the entire awakening process. This roadmap not only points out directions in the awakening process, but also allows for an assessment of where one stands in the process. All the necessary steps that are required to complete the process are depicted. Even more remarkable, these necessary steps can be understood scientifically in the framework of modern physics. This article reframes these steps in terms of what the holographic principle of quantum gravity can scientifically tell us about the awakening process and the nature of enlightenment.

The first thing to be clear about is enlightenment is only about consciousness. Enlightenment is about consciousness becoming aware of its true nature. Enlightenment is synonymous with awakening from delusion. The nature of delusion is consciousness unaware of its true nature, and enlightenment is consciousness aware of its true nature. The problem is actually much worse than simple unawareness. Delusion is consciousness actively believing false beliefs about itself. A delusion is a false belief one believes about oneself, which is the essence of the problem.

Unenlightened consciousness is not just unaware of its true nature, but actively believes itself to be something that it is not. Enlightenment is often called truth realization, but as Jed McKenna points out, the more correct terminology is *untruth unrealization*. Consciousness only becomes aware of its true nature when it stops believing untrue things about itself. Enlightenment is not an active process of learning the truth, but rather is a natural effortless discovery that consciousness comes to know about itself when it stops actively believing untrue things about itself.

In his discussion of the Ten Bulls, Osho points out this depiction of the awakening process is in the form of a search. Consciousness itself is searching for its true nature. The irony of all this searching activity is that consciousness discovers its true nature in an effortless and natural way once it stops actively believing untrue things about itself. Ultimately, this search comes down to a destructive process of disbelieving and deconstructing false beliefs. Since the false beliefs are self-concepts, McKenna refers to this self-destructive process as *spiritual autolysis*, which is a process of dissolution that dissolves separated aspects of consciousness back into a primordial undifferentiated state of consciousness, like a piece of ice that dissolves back into water.

The second thing to be clear about is science really has nothing to say about the true nature of consciousness. The true nature of consciousness cannot be conceptualized, and therefore no scientific concept has anything meaningful to say about it. On the other hand, scientific concepts have a great deal to tell us about the nature of delusion. Specifically, scientific concepts can tell us a great deal about the nature of Maya or illusion, which underlies delusion. The holographic principle of quantum gravity is the ultimate scientific concept that explains the nature of illusion.

The nature of delusion is a state of duality, which is always created in a subject-object relation of self and other. The holographic principle is the ultimate scientific concept that allows us to understand how duality is created in a subject-object relation as an observer observes some observable thing. The holographic principle explains the dualistic nature of a virtual reality. Underlying this dualistic virtual reality is the nondual reality of consciousness. Enlightenment is the direct experience of the underlying nondual reality of consciousness by consciousness itself. One can only transcend duality by going further into the nondual source of consciousness.

Shortly before his death, Nisargadatta Maharaj remarked that someday his teachings about the awakening process and enlightenment would be understood scientifically. Osho made similar comments during his lifetime. Thanks to the discovery of the holographic principle, that day is now. Even Jed McKenna, who usually views things in a decidedly unscientific way, often uses scientific analogies to explain things. McKenna bases his entire approach on the rigors of logic, but there is no more powerful form of logic than mathematical logic. Theoretical physics is fundamentally based on mathematical logic applied to scientific observations. The overwhelming consensus of theoretical physicists who work in the area of quantum gravity is the holographic principle is the most fundamental scientific concept we have about the nature of the world.

In this reframing of the Ten Bulls of Zen, the holographic principle will be used to discuss each step in the awakening process. Each step is a direction in which one must travel in order to break free of the bonds of delusion. The Ten Bulls understood as a roadmap in the awakening process can be scientifically reframed in this way because science in the framework of the holographic principle has something important to tell us about how the bonds of delusion are created.

Only a brief review of the holographic principle is given in this article, just enough to flesh out the argument. For those who want to delve deeper into the details of modern physics and why the holographic principle is the ultimate scientific concept, a review of the holographic principle and what it can tell us about the nature of reality is available below as a PDF document:

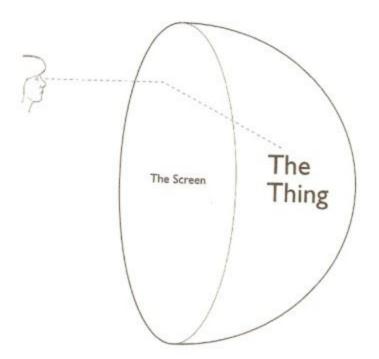
https://scienceandnonduality.files.wordpress.com/2019/11/the-holographic-principle-and-the-nature-of-reality-17.pdf

In essence, the holographic principle is telling us that the world we perceive is no more real than a virtual reality movie of perceivable images projected from a screen to the perceiving point of view of an observer in empty space. The perceivable images are forms of information encoded on the screen and animated in the flow of energy. The illusion is created as animated perceivable images are projected from the screen to the observer's point of view. The illusion appears three dimensional since the screen is a holographic screen that projects three dimensional images.

The observer itself cannot be described by any perceivable image it can perceive. The observer can only be described as a focal point of pure perceiving consciousness that arises at a point of

view in empty space in relation to the screen. Everything the observer perceives is a form of information projected from the screen, but no perceivable form of information can characterize the observer's true nature. All the information for everything the observer perceives is encoded on the screen. The act of observation is always a projection from the screen, like the projection of a movie image. Both the screen and the observer's point of view arise in empty space, but there is really no information encoded at the observer's point of perceiving consciousness. All the things the observer perceives in space are illusory and only arise with holographic projection.

The observer's perceiving consciousness exists at a point in empty space, but no information is encoded at that perceiving point. The perceiving point of consciousness exists in a space that is empty of all information. The content of consciousness is defined by information encoded on the screen. The perceiving consciousness of the observer exists at a point in space that is empty of all content. Consciousness in-and-of-itself exists at a perceiving point in space that is empty of all information content, which is to say the observer itself exists in empty space. There is only an illusion of things existing in space due to holographic projection from a holographic screen.



The Observer, the Screen and the Thing

The observer does not really exist as something that appears in the virtual reality movie that it is perceiving from its point of view in empty space. In reality, the observer exists in empty space, and that perceiving point in space is empty of all things. Delusion arises when the observer believes itself to be something and identifies itself with something that it perceives in the virtual reality movie. The observer identifies itself with the personal form of its character in the movie.

This kind of personal self-identification is a false belief the observer believes about itself, which is called a self-concept. The observer actively believes that it is a person in the virtual reality movie it is perceiving because that is where it actively focuses its attention.

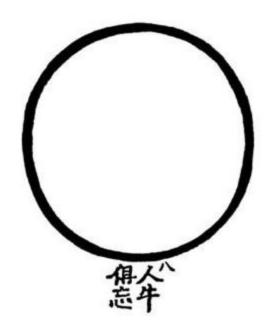
The observer not only perceives the form of things projected as images from the screen, but also perceives the flow of energy that animates those things. As Jed McKenna points out, this flow of animating energy is the nature of the emotional energy that animates the form of the observer's character in the virtual reality it perceives. The perception of this flow of animating energy, perceived as an emotional feeling, is what *makes the observer feel like it is a part of something real*. The observer really feels self-limited to the animated form of its character as it perceives the flow of emotional energy that animates its character. That feeling of emotional self-limitation is what leads the observer to emotionally identify itself with its character, but also emotionally compels the observer to defend the survival of its character as though its existence depends on it.

This emotional feeling the observer has about itself that its existence depends on the survival of its character in the virtual reality movie it is perceiving is the big lie at the heart of its personal self-identification with the emotionally animated form of its character. This is the big lie at the heart of the hypnotic spell of the observer's personal self-identification. This lie is the reason the observer's focus of attention is monopolized by all the emotional concerns the observer has about the welfare and survival of its character, which is to say the observer's focus of attention has become emotionally biased by those emotional concerns. That emotional bias in the observer's focus of attention is what perpetuates the hypnotic spell of personal self-identification with its character and actively generates all the false beliefs the observer believes about itself. This is an active process of self-delusion that can only arise when the observer actively focuses its attention on the survival of its character in an emotionally biased way, which leads to the expression of more personally biased self-defensive emotions that reinforce the observer's emotional sense of personal self-identification with its character and thereby perpetuate the hypnotic spell.

As Jed McKenna succinctly points out: to know the lie is to hate it; to see it is to slay it. It is natural to hate the lie of personal self-identification when one comes to know with certainty that one is not a person and all personal self-concepts are only false beliefs that one believes about oneself. One can never be any concept that one can perceive and understand, which is to say the true nature of consciousness cannot be conceptualized. It is also natural to destroy the lie when one clearly sees that the lie is only an illusion of what one really is. When one directly sees the illusion as an illusion, one loses interest in paying attention to it, and it is as though the illusion doesn't even exist. One just ignores it. One no longer emotionally animates the illusion with one's investment of emotional energy in it when one no longer pays any attention to it. Without that emotional energy, the illusion dies away. Jed McKenna calls this process of awakening to the truth of what one really is a process of ego death as a means to no-self. One is destroying one's

own self-concept. Freud described this self-destructive process as the *death instinct*. To awaken to the truth of what one really is, one must first die to all false concepts one has about oneself.

The Ten Bulls of Zen are a set of instructions about how to break this hypnotic spell of personal self-identification. These instructions are in the form of a roadmap that gives directions about which way to travel in the awakening process, which is very much like a journey one makes. The only difficult thing about understanding these instructions is they are not about looking outward at the world or making a journey in the world, but rather about looking within and making an inward journey. The observer itself, which is only a focal point of perceiving consciousness, has to look within to discover the true nature of what it really is. The observer must turn the focus of its attention away from the world it perceives and look within to discover its true nature.



The Ten Bulls

Introduction (adapted from Zen Flesh, Zen Bones)

The enlightenment for which Zen aims, for which Zen exists, comes of itself. As consciousness, one moment it does not exist, the next it does. But physical man walks in the element of time even as he walks in mud, dragging his feet and his true nature.

So even Zen must compromise and recognize progressive steps of awareness leading closer to the ever instant of enlightenment.

The bull is the eternal principal of life, truth in action. The ten bulls represent subsequent steps in the realization of one's true nature.

1 The search for the bull

In the pasture of this world, I endlessly push aside the tall grasses in search of the bull.

Following unnamed rivers, lost upon the interpenetrating paths of distant mountains, My strength failing and my vitality exhausted, I cannot find the bull.

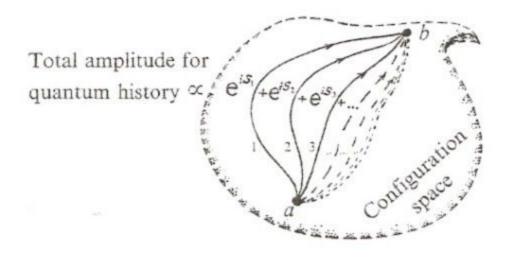
I only hear the locusts chirring through the forest at night.



The Search for the Bull

Comment: The bull never has been lost. What need is there to search? Only because of separation from my true nature, I fail to find him. In the confusion of the senses I lose even his tracks. Far from home, I see many crossroads, but which way is the right one I know not. Greed and fear, good and bad, entangle me.

Modern physics tells us the world does not exist as an objective reality. Quantum physics tells us the world only exists in a state of potentiality until observed. Only at the moment of observation does the world come into an actual state of existence. The moment of observation is always now, as in the present moment. The way this is formulated in quantum theory is to express the quantum state of the world as a sum over all possible actual states, where each possible state is weighted with a probability amplitude that is the essence of the quantum wavefunction. This sum over all possible states can always be reformulated as a sum over all possible paths through some configuration space of possible states. This reformulation of the quantum state in terms of a sum over all possible paths through a configuration space is called the Feynman sum over all paths.



Sum Over all Possible Paths Formulation of the Quantum State

Each possible path is weighted with a probability factor that is the essence of the wavefunction. The quantum state of the world understood in this way tells us that the world only exists in a state of potentiality until observed. Only at the moment of observation does the world exist in an actual state. That actual state is described by a specific path through the configuration space of all possible states. The observation of that actual state must be observed by an observer, which for lack of a better description we can call the quantum observer. The quantum observer must be present now, in the present moment, to observe that actual state of the world as it appears now.

This quantum description of the world tells us that there is no such thing as objective reality. There is no such thing as an objective world out there that exists independent of an observer. The observation of the world by the quantum observer as the world actually appears to exist now can only appear to exist in a subject-object relation. Whatever the observer observes about the world can only have a subjective kind of existence that depends on the observer observing the actual state of the world as it appears to exist now. This actual state of the world as it appears to exist now is comprised of both the form of distinct things that appear in the world and the flow of energy that animates those forms. Both the form of things and flow of energy that animates things are aspects of the quantum state of the world. When the observer observes an actual state of the world as it appears to exist now, the observer is observing both the form of distinct things that appear in the world and the flow of energy that animates those things.

Confusion arises when we mistakenly assume that the perceivable form of a person in the world is the observer of that world. This kind of mistake is called a paradox of self-reference, which is a logical error in our understanding of the nature of the world. Any scientific or mathematical formulation of the nature of the world is logically inconsistent if we make such a logical error. This isn't just idle speculation, but has been mathematically proven by the Godel incompleteness

theorems. The only way a scientific formulation of the world can be logically consistent is if the observer of that world is outside of that observable world in the sense of mathematical logic.

If the observer of the world is not a person in the world, then what is it? The holographic principle tells us that the observer is a focal point of pure perceiving consciousness that arises at a point of view in empty space in relation to a holographic screen that projects all the images of things that can appear in space. The holographic images that appear in space are an illusion that arises from the way information is encoded on the holographic screen. The images of things that appear in space are forms of information encoded on the screen and projected from the screen to the observer's point of view. The form of a person is just another one of these projected images.

Confusion arises because it really seems like the person is an observer of its own world, but as is well known, appearances are deceiving. The illusory holographic appearances that are deceiving the real observer are forms of information projected like images from the screen to the observer's point of view in empty space. All the information for the form of things that appear in space is encoded on the screen. The observer itself cannot be characterized by any form of information, but only as a focal point of pure perceiving consciousness that arises in relation to the screen.

Confusion arises because the observer is perceiving both the form of things and the flow of energy that animates things. The observer is perceiving things through the organs of sensory perception of a body. Those perceptions include sensory perceptions of the world external to the body, like sight and sound, internal perceptions of the body, like emotional feelings, and internal perceptions of mental imagination, like thoughts and memories. The surface of the body seems to create a boundary between internal and external, but in reality everything perceivable is external to the observer. Everything perceivable is a form of information projected like an image from the screen and animated in the flow of energy. The boundary of a body only creates an illusion that the embodied form of a person is an observer of the external state of its world and its internal emotional and mental state. The observer only feels like it is limited to the personal form of a body as it perceives self-limiting emotional body feelings. That emotional feeling creates a sense of personal self-limitation to a body, leading to personal self-identification. In reality, everything perceivable is external to the observer, which can only be characterized as a focal point of pure perceiving consciousness that arises in empty space in relation to a holographic screen.

How does the observer's observation of an actual state of the world occur? Quantum theory has something very specific to say about how an observation occurs. The quantum state of the world is described as a state of potentiality, but in the act of observing the world, that potentiality is reduced to an actual state. In the sense of the sum over all possible paths, an actual path is chosen from the sum. The observation of an actual path is always a choice that chooses an actual path from the potentiality inherent in the sum over all possible paths of the quantum state.

How is this choice made? The answer quantum theory gives is the choice is made randomly, like flipping a coin or throwing dice. The reason quantum theory gives this answer is the laws of physics, like the law of gravity, are only inherent in the quantum state in terms of the probability amplitudes that weigh each possible path in the sum over all possible paths. The probability amplitudes are determined by an action principle, and the laws of physics are inherent in the action principle. The action principle is determining the quantum wavefunction. The laws of physics are always expressed as a principle of least action. A classical law of physics, like the classical law of gravity, is understood as the path of least action, which is like the shortest distance between two points in the configuration space of all possible paths. The most likely path in the sense of quantum probability is the path of least action, which is the classical path.

The problem is the quantum state as formulated by a sum over all possible paths, which is like a probability distribution, only gives rise to the path of least action as the most likely path if that path is chosen from the quantum state in a random way, without bias. The observation of any path is like a measurement of the probability distribution, and that measurement is only reliable if that path is chosen from the quantum state in an unbiased way. The path of least action is only observed as the most likely path if choices are made randomly. If bias arises in the way choices are made, then all bets are off and the laws of physics lose their predictability. If bias arises in the way choices are made, then to continue the gambling analogy, the game is rigged.

An even more important question than how the choices are made is who is making the choices? The obvious answer if the observer is making the choices. The observer is choosing which path it will follow through the configuration space of all possible states. Every actual state the observer can observe is a choice on the observer's path. The observer chooses what it observes in its world with each of its observations, which is the same as choosing which path it will follow.

How does the observer make its choices? The obvious answer is the observer makes its choices with its focus of attention. The observer's choice is synonymous with the observer's focus of attention. This is where physics can no longer help us understand the nature of things for the simple reason that physicists do not want to talk about consciousness. It is the focus of attention of consciousness itself that is making its choices about what to observe and which path to follow.

This way of understanding the observer's focus of attention as the nature of choice allows for an understanding of the life-force. The quantum state of potentiality that describes the observer's world includes the potential for the form of all possible distinct things that can appear in that world and the potential for all possible ways energy can flow through that world as those things appear to be animated in the flow of energy. With each observation of an actual state of its world, the observer observes both the form of things that appear in that world and the flow of energy that animates things. Each observation the observer makes of its world is a choice that chooses the actual form of things and the actual flow of energy that animates those things.

The observer's choice about what to observe in its world and which path to follow through its world is the nature of the life-force. The life-force arises because the observer is making choices about what to observe in its world and which path to follow, but the life-force can only arise because the observer is focusing its attention on whatever it is choosing. The life-force can only arise with the focus of attention of the observer itself. Consciousness itself must focus its attention on its world in order to express the life-force in its world. It is the focus of attention of the observer itself that makes the expression of the life-force possible.

This way of understanding the life-force allows us to understand the metaphor of the bull in the Tens Bulls of Zen. The bull is a metaphor for the life-force, which can only arise with the focus of attention of consciousness itself. As the consciousness of the observer focuses its attention on the world it perceives, it makes possible the expression of the life-force in that world. The life-force is the actual flow of energy that is animating the actual form of things in that world, which only becomes possible when consciousness itself focuses its attention on its world.

The Ten Bulls is also a metaphor for awakening to the true nature of what one really is. It is consciousness itself that is discovering its true nature. The first step in the awakening process is called The Search for the Bull. It is consciousness itself that must redirect its focus of attention away from the world it perceives and look within to discover its true nature. The life-force is only active in the observer's world because the observer's focus of attention is directed outwardly as it observes that world. In the awakening process, the observer must withdraw its attention away from the world it perceives, which has the effect of withdrawing the energy of its life-force away from that world. That energy must be redirected inwardly as the observer looks within. The process of looking within, which is the first step in the awakening process, is the redirection of the observer's focus of attention or life-force onto its own true nature as consciousness itself.

This understanding of the life-force is about as far as we can go with the conventional way of understanding quantum theory. Conventional quantum theory is perfectly fine for understanding the flow of energy, but it does not really help much in terms of understanding the form of things. In order to understand the form of things, we not only need to understand the nature of energy, but we also need to understand the nature of information. The holographic principle is what allows us to understand the nature of information that is inherent in the form of all things.

The conventional formulation of quantum theory is very specific in terms of how it allows us to understand the nature of energy. This conventional understanding is called the point particle formulation of physics. In this formulation of particle physics, there is an assumption that the world is composed of point particles that exist in space and time. A point particle is located at some point in space and moves through space over the course of time. Particles carry energy because they move through space, which is called kinetic energy, and because they interact with each other through some kind of attractive or repulsive force, which is called potential energy.

The most mathematically sophisticated formulation of particle physics is called quantum field theory (QFT). A quantum field is the probability amplitude that specifies the probability with which a particle can be measured at some point in space at some moment of time. Every particle has its own quantum field, which plays the role of the quantum wavefunction. In QFT, there are both matter particles, like the electron, and force particles, like the photon. The quantum field that describes the electron is called the Dirac field, and the quantum field that describes the photon is called the electromagnetic field. The Dirac field is characterized by the Dirac equation and the electromagnetic field is characterized by Maxwell's equations. The electron carries mass, which is characterized by mass energy, but also carries other quantized properties such as spin angular momentum and electric charge. The photon is massless and chargeless, but also carries spin angular momentum. Electrons are conceptualized to interact with each other through the electromagnetic force by exchanging photons. These ideas can be generalized to include all the nuclear particles and nuclear forces. In this way, QFT has successfully characterized all the matter particles and their interactions through the electromagnetic and nuclear forces.

There is a little problem with this formulation of particle physics with QFT. The problem is gravity. In Einstein's formulation of general relativity, gravity is understood as the curvature of space-time geometry, which is not static, but is dynamical and allowed to change like everything else in the world. The problem is QFT assumes a special kind of static space-time geometry, which is called flat Minkowski space. Flat means it has no curvature, and therefore no gravity, since gravity is conceptualized as the curvature of space-time geometry. The problem is QFT assumes particles can be localized at some point in space at some moment of time. The quantum field of a particle is the probability amplitude that specifies how likely a particle can be localized at a point in space at some moment of time. This assumption only makes sense if space-time geometry is static like flat Minkowski space. If space-time geometry is allowed to be dynamical and curved, which means the force of gravity is active, then all hell breaks loose.



Curved Space-Time Geometry

This problem is epitomized by Einstein's field equations for the space-time metric, which is a measure of the dynamical curvature of space-time geometry that gives rise to the force of gravity. If we treat the space-time metric like any other quantum field, such as the

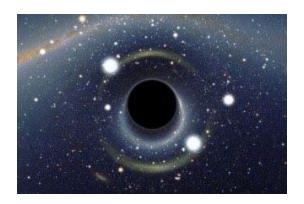
electromagnetic field for the photon, the space-time metric is the quantum field that specifies the probability amplitude for measuring the graviton, which is the force particle of gravity, at some point in space at some moment of time. The problem is the space-time metric is also specifying the dynamical nature of the curvature of that space-time geometry. We are trying to use the space-time metric both as a quantum field to determine a probability amplitude for where the graviton can be measured at a point in space at some moment of time and as a way to specify the nature of that dynamical space-time geometry. The problem is we can't have it both ways. We can't have our cake and eat it too. Either the space-time metric can be understood as a quantum field for the graviton or it can be understood to specify the nature of the space-time geometry within which the quantum fields of all particles must make reference to, but it can't do both. The space-time metric can't specify both the space-time geometry stage upon which the quantization of all particle fields play out and the quantization of the graviton field that must play out on the same stage. QFT only makes sense if we assume a static space-time geometry like flat Minkowski space, but then QFT has no notion of the nature of gravity. There is no way to understand gravity as a QFT.

The problem of trying to understand the space-time metric as a quantum field is that space-time geometry is the stage upon which all the drama of quantum theory is performed. Particles follow paths through space-time. When we measure the position of a particle at some point in space and at some moment of time, that measurement is an event in space-time. The wavefunction is only a probability amplitude that specifies the probability with which that event can be measured.

The problem is Einstein's theory of general reality tells us that space-time geometry is the stage upon which the drama of a quantized space-time geometry must be performed. Einstein's field equations for the space-time metric determine the curvature of that space-time geometry, but the space-time metric is also the wavefunction for the motion of a particle we call the graviton that follows some path through that curved space-time geometry. Can we have it both ways? Is space-time geometry really a fundamental description of the physical world? Obviously not.

This problem is only compounded when we consider the problem of black holes as predicted by Einstein's field equations for the space-time metric. A black hole is a gravitational hole in space-time geometry. This sounds weird since gravity is the curvature of space-time geometry, but this gravitational curvature allows for holes in space-time geometry. A black hole is a region of space-time where the force of gravity has become so strong that even light cannot escape from that region. Since a light ray conceptualized as a photon carries energy, and all mass and energy cause gravitational attraction since energy is equivalent to mass, even light is attracted by the force of gravity. The force of gravity for a black hole is so strong that even light cannot escape its gravitational attraction. The region of space called a black hole is a hole in space-time

geometry characterized by a bounding surface, which is called an event horizon. At the surface of the black hole's event horizon, the force of gravity is so strong that even light cannot escape.



Black Hole Event Horizon

Einstein's field equations for the space-time metric determine the radius R of the event horizon of a black hole of mass M as R=2GM/c², where G is the gravitational constant and c is the speed of light. No signal that originates from within the event horizon can escape from the black hole since the force of gravity is so strong at the event horizon that even light cannot escape and nothing can travel faster than the speed of light. All the things that apparently fell into the black hole are trapped inside the black hole forever and can never communicate with the outside world.

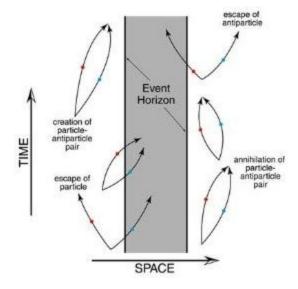
In the 1970's, both Jakob Bekenstein and Stephen Hawking tried to understand black holes as thermodynamic objects. A thermodynamic object is something characterized by a total energy, E, a temperature, T, and an entropy, S. The total energy is well understood in quantum theory in terms of the total amount of kinetic and potential energy of all the particles that comprise the object. The temperature is understood in terms of the average amount of random kinetic energy per each dynamical degree of freedom that characterizes the object. For a collection of particles inside an object, each dynamical degree of freedom can be conceptualized as a particle coordinate, such as the particle's position in space at some moment of time and the particle's velocity or momentum through space over the course of time. The entropy is understood in terms of the total number of dynamical degrees of freedom that characterize the object.

At thermal equilibrium, which is defined when the temperature is constant and there is no net flow of energy between the object and its environment, these quantities satisfy the second law of thermodynamics, $\Delta E=T\Delta S$, which relates a change in total energy ΔE of the object to a change in the entropy ΔS of the object. This equation is easy to understand if we conceptualize the total number of dynamical degrees of freedom inside the object in terms of quantized bits of information, similar to the bits of information encoded inside a computer. This is a natural way to understand entropy in quantum theory since the dynamical degrees of freedom of elementary particles, like spin and orbital angular momentum and quantized energy levels, are typically

quantized in terms of some integer quantum number. The total number of dynamical degrees of freedom can therefore be represented by an integer n, which can be conceptualized as specifying a total number of bits of information. An example of such a bit of information is the spin angular momentum of a spin ½ particle like the electron, which can only point up or down and therefore specifies information in a binary code like a computer switch that is either on or off. In terms of the total number of bits of information n, entropy can be written as S=kn, where k is Boltzmann's constant. The temperature is defined in terms of the average amount of thermal energy per degree of freedom and is written as kT, and so a change in the total energy is related to a change in the total number of degrees of freedom or entropy as $\Delta E=T\Delta S$. This makes sense, since if $\Delta n=1$, then $\Delta E=kT$, which is the average amount of thermal energy per degree of freedom.

A black hole of mass M has a total energy of E=Mc². The things that fell into the black hole as the black hole formed were all thermodynamic objects characterized by a temperature and an entropy, like a burnt-out star that gravitationally collapses into a black hole, and so a black hole should also have a characterization as a thermodynamic object in terms of temperature and entropy. This was the problem that Jakob Bekenstein and Stephen Hawking considered. What they discovered revolutionized our ideas about the fundamental nature of dynamical degrees of freedom, which eventually led to the discovery of the holographic principle.

Hawking was able to calculate the temperature of the event horizon of a black hole. He used quantum field theory to calculate the vacuum energy of a quantum field in the vicinity of the event horizon, and discovered the event horizon emitted a kind of thermal radiation characteristic of a hot object at thermal equilibrium, which is called blackbody radiation. The vacuum energy of a quantum field undergoes quantum fluctuations in the form of virtual particle-antiparticle pairs that are spontaneously created by the vacuum and then rapidly annihilate back into the vacuum. Hawking discovered that as observed by a distant observer outside the event horizon, something very strange appeared to happen. The strange thing that appeared to happen was the separation of virtual particle-antiparticle pairs at the event horizon as observed by the distant observer. When a virtual particle-antiparticle pair is created near the event horizon, one member of the pair can fall across the event horizon and disappear into the black hole, while the other member of the pair can travel toward the distant observer outside the event horizon and be observed as a particle of thermal radiation. The distant observer will observe a spectrum of thermal radiation characteristic of blackbody radiation from a hot object with a temperature T. This thermal radiation from the event horizon of a black hole is called Hawking radiation.



Hawking Radiation

Hawking was able to calculate the temperature of the event horizon in terms of the radius R of the event horizon as $kT=\hbar c/4\pi R$, where \hbar is Planck's constant and R is given in terms of the mass M of the black hole as $R=2GM/c^2$. This temperature can be written in terms of the acceleration due to gravity at the event horizon, $a=GM/R^2$, in the form of an Unruh temperature, $kT=\hbar a/2\pi c$.

We're now in a position to calculate the entropy of the black hole. We simply use the second law of thermodynamics $\Delta E=T\Delta S$, Hawking's formula for the temperature of the event horizon in the form of an Unruh temperature $kT=\hbar a/2\pi c$, and the total energy of the black hole $E=Mc^2$. Since the acceleration due to gravity at the event horizon is given as $a=GM/R^2$, the entropy S must be proportional to the surface area, $A=4\pi R^2$, of the event horizon. If we write $S=kn=kA/4\ell^2$, then $\Delta S=k\Delta A/4\ell^2$, where $\Delta A=8\pi R\Delta R$. Since we can write $\Delta R=2G\Delta M/c^2$ and use $kT=\hbar c/4\pi R$, then $\Delta E=\Delta Mc^2=T\Delta S=(\hbar c/4\pi R)(8\pi R)(2G\Delta M/c^2)/4\ell^2=(\hbar G/c^3)(\Delta Mc^2)/\ell^2$ and we can identify $\ell^2=\hbar G/c^3$, which is called the Planck area, where the Planck length ℓ is about 1.6×10^{-33} centimeters.

$$\ell_p = \sqrt{\frac{\hbar G}{c^3}} \sim 1.6 \times 10^{-35} \text{m}$$

Planck Length

This is an amazing result. The number of quantized dynamical degrees of freedom or bits of information that characterize a black hole is proportional to the surface area of the event horizon

as $n=A/4\ell^2$. It is as though the event horizon is covered with pixels about the size of a Planck area and each pixel encodes a bit of information. This way of encoding information on an event horizon in terms of a bit of information per Planck size pixel is called the holographic principle.



$$S_{\rm BH} = \frac{kA}{4\ell_{\rm P}^2}$$

Information/Entropy Encoded on a Black Hole Event Horizon

This result is also weird. The things that fell into the black hole were also characterized by entropy or quantized dynamical degrees of freedom. Since those things fell into the black hole, it would seem the entropy of the black hole should be proportional to the volume of the black hole, not to the surface area of the event horizon, but that's not what the math says. The math is telling us that the fundamental nature of the quantized dynamical degrees of freedom that characterize all things, including black holes, do not actually exist within those things, but rather exist on a bounding surface of space, like an event horizon. The bounding surface acts like a holographic screen that encodes bits of information, where the pixel size is about a Planck area. The appearance of something in three dimensional space is something of a holographic illusion that arises from holographic projection, like an image projected from a screen to the point of view of an observer. All the bits of information are encoded on a two dimensional holographic screen.

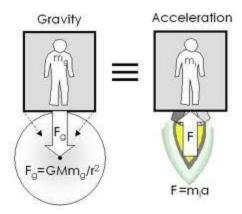
There is something else that is weird about this result. The nature of holographic projection is observer dependent. Holographic projection can only arise in an observer's accelerated frame of reference. The distant observer outside the event horizon of a black hole is in an accelerated frame of reference due to the gravitational attraction of the black hole. To avoid being pulled into the black hole by the force of gravity, the distant observer must accelerate away from the black hole with an acceleration that is equal to the acceleration due to gravity the black hole is exerting on the observer. If the observer is in a rocketship, the thrusters of the rocketship must exert an equal but opposite acceleration that opposes the acceleration due to gravity for the rocketship to

remain in a stationary position. The stationary observer only observes thermal radiation from the event horizon of the black hole because the observer is in an accelerated frame of reference.

What about a freely falling observer that falls through the event horizon? What does the freely falling observer observe? The strange answer is nothing. For the freely falling observer, the event horizon is only an imaginary surface in space, which has no temperature and radiates no thermal radiation. Particles of thermal radiation do not exist for the freely falling observer, only for the stationary observer outside the event horizon in an accelerated frame of reference.

How is this possible? How can particles of thermal radiation appear to exist for the stationary observer in an accelerated frame of reference outside the event horizon but not for the freely falling observer that falls through the event horizon? The answer is holographic projection is observer dependent and depends on the observer's accelerated frame of reference. The thermal energy of the thermal radiation observed by the accelerated observer literally arises from the observer's acceleration, which gives rise to the temperature of the event horizon. Even the event horizon, understood as a bounding surface of space that limits the observer's observations of things in space due to the limitation of the speed of light as a means of information transfer in three dimensional space, only arises in the observer's accelerated frame of reference. The holographic encoding of bits of information on the event horizon can only arise in the observer's accelerated frame of reference. The whole geometric mechanism that leads to holographic projection is observer dependent as it depends on the observer's acceleration.

The only way to understand what is going on here is to go back to the foundations of relativity theory. The central assumption of relativity theory is the principle of equivalence, which says every force is equivalent to an acceleration. The classic example is an observer in an accelerating rocketship. If that observer drops an object, the object will appear to accelerate towards the floor of the rocketship as observed by the accelerating observer, but this is really no different than an observer standing on the surface of the earth that drops an apple and watches the apple accelerate towards the ground. In the second case we say the force of gravity made the apple accelerate. In the first case we don't say any such thing. There are no forces in the first case, only an accelerating rocket-ship that creates the appearance of falling objects accelerating relative to an accelerating observer. In some sense the force of gravity is an illusion that only arises because the observer is in an accelerated frame of reference.



Principle of Equivalence

The idea of relativity theory is based on the principle of relativity and the equivalence principle. The principle of relativity tells us that there is a maximal rate of information transfer in three dimensional space, which we call the speed of light. The speed of light is the same constant for all observers, independent of their state of relative motion. The equivalence principle tells us that the force of gravity is equivalent to an acceleration. When we lump all the so-called fundamental forces together in a theory of quantum gravity, the equivalence principle tells us that all forces are equivalent to accelerations. Einstein used these two principles to formulate the theory of general reality, which culminated in his field equations for the space-time metric.

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

Einstein's Field Equations for the Space-time Metric

Relativity theory tells us the exertion of every force, like gravity, is equivalent to an accelerated frame of reference. The exertion of a force always implies the expenditure of energy, like a rocketship that must expend energy through the force of its thrusters as it accelerates through space. The force of gravity is always equivalent to an observer in an accelerating frame of reference, which requires the expenditure of energy.

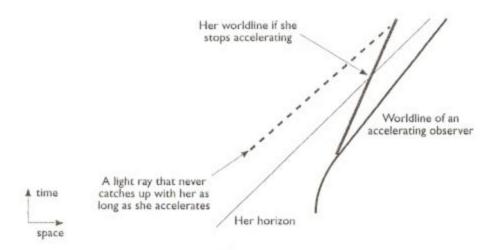
In relativity theory, an observer is understood to be located at the central point of view of a frame of reference or at the origin of a coordinate system. From the observer's own perspective, the observer does not move through space since space is defined in its own coordinate system, but if that frame of reference is accelerated, the observer will experience a force, which implies the expenditure of energy. From the perspective of another observer in another frame of reference, the accelerating observer appears to follow an accelerated world-line through the space-time

geometry of the other observer. The accelerating observer's observations in space are always limited by an event horizon, which is as far out in space as the observer can see things in space.

The observer's horizon is a two-dimensional bounding surface of space that limits the observer's observations of things in space. Since nothing can travel faster than the speed of light through three dimensional space, even a light ray cannot cross the observer's event horizon and reach the accelerating observer's point of view, and so nothing is observable beyond the observer's event horizon. If the observer stops its acceleration and enters into a freely falling frame of reference, which implies energy is no longer expended, the observer's horizon apparently disappears and the observer's observations in space are no longer limited, or so it would seem. The irony of the holographic principle is that when those observations become unlimited, nothing is observed.

Due to the limitation of the speed of light as a means of information transfer in three dimensional space, every observer in an accelerated frame of reference is surrounded by an event horizon that limits the observer's observations of things in space. The event horizon is as far out into space as the observer can see things in space. The event horizon is a bounding surface of space, which is understood to act as a holographic screen, like a computer screen. The holographic principle tells us that everything the observer can observe in space is a form of information that is encoded on the screen and that is projected like an image from the screen to the observer's point of view. The observation of anything in space can only arise through a process of holographic projection, which is only possible in an observer's accelerated frame of reference.

Every accelerating observer has its own event horizon, which limits its observations of things in space. The observer's event horizon is observer-dependent in the sense it can only arise in the observer's accelerated frame of reference. For example, an observer in de Sitter space has a cosmic de Sitter horizon that arises due to the accelerated expansion of space. Even an observer in empty space that undergoes a constant acceleration has an event horizon called a Rindler horizon that limits the observer's observations of things in space.



Accelerating Observer's Horizon

Let's go back to the problem of how particles of thermal radiation can appear to exist for an accelerating observer in a stationary position outside the event horizon of a black hole but not for a freely falling observer that falls through the event horizon. How can the two observers disagree about the nature of what exists? One possible answer is once the freely falling observer crosses the event horizon, there is no possibility of communication between the freely falling observer inside the black hole and accelerated external observer outside the black hole since no signal that originates from inside the black hole can ever cross the event horizon. The two observers cannot communicate with each other about their differing observations of what exists, and so there is no possibility of disagreement. This question about what really exists becomes meaningless.

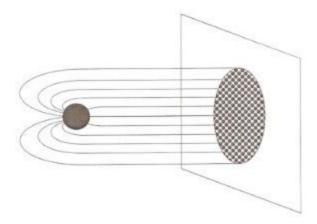
The principle of equivalence tells us that every frame of reference has equal validity. There is no absolute or preferred frame of reference. What the accelerated external observer observes is just as valid as what the freely falling observer observes. The problem is the accelerated external observer observes a black hole event horizon that appears to have a temperature and radiate Hawking radiation, while the freely falling observer doesn't observe any of this stuff. As far as the freely falling observer is concerned, what the accelerating observer observes doesn't exist.

The key point that allows for a solution to this puzzle is the accelerating observer observes an event horizon that limits its observation of things in space while the freely falling observer has no such limitation of its observations. The holographic principle tells us that the accelerating observer's event horizon acts as a holographic screen that allows for the perception of Hawking radiation. The freely falling observer has no holographic screen and observes nothing.

The ultimate solution to this puzzle is the holographic principle. In the strict sense of ontology, nothing perceivable really exists. Everything perceivable is only a holographic illusion that results from holographic projection from a holographic screen to the point of view of an

observer. The perceivable things are all forms of information that are encoded on the holographic screen. The perception of anything is like the projection of an image from the holographic screen to the point of view of the observer. These perceptions are illusory in the same sense the projection of movie images from a movie screen to an observer out in the movie audience is illusory. The observer itself is not a perceivable thing, but can only be described in the sense of perceiving consciousness that arises at a point of view in relation to the screen. Consciousness itself is not a perceivable thing. Consciousness is what perceives things. We can't say what consciousness is in the framework of perceivable things because it isn't a perceivable thing.

Appearances are deceiving because of the way information is encoded for the appearance of things on a holographic screen. Things are characterized by information, but that information does not actually exist within things. The information that characterizes the appearance of things does not actually exist inside of things. Instead, all information is encoded on a holographic screen. The appearance of anything in three dimensional space is a holographic projection of the image of that thing from a holographic screen to the point of view of the observer of that image. The projected images of things correspond to the organization of forms of information on the holographic screen. When the observer observes the image of anything, there is only the appearance of that thing actually existing in three dimensional space in the sense of holographic projection. When something appears to fall into a black hole, that's only another appearance that results from holographic projection. When the black hole appears to radiate Hawking radiation, that's only another appearance that results from holographic projection. No matter what appears to happen, the information for those happenings is always encoded on the holographic screen.

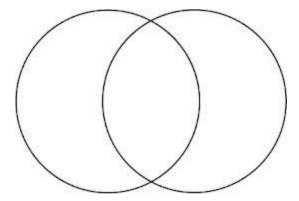


Holographic Projection

The perceivable things are all holographic projections from the holographic screen, where all the information for those things is encoded. Different observers in different frames of reference can observe different things due to the nature of holographic projection. Different observers can disagree about the nature of what appears to exist since what appears to exist is only an illusory

holographic projection. Every observer is observing the form of things as projected from its own holographic screen. Those perceptions don't necessarily need to agree since the way information is encoded and organized on different screens can be different for different observers.

The fact that different observers can observe different things and can even disagree about what appears to exist is not surprising since that is a natural consequence of the holographic principle. What is surprising is that different observers can share a consensual reality and can agree about anything. Again, the holographic principle suggests a solution. Each observer observes events as projected from its own holographic screen, but in the sense of a Venn diagram those screens can overlap and share information, much like the kind of information sharing we see in a network of computer screens, like the internet. A consensual reality shared among different observers becomes possible with information sharing among overlapping holographic screens.

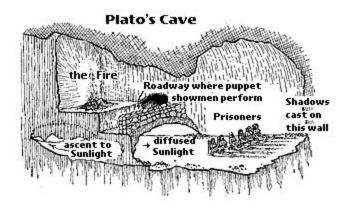


Overlapping Bounding Surfaces of Space

When Susskind and 't Hooft first proposed the holographic principle it was only a good idea in search of a more rigorous mathematical solution, which was soon discovered with the AdS/CFT correspondence. This rigorous mathematical solution about the nature of a holographic screen was possible because of the special properties of anti-de Sitter space, which is a geometric space that only has a single boundary, called an anti-de Sitter event horizon, and a single central point of singularity, which is the central point of view of an observer. The anti-de Sitter horizon is the observer's holographic screen. The special properties of anti-de Sitter space is what reduces the complexity of the problem and makes an exact mathematical solution possible. In anti-de Sitter space, we don't have to worry about differing observations of different observers because there aren't any. In anti-de Sitter space there is only a single observer and a single holographic screen.

In the Allegory of the Cave, Plato describes the perceivable world in terms of shadows projected on the wall of a cave. Plato describes a source of light that projects shadows on the wall of the cave and describes prisoners that perceive these projected shadows and identify themselves with the shadows. In this allegory, the cave is the observable universe and the wall of the cave is a cosmic horizon that defines the boundary of the observable universe relative to an observer at the

central point of view of the observable universe. As a cosmic horizon, the wall of the cave limits the observer's observations of things in space. In the sense of the holographic principle, the wall of the cave acts as a holographic screen that projects the perceivable images of all things in the observer's world to the observer's central point of view. These projected images are forms of information, which Plato refers to as shadows. The projecting light is the light of consciousness and the observer is the perceiving consciousness. Plato refers to the observer as a prisoner since the observer identifies itself with the projected image of a shadow it perceives.



In what sense are images projected from a holographic screen shadows? The formulation of the holographic principle in the AdS/CFT correspondence gives an answer. If all perceivable objects are really defined on a two dimensional holographic screen in terms of where all the fundamental bits of information are encoded, then where does the third dimension come from? An answer is given by the correspondence between conformal field theory (CFT) and gravity in anti-de Sitter space (AdS). The perception of gravity in a bounded region of anti-de Sitter space is equivalent to a conformal field theory encoded on the bounding surface of that space. The perception of a third dimension arises from the Weyl symmetry of the conformal field theory. Conformal invariance is not a symmetry of space-time geometry the way Lorentz invariance is a symmetry of flat Minkowski space, but is a symmetry of the space-time metric that measures the curvature of space-time geometry. Conformal invariance allows anti-de Sitter space to become a holographic space in the sense that whatever appears to happen in that space is a holographic projection from the bounding surface, where all the information for those happenings is encoded, to the central point of view of the observer that perceives those happenings.

Weyl symmetry of the space-time metric is what gives rise to the perception of a third dimension. Conformal invariance is inherently a symmetry of the changing size of objects, which are forms of information. Conformal symmetry is also inherent in the geometric structure of fractals, which appear the same or self-similar no matter the distance scale at which one looks at them. In the AdS/CFT correspondence, all objects in space exhibit conformal symmetry. As objects in space appear to move toward or away from the point of view of an observer and

appear to grow larger or smaller in size, the way bits of information are encoded for the objects on the bounding surface of that space also grow larger or smaller in size in perfect proportions of three dimensional perception. It is as though a light is projecting a shadow of the object onto a screen, and that shadow is growing larger or smaller in size as the object moves toward or away from the observer. The holographic principle is telling us that the shadow is the nature of the perception of objects. Objects don't really exist in three dimensional space except as holographic projections. Their shadows only exist in terms of the information encoded on a two dimensional bounding surface. This way of describing the appearance of objects in space as shadows projected on a wall is eerily similar to how Plato describes objects in the Allegory of the Cave.

Plato's Allegory of the Cave is a metaphor for the holographic principle. In the Allegory, Plato described a cave. The cave is a metaphor for the observable world. The cave has a wall. The wall is a metaphor for the boundary of the observable world. The observable world has a boundary because every observer in an accelerated frame of reference has an event horizon that acts as a holographic screen. The wall of the cave acts as a screen, like a movie screen. Inside the cave there is a source of light that projects images on the wall of the cave, like a movie projector. Also inside the cave are observers that observe the images projected on the wall of the cave, like observers in a movie audience watching movie images projected from the screen. Plato called the observers prisoners because they're identifying themselves with the images they're observing. The observers have mistakenly taken the images projected on the screen for themselves and don't know who they really are. They've mistakenly identified themselves with a projected image they perceive and are confused about who they really are.

This sounds weird, but that's because the holographic principle is weird. The only way we can understand what Plato is saying is to understand the metaphor. The cave is the observable world and the wall of the cave is the boundary of the observable world. That boundary acts as a holographic screen that projects holographic images to the observers in the cave. Everything observable in the cave is a holographic image projected from the screen. What does that make the observers? Are the observers people? The answer is no. The observable image of a person is just another holographic image projected from the wall of the cave. Just like in relativity theory all we can say is the observer is a point of view that corresponds to an accelerated frame of reference. We'll come back to this later, but the wall of the cave is an event horizon that arises in the observer's accelerated frame of reference. Since nothing is observable beyond the event horizon, the event horizon defines the observer's observable world. It's the event horizon that acts as the holographic screen. The observer itself is only a point of view at the origin of a coordinate system that defines an accelerated frame of reference. If we want to get fancy about it, we can say the observer is the perceiving consciousness that is present at that point of view.

What about the images? Is there really a movie projector with film inside the projector? The answer is no. The projected images are forms of information. The holographic principle is telling

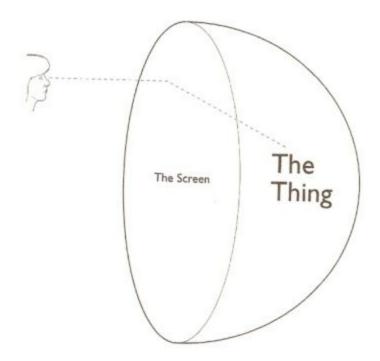
us that the movie screen is really a holographic screen that encodes bits of information in some fundamental way. The holographic screen arises as an event horizon in the observer's accelerated frame of reference, and encodes bits of information due to some kind of fundamental encoding mechanism. We'll come back to this mechanism later, but suffice it to say, it is a geometric mechanism. The projected images are forms of information organized on the holographic screen.

What about the light that is projecting the images on the wall of the cave. Is that physical light? The answer is no. To continue the metaphor, the projecting light is not physical light but the light of consciousness. We usually don't think about consciousness this way, but consciousness has both an outgoing projecting aspect and an incoming perceiving aspect. We call the perceiving aspect of consciousness the observer. The best name for the outgoing projecting aspect of consciousness is the light of consciousness. In a twisted way, the reason why the observers are identifying themselves with the images they're observing is because they're also projecting those images with their own light of consciousness. It's only a projection of their own bullshit.

Genesis tells us that in the beginning, God divided the light from the darkness. The light that Genesis refers to is the light of consciousness. Genesis also says the spirit of God moved over the face of the deep. The spirit of God is the observer in the sense of the perceiving consciousness, just as the projecting light is the light of consciousness. The source of both the perceiving consciousness and the light of consciousness is the darkness. The darkness is also consciousness, but it can't be described as either perceiving consciousness or the light of consciousness. It's the source of both. For lack of a better name, it can be called the source consciousness. When Genesis says God divided the light from the darkness, this implies the source is undivided. The source consciousness is one undivided consciousness. In order to create an observable world that is observed by an observer, the observer's perceiving consciousness and the projecting light of consciousness must be divided from the undivided source consciousness. In some sense, the observer's perceiving consciousness and the projecting light of consciousness are fragments of the undivided source consciousness. This act of division or fragmentation gives rise to individuality. Individual consciousness is always divided off from its undivided source. Individual consciousness has an outgoing projecting nature, which is the light of consciousness, and an incoming perceiving nature, which is the observer. The source of consciousness cannot be described in either of these ways because it is undivided. The undivided source of consciousness has no individuality, and has neither an outgoing projecting nor an incoming perceiving aspect.

When Genesis says the spirit of God moved over the face of the deep, this is a metaphor for the holographic principle. The spirit of God is the observer in an accelerated reference frame. The motion of the observer is its acceleration. The face of the deep is an event horizon that arises in the observer's accelerated frame of reference. The face of the deep is the wall of Plato's cave. The deep or the darkness or the abyss or the void is a way of describing the undivided source of consciousness in the sense of negation, or what it isn't. It isn't possible to describe what it is.

Before the observer's observable world was created, there was only formless darkness or void. The observable world was only created because the consciousness of the observer was divided from the undivided source of consciousness, just like the light of consciousness was divided from the darkness. That observable world is always defined on a holographic screen, which is the face of the deep. The light of consciousness is projecting images of that world from the screen back to the observer, where the projected images are perceived. The whole thing is twisted since the observer can only perceive those images if its own light of consciousness projects them.



The Observer's Holographic Screen

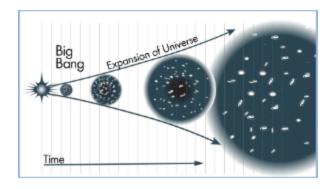
The AdS/CFT correspondence mathematically proves the holographic principle applies to any world described by anti-de Sitter space. This is a mathematical proof, not just idle speculation. The problem is the world we apparently find ourself to exist within is not anti-de Sitter space, but de Sitter space. Anti-de Sitter space arises as a solution to Einstein's field equations for the space-time metric with a negative cosmological constant. In Einstein's theory, gravity is a locally attractive force that arises from the local contraction of space. A negative cosmological constant gives rise to a globally attractive force that causes the global contraction of space. In a heuristic sense, anti-de Sitter space arises from the accelerated contraction of space.

Anti-de Sitter space is weird. In a strict mathematical sense, the distance from the central point of singularity to the anti-de Sitter event horizon is infinite, but due to the accelerated contraction of anti-de Sitter space, it takes light a finite amount of time to travel this infinite distance. In a strict mathematical sense, the anti-de Sitter event horizon is a boundary at infinity, but in the sense of

the holographic principle, it encodes a finite amount of information for everything that can appear to happen within that bounded region of space. In a very deep sense, anti-de Sitter space is unphysical since it is mixing up the finite with the infinite. This is not a physical space.

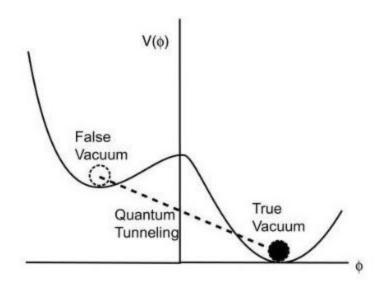
The problem with anti-de Sitter space is the negative value of the cosmological constant. The cosmological constant is understood as a vacuum energy, which is the energy of empty space. For a physical space, the lowest possible value of the vacuum energy is zero. A negative vacuum energy does not correspond to a physical space. It is possible in physics to have false vacuums that correspond to metastable states in which the vacuum energy is non-zero, but for these metastable states to be physical, the vacuum energy of these false vacuums must be positive.

The observational evidence is the observable physical universe does exist in a metastable or a false vacuum state with a positive vacuum energy. This positive vacuum energy is the measured cosmological constant, which in Planck units has a numerical value of about 10^{-123} . This value is determined from observations of the rate with which distant galaxies are accelerating away from us, which corresponds to the accelerated expansion of space. There is also evidence from observations of the cosmic microwave background radiation left over from the big bang event that early in the history of the universe the cosmological constant had a value of about 1.



Big Bang Event as the Accelerated Expansion of Space

There must be some mechanism that allows the false vacuum state of the observable physical universe to transition from a higher value of vacuum energy to a lower value of vacuum energy. This would be a transition from a less stable metastable state to a more stable metastable state. Such a transition must have occurred early in the history of the universe to reduce the initial value of the cosmological constant to its current measured value of about 10^{-123} . There may have been more than one transition, and even more transitions may be possible since the most stable state is the true vacuum with a zero value of vacuum energy. The transition mechanism is unknown, but most likely it is a non-equilibrium process like a phase transition.



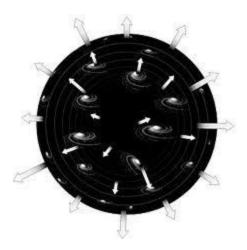
Metastable False Vacuum State

A non-zero positive value for the cosmological constant corresponds to a metastable state with a positive vacuum energy that through some unknown mechanism can decay into a more stable state with a lower energy. Since this vacuum energy is the energy of empty space, the lowest possible value that can correspond to a physical space is zero. A non-zero positive vacuum energy is a false vacuum, while a zero vacuum energy is the true vacuum. A negative vacuum energy is not physical, and cannot correspond to the physical universe.

The problem with the AdS/CFT correspondence is the kind of cosmological space we find ourselves within inside the physical universe is not anti-de Sitter space but de Sitter space. In relativity theory, anti-de Sitter space arises with a negative cosmological constant, which gives rise to a globally attractive force that corresponds to the accelerated contraction of space, while de Sitter space arises with a positive cosmological constant, which gives rise to a globally repulsive force that corresponds to the accelerated expansion of space. For various reasons, a positive cosmological constant is now called dark energy, and de Sitter space is understood as the accelerated expansion of space that arises as dark energy is expended.

As dark energy is expended, the observer at the central point of view enters into an accelerated frame of reference and space appears to expand away from the observer at an accelerated rate, faster the farther out the observer looks into space. At some point in space, space appears to expand away from the observer at the speed of light, and nothing is observable beyond that point, which defines the surface of the observer's cosmic de Sitter horizon. The accelerated observer is surrounded by a cosmic horizon, which is a bounding surface of space that limits the observer's observations of things within that bounded region of space. Nothing is observable beyond the

observer's cosmic horizon due to the accelerated expansion of space, which in relativity theory is understood as an exponentially expanding universe.



Accelerated Expansion of Space

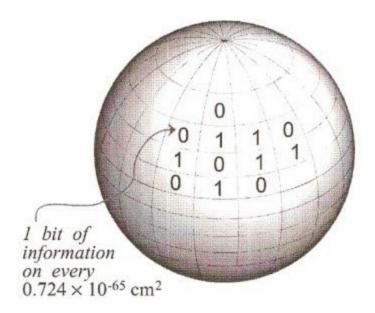
As dark energy is expended, the observer at the central point of view enters into an accelerated frame of reference and space appears to expand away from the observer at an accelerated rate, faster the farther out the observer looks into space. This accelerated observer is then surrounded by a cosmic or de Sitter horizon, which is a bounding surface of space that limits the observer's observations of things within that bounded region of space. The holographic principle tells us the observer's horizon acts as a holographic screen that encodes all the bits of information for all the observable things the observer can observe in that bounded region of space. The observation of anything within that bounded region of space is a holographic projection from the screen to the observer's central point of view, which is at the center of that bounded space.

The AdS/CFT correspondence explicitly demonstrates the holographic principle in anti-de Sitter space, but for various technical reasons cannot be generalized to de Sitter space. However, this correspondence is a special case of non-commutative geometry, and generic non-commutative geometry can be applied to de Sitter space, which is to say non-commutative geometry can be applied to the kind of space we find ourselves within inside the physical universe. Even fractal geometries can be understood as special cases of non-commutative geometry. Through the magic of non-commutative geometry, the holographic principle can be extended into de Sitter space.

It may seem like an arcane topic of discussion, but non-commutative geometry is the natural way to understand how space-time geometry is quantized. The natural kind of geometry for which non-commutative geometry can be applied is a two dimensional bounding surface of space, like an event horizon. Instead of localizing an infinite number of infinitesimal points on the surface of the horizon, with non-commutative geometry a finite number of quantized position coordinates are defined on the surface. In effect, each quantized position coordinate defined on the surface is

smeared out into an area element, like a pixel on a screen, with a well-defined mathematical procedure for defining quantized position coordinates in terms of non-commuting variables.

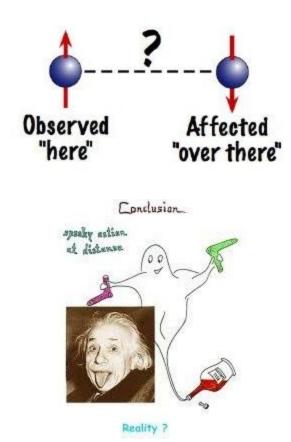
In quantum gravity, the pixel size is about a Planck area, and the total number, n, of quantized position coordinates defined on the surface is given in terms of the surface area, A, as $n=A/4\ell^2$. Non-commutative geometry not only gives a mathematical procedure for how quantized position coordinates are defined on the surface in terms of non-commuting variables, but also explains how each quantized position coordinate acts like a pixel that encodes a bit of information in a binary code of 1's and 0's. The bounding surface typically encodes n bits of information as the n eigenvalues of an n x n matrix. Just as the two eigenvalues of an SU(2) matrix can explain how a spin $\frac{1}{2}$ variable is quantized into spin up and spin down states, like a computer switch that is either on or off and encodes information in a binary code, the n eigenvalues of an n x n matrix can explain how n non-commuting variables defined on the surface encode n bits of information. The value of n corresponds to a spin S variable, where n=2S+1. Since the n x n matrix is a higher spin representation of an SU(2) matrix, it can also represent rotational symmetry on the surface of a sphere, like the spherical surface of an event horizon. Although the surface of the sphere is typically drawn as covered with pixels, each pixel encoding a bit of information, the pixels are actually defined by non-commuting variables in a rotationally invariant way.



Holographic Principle

Since all the information for a holographic world arises as the eigenvalues of an n x n matrix, all the bits of information are naturally entangled in the sense of quantum entanglement. All the paradoxes of quantum entanglement that Einstein referred to as spooky action at a distance have a natural explanation in terms of holographic projection. Entangled objects in a holographic

world can appear to separate in distance, but the entangled bits of information that define those objects as encoded on a holographic screen do not separate, and so there is no paradox. The appearance of the separation of objects is an illusion that results from holographic projection.

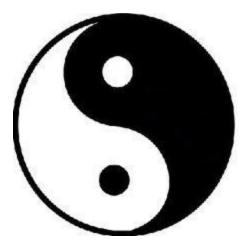


Quantum Entanglement and Spooky Action at a Distance

Non-commutative geometry gives us a natural operational explanation for how the holographic principle comes into effect. Whenever non-commutative geometry is applied to a bounding surface of space as a way to define n quantized position coordinates on the bounding surface, the holographic principle is automatically in effect and the bounding surface encodes n bits of information in a binary code of 1's and 0's, typically as the n eigenvalues of an n x n matrix. Each non-commuting variable defined on the bounding surface acts like a pixel that encodes a bit of information. The bounding surface of space naturally arises as an event horizon whenever an observer enters into an accelerated frame of reference, such as a cosmic or de Sitter horizon that arises whenever dark energy is expended and space appears to expand at an accelerated rate away from the central point of view of the observer at the central point of singularity.

This operational explanation explains the nature of everything the observer can observe within the bounded space, which in effect defines the observer's world. The nature of the observation of anything within the bounded space, which is the nature of everything the observer can observe within the bounded space that arises in its accelerated frame of reference, is a holographic projection from the observer's holographic screen, which is a bounding surface of space, to its central point of view, which is the central point of singularity of that bounded space.

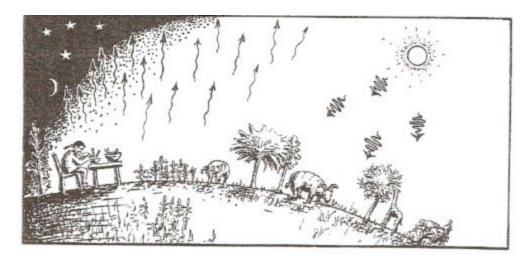
Remarkably, the holographic principle tells us that everything that can appear to happen from the point of view of an observer in any observable world, which is always a region of space that is bounded by a holographic screen that projects images of that world to the observer's central point of view, is as though nothing happens. It is as though nothing happens because all the energy for those happenings exactly adds up to zero. This is possible in relativity theory since the negative potential energy of gravitational attraction can exactly cancel out all forms of positive energy. A holographic world is fundamentally a world that is equivalent to nothing. A holographic world is a world that consists of nothing more than forms of information projected like images from a screen to an observer's point of view, and the animation of those images in the flow of energy. A holographic world is equivalent to nothing due to the nature of holographic projection.



Yin-Yang Balance

The normal flow of energy through the observer's world is a consequence of the second law of thermodynamics, which describes the random flow of thermal energy. Heat tends to flow from hotter to colder objects, and also from hotter states to colder states of the observer's world. The observer's world is not at thermal equilibrium, which is why heat flows. This is purely a statistical consequence of hotter objects tending to radiate away more heat. As heat flows in a thermal gradient, entropy, which is the disordering of information inherent in objects as a consequence of the randomization of thermal energy, tends to increase, which tends to disorder objects, like a piece of ice that becomes more disordered when it melts into water as heat flows into it and chemical bonds are broken, or the flow of heat from the sun to the earth which arises through the dispersion of photons into more randomized states. This normal flow of heat in a

thermal gradient and the corresponding increase in entropy that accompanies the flow of heat is what gives rise to the normal flow of energy through the observer's world.



Normal Flow of Energy in a Thermal Gradient

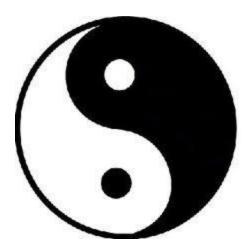
There is a competing process that tends to balance out the normal increase in entropy or disorder that occurs as heat flows in a thermal gradient. This balancing process is the tendency for coherent organization of information to develop, which allows for the organization of objects into distinct forms that coherently self-replicate their forms and for distinct forms to become inter-related. This tendency for coherent organization to develop is a natural aspect of a holographic world, since all the bits of information encoded on a holographic screen are entangled, typically as the n entangled eigenvalues of an n x n matrix that arises when a finite number of position coordinates are specified on the screen by non-commutative geometry. Entanglement of information implies that every distinct form of information that appears in the observer's world through the projection of images from the observer's holographic screen to its central point of view is inherently related to every other distinct form of information. Entangled bits of information naturally tend to align over an animated sequence of holographic projections, and that alignment of information gives rise to the coherent organization of information. Coherence can even be seen on a piece of holographic film as an interference pattern.

This tendency for entangled bits of information to align or bind together is typical of quantum entanglement, like entangled spin variables that tend to align. This tendency for entangled spin variables to align over a sequence of quantum state reductions is demonstrated in a spin network. A holographic screen has that kind of underlying structure. This natural tendency for entangled bits of information to self-organize and form self-replicating distinct forms of information and for the development of inter-relationships between distinct forms is balanced out by the natural tendency for information to become disordered and entropy to increase as heat flows in a thermal gradient. The temporary and local organization of information into forms is possible in spite of

the relentless tendency for entropy to globally increase and eventually disorganize all forms due to the possibility of entropy locally and temporarily decreasing while global entropy increases.

This local and temporary decrease in entropy is possible due to the addition of organizing potential energy to a form while disorganizing random kinetic energy or heat is radiated away from the form into the global environment. We call this addition of organizing potential energy to a form the process of forms eating other forms. The necessity for a life-form to add potential energy to itself by eating other life-forms is a necessary condition for the temporary organization of all life-forms. Life-forms can only survive as self-replicating forms if they eat other life-forms and avoid being eaten by other life-forms. This kind of energetic expression by a life-form is what we call an emotional expression, as in the expression of fear and desire, which is necessary for survival of life-forms. Even plants have to eat photons through the process of photosynthesis.

The organization and disorganization of the forms of all objects and their inter-relationships are always in a balanced state of interplay in a holographic world. This balanced state of interplay is another manifestation of a holographic world fundamentally being equivalent to nothing. Every positive action is ultimately cancelled out by a negative action, just as negative gravitational potential energy cancels out all forms of positive energy. Everything ultimately adds up to zero.



Yin-Yang Balance

Ted Jacobson has shown the dynamical nature of space-time geometry in any bounded region of space, which is the nature of gravity, is a thermodynamic consequence of the holographic way bits of information are encoded on the bounding surface of that space. The reason is quite simple. As energy flows across a bounding surface of space, the second law $\Delta E=T\Delta S$ tells us the entropy of that bounded region must change, but the holographic principle then tells us the bounding surface must change, which is reflected in a change in the geometry of that bounded region of space as specified by Einstein's field equations for the space-time metric. The law of gravity as formulated with Einstein's field equations for the metric is not really a law of nature, but is more

like a thermodynamic equation of state that arises as a thermal average when things are near thermal equilibrium. This is analogous to the way wave equations for sound waves arise from atomic theory as thermodynamic equations of state. Einstein's field equations for gravity are no more fundamental than wave equations for sound waves. The microscopic formulation of bits of information encoded on a bounding surface of space is more fundamental than Einstein's field equations just as atomic theory is more fundamental than wave equations for sound waves. The scientific term for how field equations arise from information is thermodynamic emergence.

The amazing thing is the second law of thermodynamics interpreted in terms of the holographic principle and the Unruh temperature implies Einstein's field equations for the space-time metric, which is the law of gravity for everything that appears in the bounded region of space. The law of gravity is then understood to be a purely geometric result of the way bits of information are encoded on the bounding surface of that space and the temperature of the bounding surface.

Using the usual unification mechanisms of super-symmetry and the Kaluza-Klein mechanism of extra compactified dimensions of space then gives rise to all the usual quantum fields of the standard model of particle physics. A quantum field is understood to arise as an extra component of the space-time metric, which is a way of unifying all fundamental forces and particles into a unified theory of quantum gravity. The problem is none of these quantum fields are really fundamental as they all emerge through geometric mechanisms, starting with the holographic principle. A theory of quantum gravity is only a holographic description of what appears to happen in a bounded region of space. More fundamental than that description is the way bits of information are encoded on the bounding surface of that space and the flow of energy within which everything spontaneously emerges.

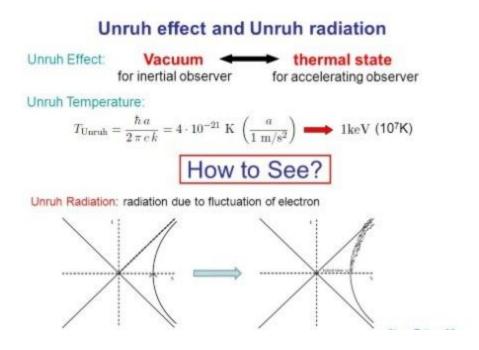
The holographic principle is a radical departure from the concepts of both classical and quantum physics. In the classical concept of particle physics, the dynamical degrees of freedom of any bound or unbound state of particles observed in the world are described by particle coordinates, which define a phase space in terms of particle position and momentum variables. In quantum theory, particle position and momentum coordinates are represented by non-commuting variables that give rise to quantized values for particle position and momentum. Forces between particles are represented by fields, like the gravitational and electromagnetic fields. With quantum field theory, even these force fields are understood to be composed of force particles like the photon or graviton that arise as localized wave-packets of field energy and momentum. The matter particles like the electron are also represented by quantum fields. With unification, all quantum fields are understood to arise as extra components of the space-time metric, which describes the dynamical nature of the space-time geometry of some bounded region of space. In this way, all degrees of freedom of any bounded region of space are represented by dynamical variables. Quantization of dynamical variables gives rise to the entropy of that bounded region of space.

The holographic principle is telling us that none of these classical or quantum concepts are really fundamental. Particle coordinates in any bounded region of space are not really fundamental dynamical variables. The way bits of information are encoded on the bounding surface of that space is the more fundamental description. Non-commutative geometry tells us the fundamental dynamical variables are non-commuting position coordinates on the bounding surface that are smeared out into area elements like pixels and encode bits of information in a binary code. The bits of information encoded on the bounding surface are the fundamental nature of entropy for whatever can be observed in that bounded region of space. This is a radical departure from the way entropy is described in either classical or quantum particle physics.

The amazing aspect of the holographic principle is it tells us this radical departure from the way entropy is described by particle physics in a bounded region of space is equivalent to the way entropy is more fundamentally defined in terms of bits of information encoded on the bounding surface of that space. This equivalence is due to holographic projection. The bounding surface arises as an observation-limiting event horizon in an observer's accelerated reference frame. The thermal energy of that bounded region of space arises from the observer's acceleration, which gives rise to the temperature of the bounding surface. Everything the observer can observe in the bounded region of space is like a holographic projection of images from the bounding surface, which acts as a holographic screen, to the observer's central point of view.

When we observe something, like a point particle that follows a trajectory through space, we are actually observing a sequence of holographic screens, each of which encodes information for the object at some moment of time. Those holographic screens can be layered together, so that each observation of a point on the trajectory corresponds to observing how that point pierces another layer of the screens. Holographic screens are inherently two dimensional, but the layering of screens gives the illusion of three dimensional space. Like all event horizons that arise in an accelerated reference frame, the distance to the screen is set by the observer's acceleration.

The classic example of this effect is a Rindler horizon, which is an event horizon that arises for an observer that undergoes constant acceleration. The observer's horizon is entirely due to the observer's acceleration. If the observer accelerates in a different way, the observer has a different horizon. The Unruh temperature is derived as the temperature of a Rindler horizon, which is given by $kT=\hbar a/2\pi c$ when the observer accelerates with an acceleration a.



Unruh Temperature of a Rindler Horizon

In quantum theory, the Unruh effect is understood as a kind of Hawking radiation that results from an accelerating observer observing the separation of virtual particle-antiparticle pairs at the observer's event horizon, which turns separated virtual particles into a kind of thermal radiation. The classic way to understand the Unruh effect is for a Rindler horizon that arises for an observer undergoing constant acceleration. The Unruh effect in effect quantizes the thermal energy of each degree of freedom as $E=kT=\hbar\omega$, where the natural frequency of oscillation is given in terms of the observer's acceleration as $\omega=a/2\pi c$. It is easy to show that for the event horizon of a black hole of radius $R=2GM/c^2$ this frequency of oscillation implies a wavelength λ as $\omega=2\pi c/\lambda$, where the wavelength is approximately the maximal circumference $2\pi R$ of the event horizon, which is characteristic of Hawking radiation. This tells us the temperature of the event horizon is inversely proportional to its radius. The other way to look at this result is the Unruh effect implies gravitational acceleration and potential energy if we understand that the wavelength of thermal radiation from an event horizon is quantized in terms of its circumference.

Quantum field theory is the ultimate mathematical formulation of particle physics, but it assumes that flat Minkowski space is the background space-time geometry within which all particle excitations of fields arise. All particle excitations of fields must move within that flat space-time geometry. The problem is that flat Minkowski space has no dynamical curvature, and therefore has no notion of the idea of gravity. It is simply not possible to develop a formulation of quantum gravity with the graviton as the force particle of the gravitational field in flat Minkowski space.

The other problem with this formulation of QFT is the space-time symmetries inherent in flat Minkowski space. For example, time translational invariance of the laws of physics gives rise to the conservation of energy and spatial translational invariance of the laws of physics gives rise to the conservation of momentum. The problem is that once gravity and the dynamical curvature of space-time geometry is allowed, there is no such thing as time or spatial translational invariance.

The weird thing about energy conservation and the invariance of the laws of physics under time translation is there is no such thing. The observable physical universe began at a point of singularity called the big bang event and will end in its heat death when the size of the universe expands to infinity. The singular big bang event is the beginning of time and the end of time is at infinity. There is no invariance under time translation because the universe is not at thermal equilibrium. The asymmetric direction of time, called *time's arrow*, is a result of the second law of thermodynamics, which tells us that heat tends to flow from hotter objects to colder objects. Nothing can be hotter than the big bang event and nothing can be colder than the heat death of the universe. The observable physical universe is not invariant under time translation.

The observable physical universe is also not invariant under spatial translations. The universe is expanding in size at an accelerated rate, which tells us the size of the observable universe is limited by a cosmic horizon that limits the observations of an observer at the central point of view. There is really no such thing as invariance of the laws of physics under spatial translations and momentum conservation. At best, the symmetries of space-time geometry that give rise to the conservation laws of energy and momentum are idealizations that arise in some idealized limit when we ignore the asymmetrical nature of the observable universe. These idealizations may have practical value in terms of what can be measured in a physics lab, but do not apply to the asymmetrical nature of the observable universe. The whole concept of the symmetries of space-time geometry is flawed when we speak of the asymmetric observable physical universe.

Since the whole concept of space-time symmetry is flawed, the whole concept of quantum theory built on the conservation laws of that symmetry is also flawed. There must be something more fundamental than either space-time geometry or quantum theory that in some sense underlies these approximate idealizations. As we've discovered, the holographic principle is what underlies these idealizations with the more fundamental concept of pure information. The way space-time geometry and quantum theory arise from pure information is called thermodynamic emergence. Both space-time geometry and quantum theory thermodynamically emerge from a more fundamental state of pure information that is described by the holographic principle.

Is space-time really fundamental or is there something more fundamental than space-time? The holographic principle is telling us that space-time is a holographic illusion that results from holographic projection. The thing more fundamental than space-time is pure information. The holographic principle is all about describing the nature of the information that underlies the

perception of space-time. The holographic principle says that information underlies all perceptions. That's why the concept of an observer in an accelerated reference frame is so important. The relativistic observer is observing those perceptions. The holographic principle is telling us that all perceptions in some sense are illusions that arise from holographic projection.

On the one hand, we have information that underlies all perceptions, and on the other hand, we have an observer that is observing those perceptions. The only thing that connects them is holographic projection. The perceptions in-and-of-themselves are illusory since they consist of nothing more than holographic projections of forms of information, like the images of a movie projected from a movie screen to an observer out in the movie audience. More fundamental than the illusory perceptions are the bits of information encoded on the screen and the observer out in the audience. The big question is about the true nature of the observer. This is a question physicists don't like to ask because it's a question about the nature of consciousness.

Is there some connection between the relativistic observer in an accelerated reference frame and the quantum observer that is observing the observable values of the quantum state? Can we put these two observers together and make them into one unified observer? The answer of course is yes. There has to be a way to put them together. This is exactly what the holographic principle accomplishes. That's why the holographic principle is the most fundamental principle, more fundamental that the uncertainty principle or the equivalence principle, but this unification comes at a price. The holographic principle is telling us that the price is neither quantum theory nor relativity theory can really be fundamental. Just like space-time is a holographic illusion that results from holographic projection, the quantum observables of the quantum state are also holographic illusions that result from holographic projection. In the strict mathematical sense of quantum theory, there is no such thing as a quantum observable. Such a thing is impossible for reasons that will be discussed below. What we call observable values, like the position and the momentum of a particle, are just as illusory as the space-time geometry we observe.

The whole concept of quantum observables in quantum theory is flawed. In the strict mathematical sense of quantum theory, the concept of quantum observables is impossible. A quantum observable is something that in principle can be measured with exact precision. If we know absolutely nothing about a particle's momentum, in principle we can know everything about the particle's position. We can measure the particle's position with absolute certainty as long as its momentum remains totally uncertain. This is a direct consequence of the uncertainty principle. The problem is that when we add gravity to the equation the whole concept of quantum observables evaporates into the mist of holographic projection. Gravity throws a monkey wrench into the whole conceptual framework of quantum observables. That monkey wrench is called a black hole. Relativity theory tells us if we concentrate enough energy into a small enough region of space, we create a black hole. Once a black hole is created, nothing is

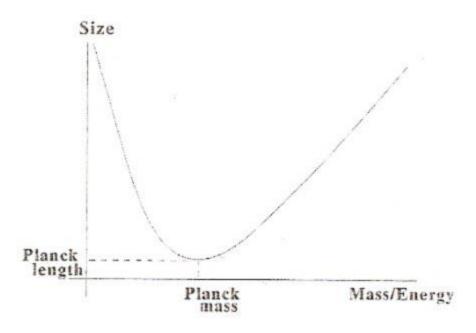
observable beyond the event horizon of the black hole. If we pour more energy into that region of space, we just make the black hole bigger and even less is observable.

The problem with quantum observables is that in order to measure something with greater and greater precision, we have to use a measuring device that concentrates more and more energy into a smaller and smaller region of space, which eventually leads to the formation of a black hole. The way this happens in practice is more accurate measuring devices use smaller and smaller wavelengths of radiation that carry larger and larger amounts of energy into smaller and smaller regions of space. Eventually we put so much energy into a small enough region of space that a black hole forms and nothing is observable beyond the event horizon of the black hole. Pour in more energy and the black hole's horizon becomes bigger and even less is observable.

There is something fundamentally incompatible with the concept of quantum observables as formulated in quantum theory and the concept of gravity as formulated in relativity theory. The answer that physicists like to postulate is that observables can only be defined on a boundary at infinity. If we put our measuring devices at infinity, they can measure observables with infinite precision. The concept of observables in any finite bounded region of space just does not make sense due to the problem of black holes, which will always throw a monkey wrench into the whole conceptual framework of observables. Observables simply do not exist in any finite region of space. Gravity does not allow exact quantum observables to locally exist in any finite region of space. Observables can only be defined on a boundary at infinity. The problem with this solution is infinity has no boundary. Once we put a boundary on infinity, it really isn't infinity any more. A boundary turns infinity into something finite. The real solution to this problem is to give up the concept of the existence of observables. What we call observables only have an illusory existence that arises from holographic projection. Observables do not really exist except as holographic projections of forms of information from a holographic screen to an observer at the central point of view, like the images of a movie projected from a screen.

A closely related problem to the incompatibility of gravity with the usual conceptual framework of observables in quantum theory is the problem of the concept of space-time. This is weird since the whole Einsteinian idea of relativity theory is that gravity is the curvature of space-time geometry. The problem again arises when we try to probe very small distances with very high energies. Since energy is equivalent to mass and mass gives rise to the force of gravity, if we concentrate enough energy into a small enough region of space, we create a black hole. The force of gravity is so strong at the event horizon of the black hole that even light cannot escape away from the black hole. Once we create a black hole, nothing is observable beyond the event horizon. Quantum theory tells us there is always some uncertainty in the amount of energy any measuring device can concentrate into a finite region of space due to the finite amount of time over which that energy is delivered. This uncertainty in energy tells us there is a smallest possible black hole where the uncertainty in energy and the uncertainty in size conspire to create

a black hole of the smallest possible size. This tells us that there is a smallest possible distance scale that we can probe, which is the size of the smallest possible Planck size black hole.



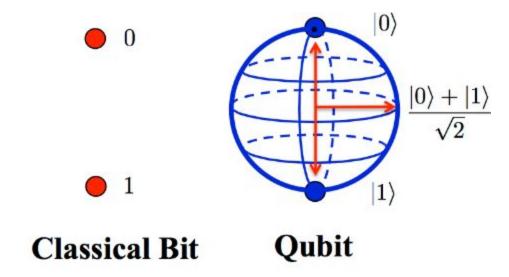
Planck Length as the Ultimate Distance Scale

If there really is a smallest possible distance scale that any observer can measure, which is the size of the smallest possible Planck size black hole, then what do the strange happenings inside a black hole tell us about the nature of space-time geometry? How can space-time be a fundamental structure of the physical world if space-time geometry has holes in it within which time itself comes to an end at the central point of singularity of those holes in space-time? The answer is that space-time geometry is not a fundamental structure of the physical world but is only a holographic projection of something more fundamental.

This smallest possible distance scale is called the Planck length which is about 10^{-33} centimeters. The smallest possible black hole is called a Planck size black hole. Since nothing is observable smaller than this distance scale, the whole concept of space-time geometry as a continuum does not make any sense. The concept of a continuum is that of infinitesimally small points, like the points on a number line. If the number line is truly a continuum, it is possible to divide it up into smaller and smaller regions with the limit of infinitesimally small points. The problem is that space-time geometry cannot be infinitesimally divided up into smaller and smaller regions since there is a smallest possible distance scale that we can measure. It simply does not make any sense to talk about distances less than the Planck length. Space-time geometry is not a continuum. We could imagine that at the Planck length space-time geometry has some sort of lattice structure, but that also does not make any sense due to the lack of rotational invariance.

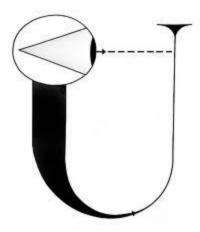
Non-commutative geometry solves this problem since the way bits of information are encoded on a spherically symmetric event horizon, like that of a black hole, is in terms of the eigenvalues of an n x n SU(2) matrix, which explicitly expresses rotational symmetry. The only concept that makes any real sense is the holographic principle, which tells us that the space-time geometry we experience is a holographic projection from a holographic screen and is as illusory as the images of a movie we are watching as those images are projected to us from a movie screen.

The event horizon of a Planck size black hole can only encode two bits of information, which can be represented by an SU(2) matrix. The SU(2) matrix is describing rotational symmetry on the surface of the event horizon, but is also the fundamental way two bits of information are defined in quantum theory as a qubit. For a Planck size black hole, n=2 in the area law for entropy $n=A/4\ell^2$, which is represented by an SU(2) matrix that encodes two bits of information as a [1> or a [0>, but due to rotational symmetry on the surface of the event horizon, the two bits of information can be represented as a quantum superposition over these two states.



Qubit as the Information Encoded on the Event Horizon of a Planck Size Black Hole

The holographic principle is a confirmation of what John Wheeler called *It from bit*, which more recently has been called *It from Qubit*, referring to the entangled nature of quantum information. At a fundamental level, the observable universe is encoded in terms of entangled bits of information on a holographic screen, and is observed through holographic projection of forms of information that are projected like images from the screen to the observer's central point of view.



Universal Observer

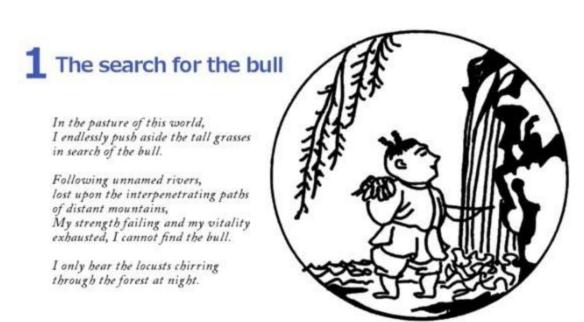
What are the fundamental ideas that underlie the nature of the observable physical universe? There are only two. The first is an observer-centric description of the observable world. The second is holographic projection as the nature of observation. Both of these ideas require the existence of an observer. The observer must exist before an observable world can be observed. That observable world is only observed in the observer's accelerated frame of reference, since that is how the observer's holographic screen arises as an event horizon. The observer is always at the central point of view in relation to the holographic screen, which is observer-dependent as it can only arise with the observer's acceleration. The observer's holographic screen encodes all the information for whatever the observer observes in its world. Those observations can only occur as a projection of forms of information from the screen to the observer's point of view.

The holographic nature of perception tells us that everything appears within consciousness. Everything an observer perceives in its world appears within the perceiving consciousness of its point of view as the observable images of all things are projected from its holographic screen to its central point of view. The apparent existence of all perceivable things in space only appear to come into existence within that consciousness. Nothing can exist outside of consciousness. The irony is that when one becomes enlightened, one knows oneself to exist within that nothingness.

This long scientific digression has finally brought us back to the problem of consciousness and enlightenment. The lessons learned from the holographic principle about the non-conceptual nature of consciousness are relevant in terms of understanding what The Ten Bulls of Zen are telling us about the awakening process. The Ten Bulls can be understood as a roadmap that points out travel directions in the journey to enlightenment or as an operator's manual for how to become enlightened. Each step in the awakening process can be analyzed in the context of the holographic principle since it tells us how the conceptual nature of delusion is created.

The first step is called The Search for the Bull. The first thing one has to become aware of is that there is something to search for, which is the true nature of one's consciousness and being. One's true nature is never lost. One always is what one is. The only problem is the confusion created by delusion, when one takes oneself to be something that one is not. Let's review the first step:

The Search for the Bull



Comment: The bull never has been lost. What need is there to search? Only because of separation from my true nature, I fail to find him. In the confusion of the senses I lose even his tracks. Far from home, I see many crossroads, but which way is the right one I know not. Greed and fear, good and bad, entangle me.

The bull is a metaphor for the life-force, which is the focus of attention of consciousness. One's true nature is consciousness. One's true nature has never been lost. One is what one is. Only because of the confusion created by delusion is one apparently separated from one's true nature. One actively believes oneself to be something that one is not. One takes oneself to be something that appears in the holographic virtual reality movie of the world one is watching as animated images of that world are projected from a holographic screen to one's point of view out in the audience of empty space. One takes oneself to be the projected form of a person in that world because that is how the movie is emotionally animated. One feels self-limited to the emotionally animated form of a person as one perceives the flow of emotional energy that is animating that form. One becomes entangled with the emotional expressions of fear and desire, which makes one feel like one is really a person. These personally biased emotional expressions can only arise

due to emotional bias in the focus of one's attention. One is wasting the expression of one's life-force on defending the survival of a character in a virtual reality movie that one is watching.

Discovering the Footprints



Comment: Understanding the teaching, I see the footprints of the bull. Then I learn that, just as many utensils are made from one metal, so too are myriad entities made of the fabric of self. Unless I discriminate, how will I perceive the true from the untrue? Not yet having entered the gate, nevertheless I have discerned the path.

The first step in the awakening process is realizing there is something to search for, which is the true nature of one's consciousness and being. This realization naturally leads to the willingness to begin the search. The problem is one can never find the true nature of one's consciousness and being in the external world one perceives, as that world is something of an illusion, no more real than the animated images of a holographic virtual reality movie one is watching as those images are projected from a holographic screen to one's central point of view in empty space. The awakening process only begins with the observer's willingness to turn the focus of its attention away from the world it perceives and look within. The observer must become willing to look within and focus its attention on its own sense of being present as a presence of consciousness.

The observer of the virtual reality movie is itself only a focal point of perceiving consciousness that arises in relation to the screen. All the information for the form of all the things the observer perceives in its world is encoded on the screen. In reality, everything the observer can perceive is external to the observer. The embodied personal form of the observer's character in the virtual reality movie the observer perceives is just another one of those animated and projected images.

Delusion arises when the observer mistakenly takes the surface of its character's body to be a boundary between internal and external. The observer mistakenly takes the perception of internal emotional body feelings and internal forms of mental imagination like thoughts and memories to be internal to itself, while in reality these forms of information are all external to the observer, as all the information is encoded on the observer's holographic screen. In the process of looking within, the observer has to clearly see the nature of its mistake and realize that the perception of these apparently internal forms of information is in reality all external to itself.

The central teaching of Zen the Ten Bulls are alluding to is that the only thing the observer can focus its attention on that is truly internal to itself as it looks within, is its own sense of beingness and presence. The central teaching of Zen that one is given as one begins the search for the true nature of what one really is, is to look within and focus one's attention on one's own sense of being present as a presence of consciousness with its own sense of beingness. The footprints of the bull is a metaphor for the attention of consciousness focused on its own sense of presence and beingness, which is not something that one can ever discover in the world one perceives.

The sense of the observer being present as a pure presence of consciousness with its own sense of beingness, as alluded to in the Ten Bulls, is often referred to as *I Am*. To be cute about it, it's possible to reduce the observer's sense of being present, represented by *I Am*, to a mathematical equation, which can be expressed as I=presence of consciousness and Am=beingness. In the awakening process, it is this sense of I-Am-ness that must be distinguished and discriminated from all the false concepts one has about oneself that one actively believes about oneself as those self-concepts are emotionally animated. Awakening is a process of breaking free from delusion, and all self-concepts are delusional. One breaks free from delusion by first discriminating and then disbelieving and deconstructing all false self-concepts one actively believes about oneself. This deconstruction process is also an active process of disbelieving false beliefs, but once the deconstruction process is completed, one effortlessly discovers the true nature of one's being.

The path to awakening is a process of looking within and discriminating the true from the untrue. The true nature of one's self as a presence of consciousness must be discriminated from the untruth of all the things that one perceives in one's world. The true nature of one's self must be discriminated from the form of a person one mistakenly takes oneself to be in that world. The true nature of one's self must be discriminated from all false beliefs one actively believes about oneself. The true nature of one's self must be discriminated from all false personal self-concepts.

All the false beliefs that one actively believes about oneself can only arise when one takes the perception of internal body feelings and internal thoughts and memories to be internal to oneself. That untruth is what one must discriminate from the truth of one's own being, which is nothing more than a pure presence of consciousness. One must directly see that one is actively creating all the false beliefs one believes about oneself that one is a person in the world one perceives as

one actively expresses personally biased emotions through emotional bias in ones' attention focused on false beliefs. Once those false beliefs are seen to be an illusion of what one really is, one naturally loses interest in paying attention to an illusion and withdraws one's attention away from the illusion, thereby withdrawing one's investment of emotional energy that is necessary to animate the illusion. Without that animating emotional energy, the illusion dies a natural death.

What does it mean to say that the untruth of everything one can perceive in the world is created out of the truth of one's own self? The holographic principle gives a perfectly good scientific answer. The self is a pure presence of consciousness or an observer that arises at a point of view in empty space in relation to a holographic screen that projects all the images of things that appear in space. Those perceivable things are all forms of information encoded on the screen and projected like images from the screen to the observer's central point of view. The observer's holographic screen only arises as an event horizon that limits the observer's observation of things in space when the observer is in an accelerated frame of reference. It is the accelerating observer itself that is creating the holographic appearance of its world. All the bits of information that are encoded on the holographic screen only arise because of the observer's acceleration. Even the energy that animates that world only arises because of the observer's acceleration. That flow of energy arises in the flow of heat that arises from the temperature of the observer's event horizon, which only arises due to the observer's acceleration. The whole thing is observer-dependent, as it depends on an accelerating observer's frame of reference. In turn, the energy of that accelerating frame of reference can only arise with the observer's attention focused on its holographic world, since the observer's attention on its world is what allows for the actual expression of that energy, which is the only way the life-force that animates the observer's world can come into being.

This is what Nisargadatta Maharaj has to say about the true nature of the observer and its holographic screen, which is the same central teaching we find in Zen:

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.

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.

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".

You are and I am, but only as points in consciousness.

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.

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, effortlessly and spontaneously. 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.

The person is merely the result of a misunderstanding.

In reality there is no such thing.

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

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

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.

Nisargadatta describes that ultimate reality exists as formless consciousness, and that all forms are in essence hollow shells, which are holographic projections that arise like images animated in the flow of energy and projected in the light of consciousness:

In reality only the Ultimate is. The rest is a matter of name and form. As long as you cling to the idea that only what has name and shape exists the Supreme will appear to you non-existing. Names and shapes are hollow shells. What is real is nameless and formless, pure energy of life and light of consciousness.

At this point in the discussion, it helps to back up a bit and discuss the nature of the mind. There is a great deal of confusion about the nature of the mind due to delusion. Although this may be hard to accept, the mind can only be understood as a mental screen, which fundamentally is a holographic screen. The mind is a mental screen that encodes information, which becomes organized into distinct forms as the mind is animated in the flow of energy. In the scientific literature, this animation of forms of information in the mind is called the *movie-in-the-mind*. These forms of information are projected like images from the mental screen to the perceiving point of view of the observer of the mind, and the projected images are animated in the flow of energy that animates the mind. This is a perfect description of the holographic principle.

The key thing to realize is that the mental screen is a bounding surface of space that encodes bits of information. All mental forms of information, like thoughts and memories, are projected like images from the mental screen to the perceiving point of view of the observer of the mind. These mental images are even called forms of mental imagination. The nature of delusion only creates an illusory sense of internal and external in terms of the surface of the body that seems to define a boundary between internal perceptions, like emotional body feelings, and external sensory perceptions, like sight and sound. In reality all perceptions are external, as all projected forms of information are encoded on the mental screen, which is really a holographic screen. All forms of information are projected like images to the perceiving point of view of the observer of the mind. There is only a holographic illusion that one internally exists within one's body.

Nisargadatta describes the importance of seeing things with a sense of externalization:

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.

Everything is depicted in the pictures on the screen, including the person you take yourself to be; nothing in the light. You are the light only. You are the pure light appearing as a picture on the screen and becoming one with it.

Yours is the power of perception, not what you perceive. Whatever you are conscious of, is not you. Yours is the cinema screen, the light and the seeing power, but the picture is not you. The sense of identity is like a sequence of pictures on the cinema screen. Without the light and the screen there can be no picture. To know the picture as the play of light on the screen gives freedom from the idea that the picture is real.

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.

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.

Nisargadatta describes how the correct understanding of things depends on the spiritual seeing of things. This spiritual seeing can only arise with the ascension of consciousness to a higher level, as things are seen with a sense of distance and detachment:

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

Remain as the silent witness only; a mere point in consciousness, dimensionless and timeless. All you need to do is to cease taking yourself to be within the field of consciousness. To look for it on the mental level is futile. It is here and now: the I Am you know so well.

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

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.

Nisargadatta describes the critical role attention plays in the awakening process:

Do not undervalue attention.

To know, to do, to discover, or to create you must give your attention to it. Give your undivided attention to the most important in your life, yourself.

Of your personal universe you are the center.

Without knowing the center what else can you know.

Attention liberates. You have put so much energy into building a prison for yourself.

Now spend as much on demolishing it.

It is disinterestedness that liberates. If you lose interest, you break the emotional link that perpetuates the bondage.

Attention comes from the Self.

All you can do is to shift the focus of consciousness beyond the mind.

By its very nature the mind is outwardly turned; it always tends to seek for the source of things among the things themselves.

To be told to look for the source within is the beginning of a new life.

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.

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.

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.

Since everything perceived by the observer of the mind is really external, the perceiving consciousness of the observer is impersonal. The form of a person is another organized form of information encoded on the mental screen and animated in the flow of energy, like any other image of mental imagination projected from the mental screen to the perceiving point of view of the observer of the mind. The perceiving consciousness of the observer is always at the central point of view of its own holographic world, and in reality has nothing to do with the person.

Everything the observer of the mind can perceive in its holographic world not only includes all external sensory perceptions of that world and all internal emotional perceptions of the body, but also includes all mental concepts that can be constructed in the mind, including the concept of a personal self. The mentally constructed personal self-concept is only another form of information organized on the mental screen. Delusion arises when the observer of the mind identifies itself with that mentally constructed personal self-concept. That delusional personal self-identification is inherently emotional. The observer really feels self-limited to the emotionally animated form of a body as the observer perceives the flow of animating emotional energy through that body.

The radical nature of understanding the mind as a holographic screen cannot be overstated. The mind cannot arise from a brain inside the body of a person in the world because all of that stuff arises from the mind. The mind is a mental screen that arises as a holographic screen. Everything observed in the world is a projection of the form of something projected from a holographic screen to the point of view of an observer, like the projection of movie images from a movie screen to the point of view of an observer out in the movie audience. Things do not really exist in three dimensional space. The information for the form of all things is encoded on a holographic screen in terms of bits of information. Anything that appears to exist in any three dimensional region of space is only a holographic projection from the bounding surface of that space to the central point of view of the observer. Things apparently existing as distinct three dimensional objects in three dimensional space are a holographic illusion. Those things include the observer's body, brain and everything else that appears to exist in its world. The observer's mind does not arise from its brain. The observer's mind arises as a bounding surface of space, which is an event horizon that arises as energy is expended in the observer's accelerated frame of reference, and its mind acts as a holographic screen that encodes bits of information. The observer itself is nothing more than a pure presence of perceiving consciousness at a point of view in empty space.

An interesting observation of child psychologists is that prior to the development of a mentally constructed body-based self-concept sometime during the second year of life, the infant sees the world two dimensionally. Such an infant has no concept of movement in the third dimension, and cannot distinguish between larger or smaller objects and objects moved closer or farther away. It is as though all objects are just images projected from a distant screen, where objects

can grow or shrink in size but can't move closer or farther away in the third dimension. This observation seems like a direct confirmation of the holographic principle. Prior to the mental development of a body-based self-concept, which requires body-based memory of self, the observer's world is seen two dimensionally. Spiritual awakening in the sense of the ascension of consciousness to a higher level can be understood as a reversion back to this more basic way of seeing things, where objects in space are actually seen to be images projected from a screen to the point of view of an observer in empty space. One such object in space is one's own body. The mentally constructed concept of a body-based self becomes absurd once one directly sees that one's body is another image projected from a screen to one's point of view in empty space.

In a very deep sense, everything the observer of the mind can perceive in its holographic world is conceptual. All concepts are forms of information encoded on a mental screen and projected like images from that screen to the perceiving point of view of the observer of the mind. All concepts are animated in the flow of energy that animates the mind. The holographic principle is telling us that everything perceivable is conceptual. Even dynamical space-time geometry and elementary particles are conceptual. All aspects of the world are perceivable forms of information encoded on the observer's holographic screen. Mental concepts are only like the tip of the iceberg.

A discussion of the nature of concepts is germane to any discussion of the final destination of the journey to enlightenment, which is only describable as a place without concepts. The true nature of consciousness cannot be conceptualized. All concepts are forms of information encoded on the observer's holographic screen. The observer itself is only a focal point of perceiving consciousness at the central point of view of its holographic screen. The observer exists in empty space. There is only a holographic illusion that things exist in space due to the way the images of things are projected from the observer's holographic screen to its point of view in empty space. In reality, there is nothing in empty space except for the observer's consciousness. All the conceptual forms of information are encoded on the holographic screen and do not really exist in space. Only the perceiving consciousness of the observer itself really exists in space, but that space is empty, which is to say the true nature of consciousness is not conceptual.

In the process of becoming enlightened, before one reaches the final destination of the journey, one becomes aware of oneself as a self-emanating source of light that illuminates everything in one's world. This is not physical light, but is what can best be called the light of consciousness, which illuminates the mind. This experience of oneself can be called the ascended *I Am* or Atmanic Self, since when one experiences oneself in this way one sees things from a higher level with a sense of distance and detachment. Even one's own body is seen in this ascended way.

However, this is not the final destination of the journey. One must go further to reach the ultimate place without concepts. It is the going further part of the journey that one can never wrap one's conceptual mind around. The reason for this strange state of affairs is actually pretty

easy to explain and understand. In some sense, one's mind is like a screen that is projecting images to the mind's eye, which is perceiving the mental images. The Atmanic Self is not only the mind's eye, but has an outgoing projecting aspect in addition to an incoming perceiving aspect. The outgoing projecting aspect is the light of consciousness that is reflected off the screen of the mind and illuminates the mind as the projected mental images are perceived by the mind's eye. All the concepts that one perceives are mental images projected from the mental screen through the reflection of one's own light of consciousness from the screen back to oneself.

Since the final destination of the journey is a place without concepts, whatever concepts one holds onto, even scientific concepts, must eventually be given up in order to move forward in the journey. Since everything perceived is conceptual, including space and time, this ultimate place without concepts is empty and isn't a place one can ever wrap one's conceptual mind around.

All mental concepts are mentally constructed forms of information energized in the flow of energy. The consciousness of the observer that gives meaning to these mentally constructed forms of information can only do so in the energetic context within which they are constructed. Meaning is always given to concepts in an energetic context, which we intuitively recognize as an emotional context. All meaning is inherently emotional and arises in an emotional context.

The emotional nature of meaning given to concepts has profound implications for the meaning given to belief systems. Although not often recognized, all belief systems begin with a core belief, which is one's belief in oneself. One must believe in oneself before one can believe any belief system. Belief systems are notoriously hard to break because one almost never examines one's core belief in oneself. One not only believes in oneself in the sense of having confidence in oneself, but more fundamentally in the sense of believing that one is a self. One's belief that one is a self is based on an emotional perception, which essentially is a false belief that one believes about oneself. One's belief in oneself is only a perception of one's emotional state of mind that is called a self-concept, which is inherently body-based. One feels self-limited to the emotionally animated form of one's body as one perceives the flow of emotional energy that animates that form. This emotional perception is at the core of all concepts of a personal self.

The emotional nature of meaning explains the nature of delusion. One actively believes the false belief that one is a person in the world one perceives because one is actively creating that belief with the expression of emotional energy. The expression of personally biased emotions can only occur due to emotional bias in the focus of one's attention, which is how one actively creates all the personal self-concepts that are constructed in one's mind that one believes about oneself.

This way of understanding the mind as a mental screen is screaming holographic principle. The holographic principle tells us that everything one can perceive in the world, which includes the dynamical nature of space-time geometry, is a form of information, which means it is all conceptual. Mental concepts are also forms of information. All the bits of information for

everything that can be perceived in the world, including space-time geometry, are encoded on a bounding surface of space that acts as a holographic screen. The mind understood as a mental screen is another aspect of that holographic screen. The holographic screen is fundamentally a bounding surface of space that encodes bits of information and limits the observer's observations of things in space, like an event horizon. Forms of information are like images projected from the screen to an observer that is perceiving the images at its central point of view in empty space.

Nisargadatta describes the witness at the center of its own world:

To be born means to create a world around yourself as the center.

Everyone creates a world for oneself and lives in it, imprisoned by one's ignorance.

All we have to do is to deny reality to our prison.

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

When the observer becomes enlightened, the observer directly sees that it is its own light of consciousness that is projecting the images off the screen, like the light of a movie projector that projects movie images as that light is reflected off a screen. The enlightened observer becomes aware of itself as a point of perceiving consciousness in empty space and directly sees that all the images it perceives are projected off the screen by its own reflected light of consciousness.

An enlightened observer that sees all of this is the nature of the ascended *I Am* or Atmanic Self, but that is not the final destination of the journey to enlightenment. The final destination is the ultimate place without concepts. One must go further than the Atmanic Self, which is the highest level of self. It is this going further that one can never wrap one's conceptual mind around. The mind in the final analysis is a holographic screen that is a bounding surface of space that limits the observer's observations. The mind as a mental screen is always a limitation of consciousness.

Nisargadatta describes the illusion of all mental projections, the perceiving consciousness of the witness beyond the mind, and the source of consciousness beyond the witness:

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.

Going further means going beyond the limitations of the mind, which is beyond the limitations of a holographic screen. When the observer has no holographic screen, there are no limitations of the observer's observations, but paradoxically, there is also nothing to observe and there is no observer. When there is no limitation of a mind or holographic screen, the highest level of self, the Atmanic Self, no longer exists, but consciousness does not stop existing.

3 Perceiving the bull

I hear the song of the nightingale.

The sun is warm, the wind is mild, willows are green along the shore, Here no bull can hide!

What artist can draw that massive head, those majestic horns?



Perceiving the Bull

Comment: When one hears the voice, one can sense its source. As soon as the six senses merge, the gate is entered. Whenever one enters, one sees the head of the bull. This unity is like salt in water, like color in dyestuff. The slightest thing is not apart from self.

The gate that Zen refers to is the *gateless gate*. The gate is referring to the sense of self, which can only be perceived in the sense of being present as a pure presence of consciousness with its own inherent sense of beingness. This presence of perceiving consciousness is always present at the central point of view of the world it perceives. The head of the bull refers to this focal point of perceiving consciousness. Perceiving the bull refers to the attention of consciousness focused on its own sense of beingness and presence. The perceiving consciousness of the observer is becoming aware of the true nature of itself as a pure presence of perceiving consciousness.

William Blake wrote about the doors of perception as the gateway to the truth of one's being. When he wrote the doors of perception must be cleansed before one directly experiences this truth, he was alluding to cleansing the sense of self. Nisargadatta also discusses this doorway and the need to cleanse oneself of the sense of self before passing through the doorway. In *I Am That*, Nisargadatta says "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". In Zen, the gateless gate paradox is alluding to the same cleansing of the sense of self. One can only pass through the gateless gate when one is without a sense of self. The *gateless gate* is a selfless self.

In the journey to enlightenment, one brings oneself to this doorway as one focuses one's attention on one's own sense of being present or beingness. Being present at the doorway means knowing oneself as the highest level of self or the highest level of consciousness present at the center of one's world, which is the point of singularity of that world. That world always appears to come into existence from one's own point of view when one is present to observe it, but can also disappear from existence when one is not present to observe it. When one knows oneself to be this conscious presence, one brings oneself to the edge of the abyss that separates being present to observe one's world as that world appears to come into existence from the disappearance of that world when one is no longer present to observe it. At this point of singularity, the highest level of self, the *I Am* Self, becomes an I am not. The edge of the abyss is crossed, the abyss opens, and one dissolves into the abyss, like a drop of water that dissolves back into the ocean. Crossing over the edge of the abyss to the other side is described as falling into the void.

The journey to enlightenment is always taken by a self in a time-bound world, but this crossing over to the other side and the experience of enlightenment is outside of time and has no sense of self. One can only cross over if one is without a sense of self. In a very real sense, the doorway or gate is the highest sense of self that one can ever have while one perceives one's own world, which is the highest level of consciousness one can have while one is present to observe one's own world. The gate only opens or becomes gateless when one becomes selfless.

The grail legend is a metaphor for discovering the true nature of one's being. When one searches for the grail as a person in the world, one is wasting one's power to awaken to the true nature of one's being. That power is one's focus of attention, which one wastes as one focuses attention on the world. This waste of time and energy is the meaning of the wasteland in the grail legend. One only discovers the grail if one withdraws one's focus of attention away from one's life as a person in the world and shifts one's focus of attention onto the true nature of one's being.

The search for the grail is all about the search, and is never really about finding the grail. One can never really find the grail. One is the grail. One can only be what one really is. The grail is the true nature of one's being. Everything else that one takes oneself to be is delusional.

Living a life in the world is never about finding one's true self. There is no such thing as one's true self. Such a thing does not really exist. Living a life in the world is only about creating a false self. One is actively creating the false sense of self through one's false belief in it, and that creation process is inherently emotional. The active emotional creation of the false sense of self can only arise with the expression of personally biased emotions, which arise with personal bias in one's focus of attention. This is an active process of expressing one's desire to create a false self. The sense of a personal self can only arise with this active process of expressing that desire.

Awakening from delusion is only a process of giving up that desire to create this false sense of self so that one can discover the true nature of one's being. This discovery can only be made when one is without a sense of self. One becomes selfless by becoming desireless. When one no

longer has any desire to create a false sense of self one naturally becomes desireless and selfless. In this desireless and selfless state, one's discovery of the true nature of one's being is effortless.

In the journey to awakening, one can only go further if one kills the Buddha. The Buddha is the highest sense of self, the ascended *I Am* Self at the central point of singularity, which is the highest level of consciousness one can have while one still perceives one's own world. As long as one has a sense of self, one is seeing two, while in reality, there is only one. As long as one has a sense of self, one also has a sense of other. To go further into the source of consciousness, one must become selfless. The source is pure oneness, and has no sense of self. To go further, one must kill one's own sense of self before one can experience this ultimate state of No-self.

"If you meet the Buddha on the road, kill him" is another version of the Zen saying: "When you reach the top, keep climbing". The highest sense of self is not the final destination of the journey. There is still further. One is not done with one's journey until one is without a sense of self, no matter how high and glorified that self might be. The goal of the journey is not to become a high and mighty self, but to become selfless. One is only done when one is truly selfless.

Going further into the nondual source of consciousness requires one to kill the Buddha both at the level of self and at the level of other. One must kill the Buddha both at the level of an internal concept of self and at the level of an external concept of other. Duality is always created in a subject-object relation of self and other as an observer observes some observable thing. One can only transcend duality by going further into the nondual source of consciousness.

Spiritual enlightenment is one's direct experience of the true nature of what one really is. It is the Holy Grail of being what one really is. One confirms that when everything in one's world disappears from existence, including one's own sense of self, one does not stop existing. One verifies the true nature of one's existence is unlimited, unchanging and undivided consciousness.

The final destination of the journey to enlightenment, the ultimate place with no concepts, the furthest reaches of further, is unlimited consciousness. There is no further or going beyond unlimited consciousness since infinity has no boundary. This ultimate unlimited nature of consciousness can be called Brahmanic consciousness. In the sense of being unlimited, it is infinite. In the sense of being unchanging, it is timeless. In the sense of being undifferentiated or undivided, it is one. In the sense of being formless nothingness, it can be called emptiness or void. In the sense of being the source of Atmanic consciousness, it is the source of the light of consciousness, but in-and-of-itself, it can only be described as darkness. In the sense of being non-conceptual and without a sense of self or a concept of self, it can be called No-self.

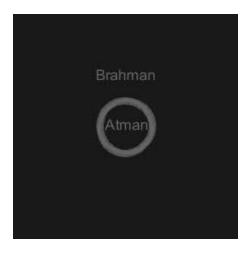
The nature of a subject-object relationship can only exist at the level of the I Am Self. All subject-object relations inherently relate a self with another. At the level of forms of information, the relationship is some sort of energetic connection that relates one form to another form, but

the ultimate subjective nature of the self experiencing the relationship can only be understood as the consciousness perceiving this energetic relation between forms. Objects in the world are all energetically related forms of information. Objects only have distinct forms in terms of their ability to self-replicate form in a recognizable way over a sequence of perceivable events.

The ultimate subjective nature of the self experiencing a subject-object relation cannot itself be a perceivable self-replicating form of information or object that it perceives in its world, but can only be a pure presence of *I Am* or Atmanic consciousness perceiving objects in its world. The perceivable objects are organized forms of information projected like images from a holographic screen to the point of view of that presence of perceiving consciousness and animated in the flow of energy like the images of a movie. Everything perceivable is such an object. There is only one subject for all the perceivable objects in any perceivable world, which is the presence of Atmanic consciousness at the central point of view of its own perceivable world. That perceivable world is always created on a holographic or mental screen that limits the observer's observations of things in space, which is always a limitation of consciousness. All subject-object relations arise from a limitation of consciousness. Without that limitation, there are no subject-object relations.

There are no subject-object relations in Brahmanic consciousness, as there is nothing to perceive. There is no self and there is no other in Brahmanic consciousness. There is only one undivided, unlimited, unchanging, nondual awareness, which in some inexpressible sense is undivided awareness aware of nothing more than its own undivided, unchanging and unlimited true nature.

In the sense that everything is conceptual and that all concepts, including all concepts of self, arise from a limitation of consciousness, everything is an illusion of unlimited consciousness, including the sense of self. There is only one truth, which is the unlimited nature of consciousness. Everything is an illusion of unlimited consciousness that arises from the limitation of consciousness. In Advaita Vedanta, this is expressed as Brahman is the only truth. In the sense of ultimately bringing that illusion of limitation to an end, Atman is Brahman.



Enlightened beings like Nisargadatta Maharaj tell us that truth is very simple, only the mind is complex, but to convince the mind to even consider the truth requires a great deal of repetition and practice, like any new skill that one learns. There is only one truth, which is very simple, so simple it cannot be further simplified. It isn't possible to remove anything from nothing.

Nisargadatta tells us that the only thing that ever stops one from recognizing the truth is delusion, which essentially is all the lies and false beliefs that one actively believes about oneself that get in the way of seeing the truth. He tells us only these false beliefs need to be removed in order to see the truth, and that it is only one's focus of attention on the false belief of a personal identity, like a hypnotic spell that one is under that monopolizes one's attention, that stops one from redirecting one's attention onto the truth of who one really is. Ironically, the truth of who one really is, is the one who is seeing everything, which in-and-of-itself cannot really be seen except as nothingness. One can only be what one really is, even if what one is, is really nothing.

Awakening is fundamentally the antidote to delusion, and delusion is inherently conceptual. The basic problem is the nature of the self-concept, which is a false belief that one actively believes about oneself. One believes that one is a person in the world one perceives, while one's ultimate or true nature is the unlimited and undivided Brahmanic consciousness that energetically creates that world and perceives that world through its division into Atmanic consciousness.

Confusion about identity naturally arises due to the interplay of potentiality and actuality in the process of creation and manifestation. Uncreated Brahmanic consciousness is the ultimate source of creation in the sense of potentiality, but that potentiality can only become an actuality through observation. A pure presence of Atmanic consciousness must be present to project and perceive the images of a manifested world for that potentiality to become an actual creation.

Nisargadatta describes the pure being of the void as the potentiality to create the actuality of all the things a pure presence of Atmanic consciousness perceives in its world. This creation process is always created as a state of duality on a surface of consciousness that acts as a holographic screen. The perceivable world encoded on that surface can only appear and disappear in relation to the central perceiving point of an observer that arises from pure being:

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.

In terms of the holographic principle, potentiality is expressed in terms of all possible ways bits of information can become encoded on a holographic screen and all possible ways energy can flow through a holographic world. The laws of physics that apparently govern events in that world are a natural consequence of the holographic encoding of information on the screen and the flow of energy that arises in the observer's accelerated frame of reference. This potentiality defines an information configuration space. Actuality requires observation, which occurs with each projection of images from the holographic screen to the point of view of the observer and as those images are animated in the flow of energy over a sequence of perceivable events.

Events only seem deterministic since there is a normal flow of things that arises in terms of quantum probability. The most likely events tend to follow the path of least action, which is like the shortest distance between two points in the information configuration space. Even this kind of determinism relies on unbiased observations. If bias arises in the way observations are made, then all bets are off and the laws of physics lose their predictability. In any case, potentiality is always available before manifestation creates an actual observable reality.

Why does manifestation of an observable world happen in the first place? The first thing to be clear about is an observable world is not an objective reality, but is purely a subjective reality. An observable world only appears to come into existence from the point of view of an observer. For that observable world to appear to come into existence, the perceiving consciousness of the observer must first come into existence. Until observed, that observable world only exists in a state of potentiality, which is the essence of the quantum state. That quantum state of potentiality can be described in terms of bits of information encoded on a holographic screen and the flow of energy within which the holographic screen is constructed. The perception of physical space and everything within that space is a projection from the holographic screen to the observer, and the perception of time and the animation of things arises in the flow of energy over a sequence of perceivable events. All energy can be traced back to the observer's acceleration, and even the projection of images from the screen to the observer requires the observer's focus of attention.

Nisargadatta describes the roles desire and imagination play in the creation of the world:

At the root of all creation lies desire.

The projecting power is imagination prompted by desire.

Desire and imagination foster and reinforce each other.

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 nature of creative imagination is to identify itself with its creations.

You can stop it any moment by switching off attention.

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

What is caused by desire can be undone only in freedom from desire.

What you see as false dissolves.

Desirelessness comes on its own when desire is recognized as false.

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

In reality all is one, the outer being merely a projection of the inner.

The objects in the world are many but the eye that sees them is one.

The very purpose of creation is the fulfillment of desire.

Things happen by their own nature.

From my point of view everything happens by itself, quite spontaneously.

I do nothing. I just see them happen.

Nisargadatta describes the world is in a state of balance due to the canceling out of opposing actions, and is equivalent to nothing, as if nothing happens:

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

In the creative process of manifesting a world, a presence of Atmanic consciousness naturally identifies itself with its creation due to its perception of the flow of energy that gives rise to feelings of self-limitation to its creation. Since creation is fundamentally a conceptual process in terms of the organization of forms of information on a mental screen, the animation of forms in the flow of energy, the projection of forms to an observer's point of view, and the perception of forms by the observer, this creative process inevitably leads to the emotional construction of a body-based self-concept the observer emotionally identifies itself with as it emotionally projects and perceives concepts from its mental screen. The observer identifies itself with an emotionally animated body due to its perception of emotional body feelings that make it feel self-limited to that animated embodied form. This is always an active process of self-identification that requires emotional bias in the observer's focus of attention, since that is the only way biased emotional actions can be expressed. Personal self-identification requires the expression of personally biased emotions that can only be expressed with personal bias in the focus of one's attention.

Nisargadatta describes that everyone lives in their own world and that everything that appears in that world is connected to everything else:

Everyone lives in his own world.

Everything is subjective.

You remain as pure being.

You are watching only; all else happens.

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 essential problem of awakening is that awakening can never occur at the same conceptual level at which the self-concept is created. Awakening always requires consciousness to ascend to a higher level and to see things with a sense of distance and detachment. The only way the self-concept can ever be transcended is through the ascension of consciousness to a higher level.

Nisargadatta describes the ascension of consciousness in terms of a detached witness:

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.

The Self stands beyond the mind, aware, but unconcerned. You are the Self, here and now. Stand aware and unconcerned and you will realize that to stand alert but detached, watching events come and go, is an aspect of your real nature.

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.

There is nothing more to it. The attitude of pure witnessing, of watching events without taking part in them.

Awakening from delusion only becomes possible when consciousness ascends to a higher level. That is the only way a personal body-based self-concept can ever be transcended. This important point cannot be stressed strongly enough. The self-concept is inherently life-form based. The only way to understand how the self-concept is emotionally constructed in the mind is to understand how life-forms are emotionally organized in the world. Life-forms are organized forms of information that are energetically animated over a sequence of perceivable events. The key point is life-forms are coherently organized forms of information that self-replicate their forms or hold together in a recognizable way over a sequence of perceivable events.

The ability of a coherently organized life-form to self-replicate its form is inherently dependent on emotional expressions. The only way life-forms can self-replicate their forms or survive in a recognizable form over a sequence of perceivable events is if they express emotions of fear and desire. Life-forms are only able to maintain their coherent organization if they add organizing potential energy to their forms through a process called eating. A life-form must have a source of organizing potential energy from which it feeds or adds energy to its form. For many life-forms, this process of adding potential energy to its form means the life-form must eat other life-forms.

The need to add organizing potential energy to a form through a process of eating in order to maintain the state of organization of that form in a recognizable form is a direct consequence of the disorganization of forms that occurs as heat flows in a thermal gradient. Heat is randomized kinetic energy. As heat flows, thermal energy tends to disorganize forms. Forms tend to fly apart

due to the randomized motions of their constituents. The only thing that holds the form together as a coherently organized self-replicating form is the potential energy of attractive forces. The life-form must feed upon a source of potential energy to maintain the organization of its form.

This actually gives a good definition of life-forms. A life-form is a self-replicating coherently organized form of information that must feed upon a source of energy in order to maintain the state of its organization in a recognizable form over a sequence of perceivable events. By this definition, a hurricane is a life-form. Not only must a life-form eat other forms in order to self-replicate form and survive as a recognizable form, but the life-form must also avoid being eaten by other forms. Life-form survival is really only a recognizable self-replication of form. What is called death is only an unrecognizable disorganization of form.

Why do self-replicating life-forms evolve in the world in the first place? The answer is inherent in the second law of thermodynamics, which says entropy tends to increase as heat flows in a thermal gradient. Life-forms have very low entropy, which means their forms must self-replicate within a small number of information configuration states for that self-replication of form to be recognizable, but they can only evolve in an environment as the total entropy of the life-form and its environment increases as heat flows. The total number of information configuration states for the life-form and its environment is actually increasing. The flow of heat and the increase in entropy are intrinsically related. Although not often appreciated, the life-form's environment is the observable universe. The big bang event that apparently created the observable universe was a very low entropy but a very high temperature state. As the universe expands in size from the big bang event, the universe cools in temperature but also increases in entropy.

This increase in entropy as the universe expands can be understood in terms of the holographic principle in terms of a cosmic horizon that defines the observable universe from the perspective of an observer at the central point of view, which is the singularity of the big bang event. The observer's cosmic horizon encodes all the bits of information for everything the observer can observe in its world. As the observable universe expands in size, the cosmic horizon increases in surface area, which means it encodes more bits of information, but also decreases in temperature, which creates the temperature gradient within which heat flows as entropy increases.

Life-forms are very efficient mechanisms for transferring heat in a thermal gradient, and as such, they are also very good mechanisms for increasing the entropy of their environment even as their own entropy remains low. A good example of this effect is photosynthesis in a plant. A plant consumes high energy low entropy visible photons that arrive from the sun and converts some of this energy into high energy low entropy molecules like carbohydrates, but in the process also radiates away many more lower energy higher entropy infrared photons into the environment. The thermal gradient within which photosynthesis takes place only arises because the sun is hot

and the surface of the earth is cool, but outer space is even colder. The ultimate source of this thermal gradient is the expansion of the observable universe from the big bang event.

This dispersive mechanism of radiating away heat into the environment is a very efficient way of increasing the total entropy of the combined system of the life-form and its environment as heat flows in a thermal gradient. A life-form may be the most efficient dispersive mechanism possible for increasing total entropy, which may be why low entropy self-replicating life-forms naturally evolve as heat flows in a thermal gradient. This may be nature's way of maximizing the flow of heat and increasing entropy. A life-form that eats another life-form does exactly the same thing a plant does as a plant eats photons. All life-forms survive by eating other forms.

Like the complex formation of eddies and whirlpools in the flow of a river, the formation of self-replicating life-forms that eat each other in a struggle for survival may be the most efficient way nature has to maximize the flow of heat and increase entropy as heat flows in a thermal gradient. As long as heat flows through the world, life-forms spontaneously develop in the world just like whirlpools develop in the flow of a river. Even the geometric form of a spiral galaxy can be understood to develop in the flow of energy like the formation of a whirlpool.



Whirlpool versus Spiral Galaxy

This natural development of life-forms is an inevitable consequence of the observable universe expanding in size and cooling, which always appears to occur from the central perspective of an observer as that holographic world is defined on a cosmic horizon. The development and

evolution of life-forms that eat each other in a struggle for survival may be an inevitable consequence of living in a holographic world, but only the life-forms really struggle for survival.

The observer only perceives this struggle for survival through the projection of life-form images from its holographic screen to its central point of view. The holographic principle is telling us that the fundamental nature of reality is not an observable world but the observer of that world. That world only consists of forms of information projected from a holographic screen, like movie images projected from a movie screen. The consciousness of the observer is more fundamental than the projected images. The consciousness of the observer is even more fundamental than the laws of physics that apparently govern events in that observable world.

For many life-forms, a life-form can only survive in the world if it eats other life-forms. This need to eat in order to self-replicate form is the basic nature of desire. The flip side of the desire to eat is the fear of being eaten. In simplest biological terms, life-forms only survive in the world or self-replicate their forms if they eat other life-forms and avoid being eaten by other life-forms. The fear of death is really nothing more than fear of an unrecognizable disorganization of form.

The biological need to self-replicate form over a sequence of perceivable events is even a more basic need than the biological need for reproduction of form. Self-replication of form must occur from moment to moment, and is totally dependent on eating and the avoidance of being eaten. At the most fundamental level of biological survival, the emotional expression of desire expresses the need to eat and the emotional expression of fear expresses the need to avoid being eaten.

The basic problem is the emotional expressions of desire and fear are in conflict with each other. The expressed desire to eat by a life-form expresses movement toward whatever it desires to eat, while the expressed fear of being eaten by a life-form expresses movement away from or against whatever desires to eat that life-form. Movement toward is always an expression of emotional attachment, while movement away from or against is an expression of self-defensiveness. The expression of desire always expresses some kind of emotional attachment of one form to another form, while the expression of fear always expresses some kind of self-defensiveness as one form defends itself against another form. By their very nature, emotional attachments are in conflict with self-defensive expressions. Movement toward is always in conflict with movement away.

The expression of desire is always in conflict with the expression of fear. The desire to eat is always in conflict with the fear of being eaten. This is an unavoidable consequence of life-forms surviving in the world, which at the most basic level is the self-replication of form from moment to moment. This emotional conflict is the basic nature of the survival of the fittest form.

Good and bad are relative terms that only appear to exist within a state of duality. Eating is good and being eaten is bad. From the point of view of the one that eats, eating feels good, but from the point of view of the one that is eaten, being eaten feels bad. Emotional feelings of good and

bad are expressed as emotions of desire and fear, which is the emotional energy that animates a state of duality, in which the sense of self and other is emotionally constructed. Expressions of fear and desire are the only way the emotional sense of self and other can be emotionally constructed within a state of duality. Outside of that state of duality, in the nondual source of that state of duality, there is no good and bad because there is no self and other.

The mentally constructed self-concept is life-form based and emotionally energized by the same emotional expressions of fear and desire. By its very nature, the construction of a self-concept in the mind is in emotional conflict. These emotional conflicts are the inherent nature of life-forms surviving in the world, and are also the inherent nature of self-concepts surviving in the mind.

The self-concept is always constructed in the mind as an emotionally energized thought. This self-concept thought is always self-referential, as a life-form based self-image is emotionally related to the image of some other thing that appears in the world one perceives. The emotional relationships of the self-concept are also life-form based in terms of the expression of fear and desire that in some way defend the survival of the life-form in the sense of self-replication of form. The perceiving one only identifies itself with that self-image due to its perception of the emotional flow of energy through that form that makes it feel self-limited to that form.

The perceiving one is recognizing that form as the form self-replicates form over a sequence of perceivable events. This recognition is inherently emotional in nature due to the expression of fear and desire by the life-form, which is necessary for life-form survival. The perceiving one can only identify itself with the life-form due to this emotional self-recognition. This emotional self-recognition comes to an end with death and the unrecognizable disorganization of form.

This process of emotional recognition and self-identification always occurs at the conceptual level of the mental construction of a life-form based self-concept. This emotional recognition is inherently conflicted, since the expression of fear is in conflict with the expression of desire. The perceiving one can never transcend its self-concept at the same conceptual level that it is created since the emotional conflicts are inherently unresolvable at that conceptual level. As long as the perceiving one perceives things at the conceptual level the self-concept is constructed, it will feel compelled to defend the survival of its self-concept as though its existence depends on it.

The self-concept can never be transcended at the same conceptual level that it is created. That creation process is inherently emotional, and is plagued by emotional conflicts. Emotional conflicts are never resolved at the same level that they are created. The only way to resolve emotional conflicts is to see them from a higher level with a sense of distance and detachment. Only the consciousness that ascends to a higher level and sees things with a sense of detachment can resolve emotional conflicts as it transcends its self-concept.

4. Catching the Bull



- I seize him with a terrific struggle.
 His great will and power are inexhaustible.
 He charges to the high plateau far above the cloudmists,
 - Or in an impenetrable ravine he stands.
- Comment: He dwelt in the forest a long time, but I caught him today! Infatuation for scenery interferes with his direction. Longing for sweeter grass, he wanders away. His mind still is stubborn and unbridled. If I wish him to submit, I must raise my whip.

Catching the Bull

Comment: He dwelt in the forest a long time, but I caught him today. Infatuation for scenery interferes with his direction. Longing for sweeter grass, he wanders away. His mind still is stubborn and unbridled. If I wish him to submit, I must raise my whip.

The bull is a metaphor for the focus of attention of the observer's perceiving consciousness. The usual undisciplined state of that focus of attention is to wander around in an aimless outwardly way as one focuses one's attention on the world. This natural tendency of the focus of attention to wander around in an outwardly way is not necessarily a bad thing, as it is the nature of curiosity about the nature of the world. However, if one wishes to awaken from delusion, then one must become disciplined and redirect one's focus of attention inwardly onto the true nature of one's own being. This redirection of one's focus of attention away from the world that one outwardly perceives and turned within onto one's own sense of beingness requires discipline.

Jed McKenna refers to this kind of discipline as *focus and intent*. One must have a clear and pure intent about undergoing the awakening process as one focuses one's time, energy and attention on the process. One cannot allow one's attention to become distracted and wander around in an aimless outwardly way by one's curiosity about the world. One cannot allow oneself to indulge in these distractions. One must focus one's attention on the awakening process like a laser beam. Nisargadatta refers to this kind of discipline in one's focus and intent as *earnestness*.

Nisargadatta describes the earnestness required for the awakening process:

When you are in dead earnest, you bend every incident, every second of your life, to your purpose. You do not waste time and energy on other things. You are totally dedicated, call it one-pointedness of the mind.

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.

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

The seriousness of this kind of *focus and intent* reflects the willingness to die at the level of a personal self. To go further into the nondual source of consciousness, one must become willing to die at the level of a personal self. One must become willing to kill that personal self. One must become so fed up with the lie that one is living that one would rather die than continue to live the life of that lie. To really know the truth of one's being, one must destroy the illusion that is in the way of seeing the truth. The *gateless gate* one must pass through is a selfless self.

How does one kill the illusion of self and other? There is no other way except to withdraw one's attention away from the world one perceives and look within. One turns away from that world when one sees that world to be an illusion and loses interest in paying attention to an illusion. One looks within and focuses one's attention on one's own sense of being present as a pure presence of consciousness, which is the only true thing one can ever know about oneself. One must stabilize one's attention on one's own sense of beingness and presence before one can go further into the non-dual source of that presence of consciousness. Only when one becomes willing to go further into the non-dual source of consciousness can one transcend duality.

Modern physics as formulated with the holographic principle tells us that the perceivable world is a holographic world, no more real than a virtual reality, like the images of a movie projected from a computer screen and animated in the flow of energy. Only the perceiving consciousness of the observer of that perceivable world has an underlying reality, which is the reality of the non-dual source of consciousness. Enlightenment is the experience of consciousness returning to its source and discovering the true nature of what it really is.

The awakening process only goes forward with one's sincere willingness to look within and examine one's own mentally constructed ego structure. One can only awaken if one deconstructs one's own ego structure, which is a self-destructive process. The true nature of what one really is can never be destroyed, only the false beliefs that one believes about oneself. One's true being is

what one really is, and that being can never stop existing. The only things that can apparently cease to exist or stop having an apparent existence are the false beliefs one actively believes about oneself. In totality, those false beliefs constitute one's mentally constructed self-concept, but this concept of self constantly changes in a reactive way to the course of events in one's life, and is often contradictory and in conflict with itself. This mentally constructed self-concept or ego structure only consists of false beliefs about oneself actively constructed in one's mind that one believes about oneself, which is what one takes oneself to be in the world one perceives.

This mentally constructed self-concept is emotionally energized and body-based. One really feels self-limited to the form of one's body as one perceives the flow of emotional energy that relates one's body to the form of other things in the world that one perceives. The self-concept only has power over oneself if one believes it, but only the emotional energy inherent in its mental construction makes it believable when one feels self-limited to the emotionally animated form of one's body. The form of a self-image is inherently body-based. The feeling of self-limitation to the form of a self-image arises with all self-concept reinforcing emotional expressions. The active aspect of generating all the false beliefs one believes about oneself is the active expression of personally biased emotions that can only arise with emotional bias in one's focus of attention.

There are two critically important emotional forces involved in creating the false beliefs inherent in the mental construction of a self-concept. The first force is emotional attachment and the second is self-defensive emotional expression. The force of emotional attachment can be understood as the tendency of the body to move toward something else, and the self-defensive force as the tendency of the body to move away from or against something else. These dynamic emotional tendencies are critically important for the biological survival of a body in the world, as the body must move toward whatever promotes its survival and away from or against whatever threatens its survival. The body moves toward whatever it desires and away from or against whatever it fears. These survival behaviors are all about the self-replication of the form of the body. In the starkest of biological terms, a body cannot survive or self-replicate its form unless it expresses desire and fear. In simplest biological terms, the body moves toward whatever it wants to eat, as eating promotes its survival, and moves away from or against whatever wants to eat it, as being eaten threatens its survival. Movement toward is an act of attachment, while movement away or against is an act of self-defense. These movements are emotional expressions. By their very nature, emotional attachments are in conflict with self-defensive expressions.

Conflicts inevitably arise when the body wants to eat something that also wants to eat it, but that kind of conflict is the nature of bodies surviving in the world. We call this conflict the survival of the fittest body, which is an inevitable natural law that characterizes the survival behavior of biological bodies in the world. If a body doesn't express this kind of survival behavior in an efficient way, it won't survive in the world for very long. Another fitter body will eat it. Survival behavior must automatically begin with the conception or birth of a body, continue throughout

the life-span of the body, and can only come to an end with the death of the body. If this kind of survival behavior does not occur, the body will not survive for very long. Without survival behavior, the body will die. The fear of death is a survival instinct, but this fear gives rise to the unresolvable emotional conflicts that are at the root of the mental construction of a self-concept.

Emotional conflicts arise from the desire to control things. The problem is that things cannot really be controlled. The normal flow of things arises with the normal flow of energy through the entire world. An expression of energy limited in space and time can never control the entire flow of energy through the world. The desire to control things is inherently personal, and is limited in space and time. This limited expression of desire can never control the universal flow of things.

The desire to control things is all about feeling powerful in an uncertain world where events are unpredictable and death is always near. Death is feared since it is equated with non-existence. Fear of non-existence underlies the desire to control things, which is a denial of death. The desire to control things is a way to deny death, but this is a denial of reality and the facts of life, and leads to creation of unresolvable emotional conflicts. Conflicts inevitably arise because the desire to attach oneself to another or feel close to another comes into conflict with fear of others, such as the fear of being controlled by another or the desire to defend oneself from others. In simplest biological terms, the desire to eat is in conflict with the fear of being eaten. These inherently unresolvable emotional conflicts can only arise from the desire to control things in an attempt to deny death, but are at the root of the mental construction of a self-concept.

The emotional forces of emotional attachment and self-defensive emotional expression are critically important not only for the survival of the form of a body in the world, but also for the mental construction of a self-concept, since these emotional forces are how the self-concept is emotionally energized. The self-concept is mentally constructed as thoughts. All self-concepts are mentally created as thoughts that inherently relate the form of a body-based self-image to the form of some other thing in the world. That relationship is always an emotional relationship. Unlike the emotional relationships that relate the form of a body to the form of some other thing in the world in the present moment event, the emotional relationships of the mentally constructed self-concept tend to relate the body-based form of a self-image to the form of some other thing in the past or the future through the utilization of memory and anticipation of events.

Surrender and detachment are the only ways of resolving the inherently unresolvable emotional conflicts of the self-concept. When one surrenders, one gives up the desire to defend oneself and control things. When one detaches oneself from things, one severs the emotional attachment to things. Surrender and detachment are a way of becoming motionless at the level of one's mind. One's body is still in motion, but at the level of one's mind, the thoughts that move one toward things with the desire to attach oneself to things or that move one away from and against things

with the desire to defend oneself from things come to an end. Without these thoughts, one's mind becomes silent and still. In that silence and stillness, one can see things more clearly.

Emotional conflicts are never resolved at the same level they are created. Emotional conflicts can only be resolved if one sees things more clearly and from a higher level. As one surrenders and detaches oneself from things, one sees things more clearly and with a sense of distance, like a movie one is watching. One sees that one's character in the movie is afraid of death and non-existence, but when one detaches oneself from one's character, one no longer feels compelled to defend the survival of one's character as though one's existence depends on it. One becomes willing to just watch things play out in the normal way.

The term ignorance is used to describe someone who does not know who one really is. There is both a passive and an active aspect of ignorance. The passive aspect is simply not knowing who one is. This is seen in spiritual seekers who appear to be lost, as they are in the process of giving up their personal identity but have not yet realized a spiritual identity. There is a sadness to their seeking that reflects the loss of something of great value, which is one's spiritual identity.

There is also an active and toxic aspect of ignorance seen in people who express the arrogance of believing that they know who they are. They believe themselves to be a person in the world, and act with all the arrogance of a selfish self-centered ego as they express their biased personality in the world. They act with both arrogance and stupidity, since their biased emotional expressions of fear and desire can only create more trouble for themselves as they interfere with the normal flow of things and create an emotional disturbance in the world.

Nisargadatta describes the nature of selfishness:

To be attached is to be selfish.

As long as you have a self to defend you must be violent.

There is no such thing as free will. Will is bondage.

It is your ego that makes you think that there must be a doer.

You are compelled to act. You make it possible by giving it attention.

It is your mind that separates the world outside your skin from the world inside and puts them in opposition. This creates fear and hatred.

This is where all the troubles that one creates for oneself begin. With the mental construction of emotionally energized self-referential thoughts that make use of memory and anticipation of events to recall past events and imagine future events, one identifies oneself with a mortal creature one perceives in one's world, and one begins to contemplate one's own mortality. One begins to fear one's own anticipated death and nonexistence. As Shakespeare expresses in Hamlet's soliloquy: "To be or not to be, that is the question", but a second question needs to be

asked to resolve the inherent contradictions and inconsistencies of the self-concept implied by this first question: What does one take oneself to be?

Nisargadatta describes the search for reality is a seeker in search of itself:

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

The seeker is he who is in search of himself.

Give up all questions except one: "Who am I?"

The only fact you are sure of is that you are.

"I am" is certain. "I am this" is not.

A false question cannot be answered. It can only be seen as false.

The question "Who am I?" has no answer. No experience can answer it.

All I can truly say is "I am".

I am beyond consciousness and therefore in consciousness I cannot say what I am.

There is nothing wrong in the idea of a body, but limiting oneself to one body only is a mistake.

In reality all existence, every form, is my own, within my consciousness.

Appearances are deceiving. One is only deceived by appearances if one believes false beliefs about oneself as one actively creates and perceives those false beliefs. It all depends on what one takes oneself to be. What one really is does not change whether one is deceived and believes those false beliefs about oneself or not. When the false beliefs of a self-concept are removed from one's mental field of view, one is only undeceived. Only an illusion comes to an end.

5 Taming the bull

The whip and rope are necessary, Else he might stray off down some dusty road.

Being well trained, he becomes naturally gentle.

Then, unfettered, he obeys his master.



Taming the Bull

Comment: When one thought arises, another thought follows. When the first thought springs from enlightenment, all subsequent thoughts are true. Through delusion, one makes everything untrue. Delusion is not caused by objectivity; it is the result of subjectivity. Hold the nose-ring tight and do not allow even a doubt.

Delusion is a subjective process that one actively creates for oneself through personal bias in the focus of one's attention. That subjective bias is what gives rise to the expression of personally biased emotions, which makes one feel self-limited to the emotionally animated form of a person as one perceives the self-limiting emotional energy that animates that personal form. When this delusional subjective emotional bias expresses itself at the conceptual level of a mentally constructed personal self-concept that one identifies oneself with, the ego is born.

One can only awaken if one goes to war with one's own ego. The only thing that stands in the way or in-between one and one's awakening is one's own ego, which is the mentally constructed self-concept that one emotionally identifies oneself with as one perceives it. The ego is a false belief one believes about oneself, which tells a false story about what one is. This false story about a personal self is all about the drama of living a life in the world. The awakening process is really just a process of removing this false self-image from one's mental field of view. One has to destroy one's own false self-image, which occurs through a process of ego-death.

In the Bhagavad-Gita, when the warrior Arjuna was about to give the order to launch the great war, he saw that everyone he loved was on the other side, and he fell to the ground in a state of emotional paralysis rather than give that order. This is only a metaphor for one's war with one's ego. One does not have to go to war with the world or destroy anything in the world to awaken. Whatever appears to happen in the world is mostly irrelevant in terms of the awakening process. What needs to be destroyed are one's emotional attachments to whatever one loves in one's world, which goes forward in a process of severing emotional attachments and surrender to divine will. Arjuna eventually got back up and gave the order to launch the great war. Again, this is a metaphor. Arjuna got back up because he saw that the world he was living in was an illusory make-believe world, that everything he loved in that world was a part of the illusion, and that he was only living a make-believe life. One can only go to war with one's ego in that state of mind.

Nisargadatta describes going to war with the ego:

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.

Your thoughts dominate you only because you are interested in them. Turn away from your desires and fears and from the thoughts they create and you are in your natural state.

Only in complete self-negation is there a chance to discover our real being. The false self must be abandoned before the real Self can be found.

Whenever a thought or an emotion of desire or fear comes to your mind, just turn away from it.

Turn away. Refuse attention.

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

One's ego is what makes one a prisoner of one's mind, living in a state of emotional bondage, as one identifies oneself with the emotionally animated form of one's ego, which one only does because one feels emotionally self-limited to that animated form. The more one emotionally identifies oneself with one's ego, the stronger the emotional bonds become, as one becomes emotionally biased to defend the survival of that form as though one's existence depends on it.

One has to clearly see the falseness and the illusory nature of this mental state of emotional bondage before the awakening process can begin and freedom from emotional bondage becomes a real possibility. Only then will one go to war with one's ego and vanquish it. One has to bring to an end the expression of the emotionally biased ego-reinforcing emotions of fear and desire that perpetuate the vicious cycle of this state of emotional bondage. The expression of fear and desire are not inherently bad things, since that is how life-forms survive in the world. Only when this emotional expression becomes emotionally biased can the ego raise its ugly head.

Fear arises with self-defensive emotions and desire arises with emotional attachments. One can only free oneself from the emotional bonds of one's ego through a process of severing emotional attachments and surrender to divine will. One does not really have to destroy one's ego as much as make it irrelevant. One only has to clearly see the ego as an illusion and lose interest in it. When one loses interest in its mental construction, one withdraws the focus of one's attention away from it, and thereby withdrawals one's investment of emotional energy in its construction. Ego is not so much destroyed as it dies a natural death from lack of animating emotional energy.

Nisargadatta describes the need to abandon all self-identifications:

Abandon the idea of a separate 'I'.

Abandon all self-identifications. It is a vicious circle.

Only Self-realization can break it.

By focusing the mind on 'I am', on the sense of being, 'I am so-and-so' dissolves.

'I am a witness only' remains and that too submerges in 'I am all'.

Then the all becomes the One and the One-yourself.

When one goes to war with one's own ego, one uses concepts to attack and destroy one's emotionally energized self-concept. One's self-concept is what keeps one a prisoner of one's mind and in a state of emotional bondage. This state is like a hypnotic spell, as one focuses one's attention on one's self-concept as though one's existence depends on it. That false sense of one's existence depending on the survival of one's body is what monopolizes one's attention. The only way to break this hypnotic spell is to remove the self-concept from one's mental field of view. One uses concepts to expose the contradictions and inconsistencies of the self-concept, thereby attacking and ultimately destroying it. In this attack on one's own self-concept, one ultimately comes to see it as an illusion and loses interest in it. Without one's focus of attention on it, the self-concept is no longer emotionally energized and disappears from one's mental field of view.

Nisargadatta describes awakening as a self-destructive process:

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', and the inner and outer become one.

It is the clinging to the false that makes the truth so difficult to see.

There is a deep contradiction in your attitude which you do not see.

See your world as it is, not as you imagine it to be.

See the person you imagine yourself to be as a part of the world you perceive within your mind and look at the mind from the outside, for you are not the mind.

The person is never the subject.

You can see a person but you are not a person.

The difference between the person and the witness is as between not knowing and knowing oneself.

Mere knowledge is not enough; the knower must be known.

Without knowledge of the knower there can be no peace.

I know myself as I am in reality.

I am neither the body nor the mind. I am beyond all these.

You are accustomed to deal with things, physical and mental.

I am not a thing, nor are you.

We are neither matter nor energy, neither body nor mind.

You are not the body. You are the immensity and infinity of consciousness.

Once you have a glimpse of your own being you will not find me difficult to understand.

You must gain your own experience.

We believe so many things on hearsay.

We never cared to verify.

I am not my body. I am the witness only.

All things are in me. I am not among things.

You are confused because you believe you are in the world, not the world in you.

You are so accustomed to thinking of bodies having consciousness that you cannot imagine consciousness as having bodies.

Bodily existence is but a movement in consciousness.

In the war against one's own ego, one has to become totally fed up with living the false life of a phony person in the world. One has to see for oneself that living this false life of a phony person in the world is only an illusion of what one really is. One has to lose interest in living that phony life before one can withdraw one's focus of attention away from it and bring that phony life to an end. That is the only way emotional bias in one's focus of attention can come to an end.

Nisargadatta describes progress in the awakening process as rejection of false self-concepts:

You progress by rejection.

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.

To question is the essence of revolt.

Without revolt there can be no freedom.

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

The dark side of the human personality will always express fearful self-defensiveness and selfish emotional attachment, which inevitably leads to anger and resentment whenever the personality is threatened. The desire for the admiration or approval of others expresses the desire to control others. The expression of a narcissistic self-image expresses the desire for the approval of others, while the expression of a grandiose self-image expresses the desire to make others subservient to oneself and have power over others. All these emotional expressions are in defense of a personal self-image and express the desire to have power over and control others. These emotional forces only perpetuate the hypnotic spell of personal self-identification.

The devious ego can even appear as a wise and kind or a holy and compassionate person. These kinds of personal expressions can express the desire to have power over others as much as a blatant expression of grandiosity. Any role that one plays in the world for the purpose of having power over others in order to defend the survival of the personal form of a self is an expression of ego, since the expression of those personally biased emotions will lead one to emotionally identify oneself with the emotionally animated form of the person.

Ego is all about expressing the emotionally biased power of a person in the world. Ego is like a power-hungry tyrant that rules through divide-and-conquer. Expressing that emotional power

inevitably leads to a state of emotional bondage, as one apparently becomes a person in the world expressing an emotionally biased personality. One emotionally identifies oneself when one feels self-limited to that personal form. Awakening really has nothing to do with the world. Awakening is only about freedom. One frees oneself from this state of emotional bondage.

In the awakening process, ego is in resistance until the very end. The expression of personally biased self-defensive emotions by its character perpetuates the emotional self-identification of a presence of consciousness with its character, which reinforces the personal bias in its focus of attention and leads to the expression of more biased emotions by its character. A presence of consciousness will not give up personal bias in its focus of attention until its character stops expressing personally biased emotions. This is the fundamental reason that surrender is required in the awakening process. Before a presence of consciousness can give up personal bias in its focus of attention, its character must stop expressing personally biased self-defensive emotions, which can only happen with its surrender to divine will.

Nisargadatta describes how the person is in resistance to the very end:

The person is in resistance to the very end.

It is the witnessing consciousness that makes realization attainable.

It is the witness that works on the person-on the totality of its illusions.

The conceptual representation of emotional conflicts in the mind is only a mentally constructed story of a personal self, like the self-referential narration of a movie by the central character. This personal story is all about the drama of the character living a life in the world. Resolving emotional conflicts is necessary for deconstruction of the self-concept, but the only possible resolution is through emotional detachment, which allows one to rise to a higher level of consciousness. Only the observer outside the movie screen, which is the mind's eye observing the movie, can become aware of the emotional conflicts inherent in mental construction of the self-concept. As the observer becomes aware of emotional conflicts, it sees them as immature, like a baby that wants to control its mother in order to force her to satisfy its desires. It sees them as futile, since nothing can really be controlled. It also sees them as false, since the observer can never be any mentally constructed self-concept it can observe. Only when the immaturity, futility and falseness of all self-concepts and emotional conflicts inherent in their construction is seen, will the observer become willing to give up its conflicted desires. The observer becomes willing to detach itself from things, and sees things from a higher level with a sense of distance.

Nisargadatta describes the world as a mistaken view of reality:

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 world is but a mistaken view of reality, unreal to its core, it is not what it appears to be.

To know that you are a prisoner of your mind, that you live in an imaginary world of your own creation, is the dawn of wisdom. To want nothing of it, to be ready to abandon it, to long intensely for liberation, with true despair, is enough for the first step, and each step will generate the next step. Self-awareness tells you at every step what needs to be done. When all is done, the mind remains quiet.

Nisargadatta describes that truth can only be discovered by looking within:

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.

Everyone sees the world through the idea one has of oneself. As you think yourself to be, so you think your world to be. If you imagine yourself 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.

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.

With emotional detachment, there is willingness to let go, give up the desire to control things, and allow things to play out in the normal way without any desire to control things or interfere with the normal flow of things. A sense of trust develops as one sees that things tend to play out for the best if one does not interfere with the normal flow of things in an emotionally biased way. The desire to control things and defend oneself in a personally biased way can only create an emotional disturbance and make things worse. The observer's willingness to detach itself from things, let go and give up its desire to control things is its own growing-up process.

Nisargadatta describes the need to let go and to detach oneself before one can free oneself:

Freedom means letting go.

Spiritual maturity lies in the readiness to let go of everything.

Giving up is the first step.

The real giving up is in realizing that there is nothing to give up, for nothing is your own. Give up all and you gain all.

Then life becomes what it was meant to be:
Pure radiation from an inexhaustible source.
In that light the world appears dimly like a dream.

Nisargadatta describes the critical role detachment plays in the awakening process:

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

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.

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.

You are compelled to desire.
You cannot avoid action.

You make it possible by giving it attention.

You identify yourself with your desires and become their slave.

You create bondage when you desire and fear and identify yourself with your feelings.

Your bonds are self-created as chains of attachment.

Cut the knot of self-identification.

Emotional attachments make one feel self-limited, and keep one imprisoned in a state of emotional bondage. This egoic state largely develops during the first three years of life. These events are critical for the mental construction of a body-based self-concept that begins to develop in the second year of life. Emotional attachments are necessary for early life survival as they attach the child to its caregivers, but the process of growing up and becoming independent and self-reliant can only go forward through the process of severing those attachments. The early life events that shaped and formed emotional attachments often are not consciously remembered, but the unresolved emotional conflicts of these events often replay themselves over and over again throughout life as they arise from the unconscious memories of these early events.

Unresolved emotions are often in conflict with each other, such as the desire to feel connected that comes into emotional conflict with the fear of being controlled. The only way one can move forward from this state of emotional bondage is to make unconscious memory conscious and fully examine it. Conscious examination of emotional attachments is what severs attachments and liberates one from this state of emotional bondage. One only severs emotional attachments if one sees them for what they really are and one moves beyond them. One detaches oneself and moves beyond them as one sees things with a sense of distance and one's consciousness ascends to a higher level. One sees things like a movie that one is watching and one knows oneself to be the conscious presence that is out in the audience only watching the movie.

Nisargadatta describes the witness at the center of its world:

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

Go beyond, go back to the source, go to the Self that is the same whatever happens. See everything as emanating from the light which is the source of your own being.

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.

The natural state of pure witnessing of a detached silent observer is that of immediate knowing that arises with direct seeing. The only things that can block this natural state of pure witnessing are the mental distortions created in the observer's mind. These mental distortions typically take the form of self-concerned thoughts that are emotionally constructed whenever fear and desire are expressed as the observer focuses its attention on a form in an emotionally biased way and emotionally attaches itself to a form or identifies itself with a form. These mental distortions are emotionally conditioned and occur in a pattern of stimulus and response, but they only become learned in the emotional context of a society within which the observer's mind develops.

For a human mind, this process of emotional conditioning and learning largely develops during the first three years of life. This is the major period of mental development during which time language and a mentally constructed self-concept develop. Once these mental distortions develop, their mental functioning blocks the normal direct seeing and immediate knowing of the natural state of pure witnessing. The only way that one can return to one's natural state of pure witnessing is if one unlearns these mental distortions. One has to become unconditioned. The only way one can unlearn these mental distortions and become unconditioned is if one goes through a self-destructive process of deconstructing one's self-concept. This self-destructive process only goes forward by bringing to an end the expression of the personally biased emotions of fear and desire that emotionally energize these mental distortions, which requires the willingness to surrender to divine will and sever emotional attachments.

Nisargadatta describes how the detachment process depends on discrimination of all delusional false beliefs that one believes about oneself from the true nature of one's being:

Discrimination will lead to detachment.

You gain nothing.

You leave behind what is not your own and find what you have never lost:

Your own being.

All attachment implies fear, for all things are transient.

Fear makes one a slave.

Freedom from attachment is natural when one knows one's true being.

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

The reward of Self-knowledge is freedom from the personal self.

The dissolution of personality is always followed by a sense of great relief, as if a heavy burden has fallen off.

The awakening process always begins down in the trenches at a conceptual level. Concepts are used to attack the self-concept and demonstrate its inherent falseness. The self-concept can never really be destroyed through a conceptual attack, but that is how the process must begin.

For the awakening process to go forward, this conceptual attack on the self-concept has to be combined with surrender and detachment. The emotional energy of the self-concept is inherently in conflict with itself, as the desire to move toward and attach itself to things is in conflict with the fear of other things and the desire to defend itself against other things expressed as movement away and against. The only way the self-concept can really be transcended is if these emotional conflicts are resolved and come to an end. Only surrender and detachment can resolve them.

Surrender deals with self-defensive expressions, especially the self-defensive desire to control things, which inherently involves emotional bias in the focus of attention. This desire to control things in a personally biased or self-defensive way is a denial of death that arises from the fear of death. When one identifies oneself with form, death is equated with nonexistence, and so the fear of death turns into fear of nonexistence. When one feels one is able to control things, one feels powerful, which is a way of denying death. The problem is nothing can really be controlled as events are inherently unpredictable, and this feeling of being in control is illusory.

The irony is that death is inherently illusory, as death is only an unrecognizable disorganization of form. The perceiving one that recognizes a form and identifies itself with that form does not really die when that form appears to die and is no longer recognizable. The desire to control and have power over things in a denial of death is just as illusory as the death that is denied.

The whole sense of doership or personal agency is illusory. The self-replicating form of a person is animated by the same forces that animate the entire observable universe. To a limited degree, emotional bias in one's focus of attention can affect how a person acts, but this emotional effect is always limited in space and time, and cannot really alter the universal flow of things. At most, the limited emotional expressions of a person can only create a localized disturbance in the normal flow of things. The feeling of being in control is only an illusion of the self-concept.

The only way one can ever transcend the illusions of control and doership is through surrender and detachment, which is ultimately how emotional conflicts of the self-concept are transcended. The desire to move toward and attach oneself to things is transcended as one severs emotional attachments, and the desire to control things and defend oneself is transcended as one surrenders.

Nisargadatta describes the nature of surrender:

Self-surrender is the surrender of all self-concern.

It cannot be done.

It happens when you realize your true nature.

When there is total surrender, complete relinquishment of all concern with one's past, present and future, with one's physical and spiritual security, when the shell of self-defense is broken, a new life dawns, full of love and beauty.

Complete self-surrender by itself is liberation.

With surrender, one gives up the desire to control things and simply accepts things as they are every moment without any desire to change or interfere with anything. One puts one's trust in the normal flow of things to sort out what is for the best and allows things to play out in the normal way. With detachment, one becomes willing to let go and sever one's emotional attachments to things and allow things to come and go without any desire to hold onto or possess things. The result of surrender is integration, as the animating flow of energy through the form of the person comes into alignment with the normal flow of things, which gives rise to feelings of connection. The result of detachment is the ascension of consciousness to a higher level, as one sees things with a sense of distance and detachment. One empties oneself of all the things that one detaches oneself from, and knows oneself to be a presence of consciousness within this emptiness. This detached way of seeing things within emptiness is called witnessing. With detached witnessing, one doesn't do anything. One only watches as things play out in the normal way.

Nisargadatta describes the detached state of pure witnessing:

The state of pure witnessing is like space, unaffected by whatever it contains.

As long as there is consciousness of something, its witness is also there.

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

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

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

The ascension of consciousness to a higher level is how emotional conflicts of the self-concept are ultimately resolved and transcended. The conceptual process of negation of the self-concept turns into the direct seeing of the illusory nature of the self-concept. Through surrender and detachment, the negation of the self-concept turns into disillusionment. Once the self-concept is directly seen to be an illusion, one loses interest in it and no longer focuses one's attention on it as though one's existence depends on its survival. One sees one's self-concept is an illusion, and one loses interest in paying attention to it. As one withdraws one's focus of attention away from it, one also withdraws one's investment of emotional energy in it that is needed to emotionally construct and animate it. Without that animating emotional energy of emotional attachment and self-defense, the self-concept is no longer emotionally constructed and dies a natural death.

Jed McKenna points out the process of letting go and detaching oneself from things is a kind of death. When one severs an emotional attachment, it always feels like something dies inside. McKenna calls this self-destructive process a process of *ego death as a means to no-self*.



Riding the Bull Home

Comment: This struggle is over; gain and loss are assimilated. I sing the song of the village woodsman, and play the tunes of the children. Astride the bull, I observe the clouds above.

Onward I go, no matter who may wish to call me back.

One rides the bull home as one shifts the focus of one's attention away from one's false concept of oneself as a person in the world. One rides the bull home as one looks within and focuses one's attention on one's own sense of beingness and presence. One comes to know oneself to be a pure presence of perceiving consciousness at the center of one's own world.

At the same time that one withdraws one's focus of attention away from one's self-concept, one must become willing to shift one's focus of attention onto one's own sense of beingness or being present, so that one can come to know oneself to be a pure presence of consciousness. One must bring together one's focus of attention, which is the projecting aspect of one's consciousness or one's life-force, with the perceiving aspect of one's consciousness, which is the witness, and merge them into one consciousness. One comes to know oneself as the Atmanic consciousness emanating the light of consciousness. Once this shift in one's focus of attention is stabilized on one's own beingness, the awakening process can go forward to its final conclusion.

As one shifts and stabilizes one's focus of attention on one's own sense of beingness, one comes to know oneself as the detached witness. Without one's attention focused on the life of the person

in the world that one takes oneself to be as one perceives that world, one's mind becomes silent as one stops emotionally constructing a self-concept. This naturally stops happening when one sees one's self-concept is only an illusion of what one is, and one loses interest in it and stops paying attention to it. With a silent mind one also becomes aware of the inherent stillness and silence of the empty space from which one observes things. One goes deeper into the stillness and silence of this emptiness as one focuses one's attention on one's own sense of beingness.

In the process of awakening from the delusional state of believing that one is a person in the world one perceives, one first comes to know oneself as the detached, impartial, silent observer of that world, which is often called the detached witness. With witnessing, one perceives things from a higher level, with a sense of distance and detachment. One becomes aware of the stillness and silence of the space from which one perceives things. The things one perceives are like a passing show, no more real than the animated images of a movie projected from a screen to one's point of view out in the audience. One becomes aware of one's own sense of beingness or being present as a presence of consciousness in the audience of empty space that is perceiving things.

One enters this emptiness as one detaches oneself from things and knows oneself to be the silent detached witness of things. Thoughts are only more things. One empties oneself of thoughts as one detaches oneself from thoughts. When one watches thoughts with detachment, one sees them as illusions, loses interest in them, withdraws the focus of one's attention away from them, and allows them to die away as one withdraws the emotional energy needed to energetically animate them. When one looks within, one enters this emptiness by detaching oneself from thoughts. When the mind becomes quiet, one can know oneself only as the silent detached witness. When one witnesses things from emptiness, one knows oneself to be this emptiness.

Nisargadatta describes feeling empty and estranged in the awakening process:

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.

There is a vastness beyond the farthest reaches of the mind. That vastness is my home; that vastness is myself.

Wisdom says "I am nothing".

By itself nothing has existence.

Your true home is in nothingness.

When one looks within and focuses one's attention on one's own sense of beingness, rather than looking outward and focusing one's attention on things in the world one perceives, one's mind becomes quiet as one stops thinking about oneself as a person in the world one perceives. As one withdraws one's focus of attention away from one's personal self-concept, one also withdraws one's investment of emotional energy in the mental construction of that personal self-concept that is required to emotionally animate it. Without that emotional animation, one's mind becomes

quiet. One's mind stops telling a story of a personal self as it stops remembering a personal past and anticipating a personal future. As one focuses one's attention on the sense of being present in the present moment, one stops remembering a personal past and stops anticipating a personal future. One's attention becomes focused and stabilized on the present moment as one focuses on one's own sense of being present. The present moment is the only place one can find oneself.

Nisargadatta describes the nature of a quiet mind:

When the mind is quiet we come to know ourselves as the pure witness.

We withdraw from the experience and stand apart in pure awareness.

The personality continues, but its self-identification with the witness snaps.

When the mind becomes quiet, if you do not disturb this quiet and stay in it, you find that it is permeated with a light and love you have never known, and yet you recognize it at once as your own nature. Once you have passed through this experience, you will never be the same again.

Delusions and attachments end and life becomes supremely concentrated in the present.

Your natural state is pure awareness of being, without any self-identification with anything in particular. In that pure light of consciousness there is nothing, only light.

The sense of being present as a presence of consciousness or being a self is not the ultimate state of being, but to realize the ultimate state of being, the focus of attention of consciousness must become stabilized on this sense of beingness. The focus of attention of consciousness is directed outward as a perceivable world of forms is perceived by consciousness. The focus of attention has a tendency to wander around, which is the nature of curiosity. In the process of awakening to one's true nature, the focus of attention of consciousness must be directed inward and focused on one's own sense of being present. One must become willing to look within. Reversing the focus of attention of one's consciousness from the usual outward direction to an inward direction and stabilizing one's focus of attention on one's own sense of being present requires great discipline, since the usual tendency for one's attention to wander around in an outgoing way is so strong.

Before one can know oneself to be a detached witness existing within emptiness, one has to detach oneself from and empty oneself of all things. One also has to empty oneself of all feelings, since feelings are the perception of the flow of energy that animates the form of all things. One detaches oneself from things and feelings as one withdraws one's focus of attention away from them. When one sees things and feelings as illusions and loses interest in them, one stops paying attention to them and stops investing energy in them. Without that energy, those things and feelings disappear from existence and only the emptiness of one's own being remains.

In order to awaken to one's true nature, the most important thing one has to detach oneself from is one's own self-concept. Before one can awaken, one has to look within and critically examine one's own self-concept in a self-destructive process of deconstructing one's self-concept. One has

to see one's self-concept to be an illusion of what one is by looking at it hard with the full power of one's focused attention and by illuminating it with the light of one's own consciousness.

One sees one's self-concept to be an illusion of what is for the simple reason that one cannot be anything that one can perceive. One sees that one is only identifying oneself with a shadow that one's own light is projecting on a screen. One sees the lie of all self-concepts that one's mind tells oneself that one is some perceivable thing that one cannot be since one is perceiving that thing.

Everything one's mind tells oneself about oneself is only another shadow that one's own light is projecting on the screen. One only believes these lies about oneself because that's where one's attention is focused as one perceives and believes the lie. Seeing the lie as a lie is the same as disbelieving the lie. One disbelieves the lie when one clearly sees it is only an illusion of what one is and stops believing the lie. One only believes the lie if one feels emotionally self-limited to an emotionally animated shadow. Only one's focus of attention on the animation of the shadow gives rise to one's own light that emotionally projects and animates the shadow. One's focus of attention on the lie is the only thing creating the false belief one believes about oneself.

The lie at the heart of this false self-concept is one's belief that one's existence depends on the survival of the shadow. One only believes this lie because one feels self-limited to the shadow as one emotionally animates it, projects it from the screen and perceives it. One only believes this twisted false belief as one focuses one's attention on defending the survival of the shadow as though one's existence depends on it. One can only create the lie if one believes it. To destroy the lie one has to see it as a lie and stop believing it. One has to see it as an illusion.

The only way one can move forward in the awakening process is if one becomes willing to destroy one's own self-concept. One's self-concept is the obstruction that prevents one from moving forward. One destroys one's self-concept by de-energizing it and by deanimating the feeling of emotional self-limitation to the form of a person. This happens naturally when one sees one's self-concept is a lie; a false belief that one believes about oneself; an illusion of what one is. One deconstructs one's self-concept by losing interest in paying attention to an illusion. As one withdraws one's attention away from the illusion, one withdraws one's investment of emotional energy that is necessary to emotionally animate and self-replicate the illusion.

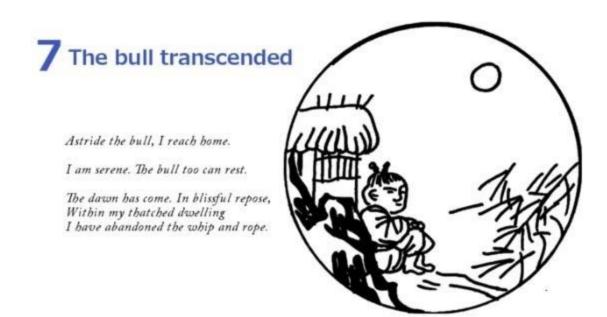
When one clearly sees that one's existence depends on nothing one perceives, and does not depend on the survival of an illusion, one deprives the illusion of the self-defensive emotional energy it needs for its survival by withdrawing one's focus of attention away from it, thereby deanimating the illusion and allowing the illusion to die a natural death. Withdrawing emotional energy away from one's self-concept through the withdrawal of one's focus of attention on it is the only way one can become desireless and deanimate one's self-concept. That is the only way one can clear one's path of all the obstructions of one's self-concept and move forward.

Seeing one's personal self-concept as an illusion of what one is, is the only way one can detach oneself from the self-concept and empty oneself of the self-concept. That self-destructive or deconstructive process is the only way one can go further and enter into the emptiness of one's own being as one looks within. One knows oneself to be the detached witness existing within emptiness as one shifts the focus of one's attention inward and focuses one's attention on one's own sense of beingness and being present as the witnessing consciousness itself.

As one detaches oneself from things and empties oneself of things, one becomes the detached witness of things. When one looks outward at the world as the detached witness, one sees things from a higher level with a sense of distance and detachment. When one looks within, one sees one's own sense of being present as the detached witness and the emptiness within which one exists. One knows oneself to exist within emptiness as the detached witness even as one looks outward at the world and sees things, but when one looks within one only knows the emptiness within which one exists as the witnessing consciousness. Through the power of one's focus of attention, one's witnessing consciousness must become stabilized within emptiness before going further into its source of nonconceptual nothingness that is beyond emptiness.

One not only detaches oneself from all things, but one also detaches oneself from all emotional feelings about things. One not only becomes empty of all things, but one also becomes empty of all feelings. When one detaches oneself from one's character and no longer emotionally identifies oneself with one's character, one feels nothing about one's character. Severing the knot of emotional self-identification with the personal form of one's character is only possible if one becomes a detached witness and feels nothing about the person.

When one detaches oneself and empties oneself of all things, one exists within emptiness as the detached witness of all things. One stabilizes one's consciousness within emptiness as one focuses one's attention on the sense of being present as the witnessing consciousness. This is an experience anyone can have right now if one becomes a detached witness, but beyond emptiness is the nonconceptual nothingness that is the source of witnessing consciousness. The detached witness is often called the Heart or the Self, but its source of nondual awareness is beyond emptiness. When the Heart Waits refers to the Heart waiting to go further into its source.



The Bull Transcended

Comment: All is one law, not two. We only make the bull a temporary subject. It is in the relation of rabbit and trap, of fish and net. It is as gold and dross, or the moon emerging from a cloud.

One path of clear light travels on throughout endless time.

The experience of subjectivity, as in a subject-object relation, can only arise with the focus of attention of a presence of perceiving consciousness. The usual outgoing focus of attention of consciousness on the world it perceives arises with the light of consciousness that emanates from that perceiving point and illuminates all the objects of that world. That light is reflected off a mental screen as all the illuminated images of objects are projected back to the observer's point of perceiving consciousness. Just as there is only one source of the light of consciousness, there is only one source of perceiving consciousness. Transcending the bull is a process of redirecting and refocusing the focus of attention of one's consciousness on the beingness of the perceiving consciousness and merging them into one unified consciousness.

Understanding the usual outgoing nature of the focus of attention of consciousness as the light of consciousness that is projecting all the sensory and mental images of one's world as that light is reflected off one's mental screen allows for an understanding of the life-force. The witness is the incoming perceiving nature of consciousness, and the life-force is the outgoing projecting nature of consciousness. Not only are the forms of all things perceived with each projective event, but the flow of energy that animates all those things is also perceived over an animated sequence of projective events. The witness, which is a pure presence of perceiving consciousness, perceives both the form of things and the flow of energy through things as the life-force is expressed.

The witness is only a point of perceiving consciousness at the central point of singularity of its world. That world is defined on a mental screen, which is a holographic screen. That screen only arises as a bounding surface of space like an event horizon that limits the observer's observations of things in space since the observer is in an accelerated frame of reference that requires the expenditure of energy. The holographic principle tells us this expenditure of energy is literally the observer's own acceleration, which is the source of that energy. That expenditure of energy is the nature of desire. The observer's world only appears to come into existence since the observer is expressing energy when it enters into an accelerated frame of reference. The emotional expression of that energy is literally the observer's desire to create the appearance of its world.

Only this expression of energy or desire by the observer can create the appearance of its world. As the observer expresses this emotional energy, the observer not only perceives the projected form of things, but also perceives the animating flow of energy through things. The perception of the emotional energy that animates the form of a person is the only thing that makes the observer feel self-limited to form and identify itself with the form of a person. The observer is creating the conditions necessary for its personal self-identification through its expression of that desire.

The observer can only create these conditions if the observer is present to perceive its world. The observer's focus of attention on its world is the outgoing projecting nature of its consciousness or life-force. That is the only way the observer's world can appear to come into existence from its own point of view. *Attention is intention*. One's intentions can only arise when one focuses one's attention on the actions one intends. As one focuses one's attention on those actions, those are the actions that one intends to enact. If the observer withdraws its attention away from its world and redirects its focus of attention inward, the observer is withdrawing its life-force away from its world. When the observer completely withdraws its attention away from its world and is no longer present to perceive its world, it completely withdraws its life-force away from its world.

Only the Atmanic consciousness has a sense of self and other and a sense of subject and object. In the source of consciousness there is no sense of self and other and no sense of subject and object, only one undivided awareness aware of nothing but its one undivided true nature. The Atmanic consciousness of the observer observing its own observable world is divided from its source as it expresses a sense of self-ness, subjective-ness, and I-Am-ness. In its dividedness, it feels self-limited to form and emotionally identifies itself with a person in the world it perceives.

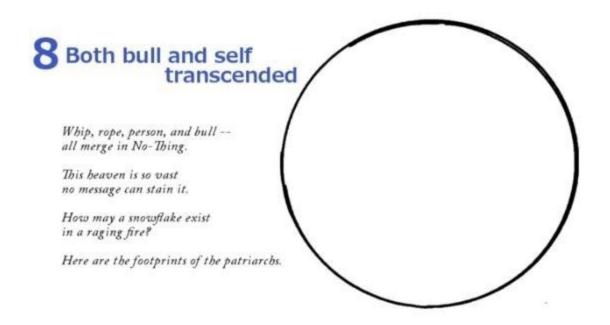
Its emotional self-identification with the emotionally animated form of a person is twisted, since it consists of nothing more than false beliefs it believes about itself. That false belief is conceptual. Its self-concept is an emotionally energized animated form of information its mind constructs about itself and emotionally projects back to itself like an image projected from a screen. The whole thing is twisted since the image can only be projected if the observer focuses its attention on it, which it only does because it really believes it is the self-image it perceives.

Like the myth of Narcissus, the presence of Atmanic consciousness falls in love with the personal form of its own projected self-image. Its emotional attachment to form underlies its self-identification with form. Once self-identified, it feels compelled to defend the survival of that personal form as though its existence depends on it. Its focus of attention on form leads to further emotional expressions that make it feel self-limited to a personal form and perpetuate the vicious cycle of the hypnotic spell of its self-identification with that personal form.

The hypnotic spell is only perpetuated because the observer feels compelled to defend the survival of that self-replicating form of information as though its existence depends on it, which is the lie at the heart of its believing that false belief about itself. The emotional energy at the heart of the lie is the expression of fear and desire, which is all about defending the survival of a life-form. The perception of the emotional energy animating the life-form makes the observer feel self-limited to that form, which is how the whole twisted mess is perpetuated through the vicious cycle of self-identification and self-defense.

A person caught up in this twisted mess feels like it must escape from this mess, but the person can never escape. The person is at the heart of the mess through its emotional animation. The person is searching for the truth of its true nature, but the person can never reach or know that truth. The person can only disappear from existence. The person is in the way of seeing the truth. One can never know the truth as long as one takes oneself to be a person. It is the consciousness itself that must stop believing the twisted false belief it believes about itself that it is a person.

The only real power the consciousness has is its focus of attention. The consciousness must withdraw its attention away from the life of the person in the world to the point the person and its world disappear from existence. The only reason the consciousness will ever do this is if it sees the life of the person in the world is an illusion of what it really is and loses interest in paying attention to an illusion. The consciousness must simultaneously shift the focus of its attention onto its own sense of beingness and being present. The consciousness is only an observer that is observing things. The only real power the consciousness has is its focus of attention as it chooses what to observe in its world. This is a limited power as it chooses what things to observe in its world, but is an absolute power as it chooses whether or not to observe that world. Ultimately, the presence of consciousness chooses whether or not to be present to observe its world.



Both Bull and Self Transcended

Comment: Mediocrity is gone. Mind is clear of limitation. I seek no state of enlightenment. Neither do I remain where no enlightenment exists. Since I linger in neither condition, eyes cannot see me. If hundreds of birds strew my path with flowers, such praise would be meaningless.

Transcending both the bull and the self is a state of no-self. When there is no self, there is also no other. One only reaches this state of no-self when one has returned to the source. The source of the light of consciousness can only be described as darkness. The source of perceiving consciousness can only be described as emptiness or nothingness.

Nisargadatta describes the source of consciousness as darkness:

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.

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.

Nisargadatta describes that the expression of I Am is the first concept that shatters the undivided unity of consciousness. The expression of I Am is the separation of the perceiving consciousness of the witness of its own conceptual world from the undivided pure consciousness of the source:

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.

Without the expression of its life-force, the observer's world of forms is no longer projected from a mental screen or animated in the flow of energy, and disappears from existence. This desireless state arises when energy is no longer expended. This is an ultimate state of freefall in which the observer's acceleration comes to an end. When this acceleration comes to an end, the observer no longer has a bounding surface of space that limits its observations. Without that holographic mental screen, there is literally nothing to observe. In the sense of awakening from delusion, this ultimate state of freefall is experienced as falling into the void. In this ultimate state of freefall, the individual perceiving consciousness of the observer no longer exists as a separate entity. In this ultimate state of existence, only undivided, unlimited nondual awareness timelessly exists.

Nisargadatta describes absolute reality as the pure being of nondual awareness that is the timeless source of whatever appears to come into being:

Absolute reality imparts reality to whatever comes into being.

It is the very source of reality.

It is 'what is'-pure being-the timeless reality.

It is not perceivable; it is what makes perception possible.

Awareness is beyond all.

Awareness is primordial; it is the original state.

Awareness is undivided, aware of itself.

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

The Supreme state neither comes nor goes. It is.

It is a timeless state, ever present.

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.

Before this ultimate state of freefall can occur, the observer must redirect its focus of attention inward and stabilize its attention on its own sense of being present. The outgoing projecting light of consciousness must be redirected inward in order to bring together one's life-force with one's perceiving consciousness and merge them into one consciousness. This is the highest level of consciousness one can have while one is still present to perceive one's own world, which is the nature of being the ascended Atmanic Self. Although this consciousness is ascended, one is still perceiving one's world in a subject-object relation and seeing two when there is really only one.

This highest sense of self in the sense of a subject-object relation is often referred to as the born again experience. One dies to one's false self-identification with one's body-based personal sense of self and is reborn to the spiritual identity of a presence of consciousness. This is the highest sense of self one can have while one still perceives things in one's world, but there is still further. One is still in a state of duality and is seeing two, while in reality there is only one. One must go further to discover the source of one's consciousness, which is purely nondual. There is no sense of self or subject-object relation in the nondual awareness that is the source of consciousness.

Nisargadatta describes the perceiving point of I Am as the bridge or the doorway between the manifested world and the unmanifested source of consciousness:

The point of I Am is the bridge between the watcher and its dream.

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.

I Am both inside and outside the dream, but what I see in dream, I am not.

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

Between desires and freedom from all desires is an abyss which must be crossed.

Cross the door and go beyond.

The highest sense of being a self is the highest level of consciousness, but there is still further. The ultimate state is not a state of consciousness. The ultimate state is the ultimate nature of existence, which is non-conceptual. The highest level of consciousness or self is characterized by the sense of being present or I-Am-ness. In a very real sense, I Am is the first concept that must be expressed before any other concepts can come into existence. Since the entire perceivable world is conceptual, I Am must be expressed before the world comes into existence. I Am is the perceiver of that perceivable world, which can only come into existence from one's own point of view when perceived. I Am must come into existence before that world is perceived, but I Am is not the ultimate state. The source of I Am is the ultimate nonconceptual nature of existence.

Nisargadatta describes that one consciousness is the source of everything:

Consciousness itself is the source of everything. Everything is a form of energy.

What is real is nameless and formless, pure energy of life and light of consciousness.

In the immensity of consciousness a light appears, a tiny point that traces shapes, thoughts and feelings, concepts and ideas.

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

Every moment returns to its source, just as every wave subsides into the ocean.

Look within and you will find that the point of light is reflected as the immensity of light in the body as the sense I Am. There is only light. All else is appearance.

You are that point of consciousness.

By your movement the world is ever created. Stop moving and there will be no world.

The source of consciousness cannot be an object in consciousness.

I am not an object in consciousness but its source, its witness, pure shapeless awareness.

To know the source is to be the source.

Realization is in discovering the source and abiding there.

manic Self must become free of all sense of self before going furth

The *I Am* or Atmanic Self must become free of all sense of self before going further. At the end of the awakening process, the Atmanic consciousness brings itself into focus and knows itself to be nothing more than the pure being of a presence of consciousness. It brings itself to the edge of the abyss that separates being present for its world from the void of not being present. At this point of singularity, it passes through the gateless gate and reunites itself and becomes one with the source of consciousness. Through dissolution into the Brahmanic consciousness of No-self, one knows oneself to be that formless, timeless, undivided and unlimited pure beingness.

Osho describes awakening as the cessation of consciousness dreaming the creation of a virtual reality. Without that virtual reality, one's consciousness becomes pure space:

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.

Osho describes that this pure space of inner emptiness is the mystery of being. When the IAm of the witness dissolves into an I am not of emptiness, the mystery of true being is revealed:

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 describes that this dissolution into the nothingness of true being is experienced as falling into the 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.

That Being is void.

Nisargadatta describes the experience of falling into the void as the path of return:

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.

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

The Supreme reality is the void beyond being and non-being, beyond consciousness. There is no journey to Supreme reality. One is undeceived only. One is as one always is. One knows nothing, wants nothing, is nothing. There is nothing left to do. One's work is done.

Nisargadatta describes the nature of the realized man:

The realized man has returned to the source and realized his true nature.

The realized man knows the state in which there is neither the world nor the thought of it; the state in which imagination is no longer taken for reality. He comes to take you to the real, to truth, to what is; not to come to terms with the mind and its delusions.

The realized man is egoless; he has lost the capacity of identifying his Self with anything. He is beyond space and time, beyond the world.

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.

Realization is in discovering the source and abiding there.

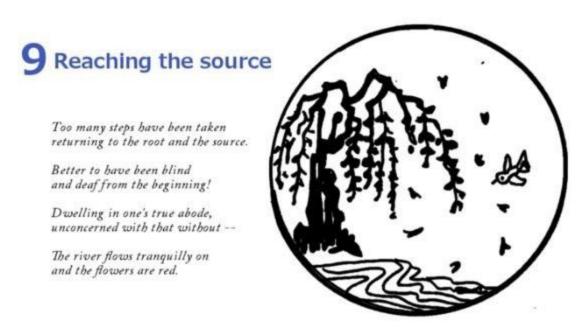
One is left without questions; no answers are needed.

One is undeceived only.

The Atmanic or *I Am* consciousness of an observer observing its own observable world is always a limitation of consciousness that arises from an observation-limiting holographic screen, which is a bounding surface of space that encodes all the information for everything the observer can observe in its holographic world. Brahmanic consciousness is inherently unlimited and has no boundary, but it also observes nothing since it encodes no information from which forms of information can be constructed and has no energy that can give rise to the animation of forms.

Since all concepts are energetically animated forms of information, Brahmanic consciousness is inherently nonconceptual. No concept can ever describe it. Brahmanic consciousness can only be described in terms of the negation of concepts as limitless, timeless, formless, selfless, emptiness and nothingness. Since it is undivided and undifferentiated, it can also be described as oneness.

Atmanic consciousness can only be divided from Brahmanic consciousness when a limiting holographic screen is constructed. Ultimately, when a limiting holographic screen is no longer constructed, limited Atmanic consciousness must return to, reunite itself with and become one with unlimited Brahmanic consciousness. It is then possible to say in a scientific way as Shankara stated long ago: There is ultimately no difference between Atman and Brahman.



Reaching the Source

Comment: From the beginning, truth is clear. Poised in silence, I observe the forms of integration and disintegration. One who is not attached to form need not be reformed. The water is emerald, the mountain is indigo, and I see that which is creating and that which is destroying.

That which is creating and destroying the forms of integration and disintegration is the source of the light of consciousness, which in-and-of-itself can only be described as darkness, emptiness, silence and nothingness. That is the one truth. One sees this truth when one becomes the truth. To know the truth is to be the truth. Undivided awareness is aware of its true undivided nature. Undivided awareness need not reform itself into a new form if it has no desire to do so.

Nisargadatta describes one absolute consciousness is the source of the light of consciousness in which the world appears and disappears like a dream, and is also the source of the perceiving consciousness of an observer in motion that creates the appearance of the world:

The dreamer is one.

I Am beyond all dreams.

I Am the light in which all dreams appear and disappear.

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

Nisargadatta describes the nature of awakening from the dream:

Realize that you are dreaming a dream you call the world.

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.

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.

When you have seen the dream as a dream you have done all that needs to be done.

The first thing awakening from delusion proves is that everything exists within consciousness. From the point of view of a presence of consciousness, everything in its world appears to come into existence if that conscious presence is present to observe things, and everything in its world disappears from existence if that conscious presence is not present to observe things. Being present requires the presence of consciousness to focus its attention on whatever it observes.

There is nothing mysterious about things disappearing from existence when a presence of consciousness is not present to observe them. This happens each night when one falls into a deep sleep and everything disappears from existence from one's own point of view. One does not become unconscious in deep sleep. One becomes aware of nothing, which is the ultimate nature of what one really is. The only difference between deep sleep and awakening from delusion is with awakening from delusion one focuses one's attention on one's own sense of beingness to the point that one becomes aware that the true nature of one's existence is that nothingness.

The second thing awakening from delusion proves is that one still exists even when everything in one's world disappears from existence and nothing remains. Just like awakening from a dream, the true nature of the dreamer remains when the dreamer awakens and its dream disappears from existence. Awakening proves that everything in one's world is no more real than a dream, and the ultimate nature of the dreamer is the nothingness that remains when everything disappears from existence. The formless nothingness that remains is the dreamer's underlying reality, which could be called the ground of being, but is really just the ultimate reality of the dreamer's existence.

Enlightenment is knowing the truth of what one is. One always is what one is. One can only believe a false belief that one is something that one is not. That false belief is called a delusion. One takes oneself to be something that one is not. The only thing preventing one from becoming

enlightened is delusion. At the end of the awakening process when everything disappears from existence and nothing remains, one can no longer take oneself to be something that one is not. One knows oneself to be that formless nothingness.

Nisargadatta describes that absolute reality is alone and knows nothing:

Reality is essentially alone.

To know that nothing is, is true knowledge.

To know that you do not know is true knowledge.

Nisargadatta describes the need to do nothing before one can know and be 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.

Everything in an observable world is conceptual. Everything observed is a concept constructed as a form of information that is projected from the holographic screen of the observer's mind to the observer's point of view and animated in the flow of energy. Everything is only observed in the energetic context that arises with the observer's acceleration and as the observer focuses its attention on and is present to perceive its observable world. In an observable world, being and knowing can only coexist in terms of what is known in the sense of a subject-object relation. The observer's mind is only an observation-limiting bounding surface of space that arises in the observer's accelerated reference frame. When that limitation of consciousness comes to an end, there is nothing to observe and there is no observer. All subject-object relations come to an end.

There are no subject-object relations in the nondual awareness that is the source of perceiving consciousness. The source of the observer and its observable world is only describable in terms of negation as formless, timeless, non-conceptual nothingness. In that formless nothingness, being and knowing are the same thing, which is non-conceptual nothingness. In that formless nothingness, one can only know what one is if one is what one knows. To know is to be. One can only know what one really is if one knows nothing, does nothing and is nothing.

10 In the world

Barefooted and naked of breast, I mingle with the people of the world.

My clothes are ragged and dust-laden, and I am ever blissful.

I use no magic to extend my life;

Now, before me, the dead trees become alive.



In the World

Comment: Inside my gate, a thousand sages do not know me. The beauty of my garden is invisible. Why should one search for the footprints of the patriarchs? I go to the marketplace with my wine bottle and return home with my staff. I visit the wine shop and the market, and everyone I look upon becomes enlightened.

After one reaches the source and chooses to return to the world, one lives an integrated life in the world. This integrated life is characterized by surrender to divine will. One relinquished the illusion of control. When one no longer expresses any personal bias and no longer interferes with the normal flow of things, the animating flow of energy through one's own character comes into alignment with the normal flow of energy through one's entire world, and one feels connected to all things. One sees those things from a higher level with a sense of distance and detachment, like a movie one is watching. One no longer has any desire to interfere with the normal course of events in the movie, but just relaxes and allows things to play out in the normal way. One is no longer trying to direct the movie, but is only watching it as it plays for one's amusement. One knows oneself to be the perceiving consciousness out in the audience watching the movie.

This integrated life is also characterized by expressions of creativity, since that is the nature of the normal flow of things. The behavior of one's character comes into alignment with the normal flow of things, and is naturally characterized by right actions. An integrated life is characterized by a sense of gratitude for all that is given, but that gratitude is also tinged with sadness for all that is lost. When one lives an integrated life, one still has likes and dislikes that arise from the way one's character is organized as a life-form, since all living organisms must express emotions as they live in the world. The significant distinction from living a self-identified life is that an

integrated life is lived without personal bias, but with a sense of being connected to all things, the expression of creativity, and the sense of right action, as the emotional energy animating one's character comes into alignment with the flow of energy through one's world. Instead of personal bias, there is a sense of trust in the normal flow of things to sort out what is best for one's character and world. An integrated life is a life lived in *the best of all possible worlds*.

Physicists like to speculate about what existed before the observable universe was created in a big bang event. What existed before the singularity of the big bang? That creation event is often called the beginning of time. What existed before time was created? The answer to this question is actually quite simple. Nothing existed. The singularity of the big bang is the observer of that observable world. Not only is that observable world created, but the perceiving consciousness of the observer must also come into existence. That observable world is always perceived from the central point of singularity. If the observer is not present at that singularity to observe its world, that world disappears from existence and nothing remains. The non-conceptual nothingness that exists before anything is observed is what exists before the observable world is created.

Why does manifestation of an observable world happen in the first place? One possible answer is everything is a spontaneous expression of creativity, like the desire to go on an imaginary adventure. This is the Story of the Prodigal Son, but it is also the plotline of the Wizard of Oz. When one is finished with one's imaginary adventure, one must return home. When one is done with one's desire to go on an imaginary adventure and one no longer wants to pretend to be something that one is not, one must return to one's true home and be what one really is.

Another answer sometimes given is the ultimate nature of existence is essentially alone as it is all-one. In some inexpressible way, like a young child that feels lonely, in its loneliness it creates imaginary companions for itself. It first has to create an individual identity, which is the expression of the I Am Self. It then creates a perceivable world of forms which it can experience in a subject-object relation of self and other as it identifies itself with the form of a person in that world perceived by the I Am Self, and as that person comes into emotional relationship with the form of other things perceived in that world. In this way, the ultimate nature of existence creates a make-believe imaginary virtual reality world for itself. The problem of delusion only arises when one begins to believe that make-believe imaginary world is real.

The ultimate nondual nature of reality is telling us there is only an illusion multiple conscious entities exist. Each presence of Atmanic consciousness is truly alone in its own world. The Atmanic Self perceives everything in its world in a subject-object relation in terms of forms of information projected from the holographic screen of its mind to its central point of view and animated in the flow of energy. The Atmanic Self is the only conscious entity in that world, and yet we have the impression there are many conscious entities that interact and communicate with each other. The answer to this puzzle is information sharing that can occur between different

presences of Atmanic consciousness that arise at different points of view. Each Atmanic Self only perceives the forms of information that arise from its own holographic screen, but those screens can overlap in the sense of a Venn diagram and share information, much like the kind of information sharing that occurs in a network of overlapping computer screens. The illusion of individual conscious existence arises from the limitation of the mind, which is a bounding surface of space that limits the observer's observations. When that illusion of limitation comes to an end, the Atmanic Self must dissolve back into its nondual source of No-self.

The journey to awakening is only a process of breaking the hypnotic spell of personal identity. The only real power one has to break this hypnotic spell is one's focus of attention, which is how one makes choices. One breaks the hypnotic spell of personal identity by choosing to negate the false belief in personal identity, which always requires a shift in the focus of one's attention. One negates the false belief by shifting one's attention on one's own sense of beingness. The negation process narrows down the issue of choice to a single question: Who am I?

The paradox is when one becomes enlightened and knows what one really is, one also knows what one isn't. One isn't a person in the world one perceives. The truth of what one is sets one free from the bondage of personal self-identification. Ultimately, one has no need to live a life in that world, and need not even be present to perceive that world. One is always free to choose to exist as formless nothingness. An enlightened being can just as easily answer the Who am I question with I am not as with I am.

One of the strange aspects of the awakening process is that many who undergo the process stop the process before it has finished its natural course and come to its natural conclusion. Instead of going further into Brahmanic consciousness, they stop their journey at the level of Atmanic consciousness. They are half-way up the mountain, but they stop their journey to admire the scenery from that view. They may even organize a base-camp called an ashram, and collect a number of other spiritual seekers organized into a kind of cult. The cult leader is only half-way up the mountain and cannot guide them any further than that level. They are all stuck half-way up the mountain, admiring the scenery from that level of the view of things.

The irony is the top of the mountain is no mountain. The view from the top of the mountain is no view, which is probably why many seekers stop climbing. The complete awakening process that leads to enlightenment can be summarized with the Zen saying: *First there is a mountain, then there is a mountain again*. The problem is, the top of the mountain, which is no mountain, is the only truth. The truth is pure truth, and has no untruth in it. Any amount of untruth, no matter how small, makes the whole thing untrue. For the one who really wants to know the truth, no amount of untruth, no matter how small, can be tolerated.

The problem with stopping the awakening process at the level of Atmanic consciousness is that one is still seeing two when there is really only one. One is still seeing things in a subject-object

relation of self and other. Atmanic consciousness is inherently the consciousness of an observer observing things in an observable world. The problem is that observable world is no more real than a computer generated virtual reality. In the oneness of Brahmanic consciousness, there is nothing to observe and there is no observer. There is no subject, no object, no self and no other. That is the ultimate truth that has no untruth in it.

The Matrix is a retelling of Plato's Allegory of the Cave. The virtual reality of the Matrix is projected from a computer screen to the perceiving point of view of an observer, just like images projected from the wall of Plato's cave. The computer screen encodes all the information for that virtual reality. The observer's are prisoners because they identify themselves with the images they perceive. They take the virtual reality to be the true nature of what they really are.

In a central scene of the Matrix we are told that the truth is there is no spoon. The appearance of a spoon in three dimensional space is only a holographic illusion, like everything else one can perceive in space. The spoon doesn't really bend. That's impossible because it doesn't really exist. Only one's self bends as one creates the holographic illusion of the spoon. Although the Matrix didn't say this explicitly, the lesson to be learned is that a person is no more real than a spoon. There is no person. When one realizes the truth, one sees for oneself that only one's self really bends. The bending of the self is an accelerating observer, which creates the appearance of everything in one's world as images are projected from a holographic screen to one's point of view in empty space. The irony is one only has a self when one's self bends and one perceives a holographic world. When one's self doesn't bend, one has no self and one perceives nothing.

Do not try to bend the spoon. That's impossible. Instead, only try to see the truth.

What truth?

There is no spoon. Then you'll see that it is not the spoon that bends, but only yourself.



There is No Spoon

What is it that really bends? Relativity theory tells us the strange answer is only space can bend. Not the projected holographic space we perceive, but the empty background space of pure

consciousness within which the holographic universe and its observer arise. Only space can really bend because only empty space really exists. Everything else is part of the holographic illusion. That empty space of non-dual awareness is what one really is.

Ultimately, all the observer really is, is empty space. That is the mystery of the ultimate nature of its existence. Ultimately, all the observer really does is bend space as it expresses energy and desire and creates the virtual reality or the manifestation of a world for itself to experience. This is a spontaneous expression of creativity for the sheer joy of it; for the love of playing the game.

Like the prisoners in Plato's Cave, the Matrix describes a state of bondage. It is the perceiving consciousness of the observer that is in a state of emotional bondage as it emotionally identifies itself with the emotionally animated form of its character in the virtual reality movie of the world it is watching as images of that movie are projected from a holographic screen to its point of view in empty space. In the Matrix, the machines are responsible for creating the virtual reality world of the Matrix and imprisoning the humans in that virtual reality, but this description is only a metaphor. In reality, consciousness itself creates the machinery of the Matrix through its expression of geometric mechanisms. These geometric mechanisms naturally arise whenever an observer is in an accelerated frame of reference. This acceleration gives rise to an event horizon, which becomes a holographic screen through the geometric mechanism of the holographic principle. The observer's acceleration is the source of the energy that allows for the projection of images from that holographic screen and the animation of those images. The observer's focus of attention on those images is what allows for the expression of that animating energy and gives rise to the projecting light of consciousness that is projecting the images from the screen back to the observer. Consciousness itself is creating the imprisoning machinery through its expression of geometric mechanisms and is imprisoning itself in the virtual reality world it creates for itself.

The central metaphor of the Matrix is about entering the darkness, which is represented by wearing dark glasses. Awakening from one's delusion that the virtual reality world of the Matrix is real is only possible if one is willing to enter the darkness. The darkness is the source of the light of consciousness that is creating and destroying the appearance of that virtual reality world.

One doesn't have to do anything to know what one really is. One always is what one is. One can't be anything else. One can only pretend to be something that appears in one's imagination. Everything one perceives is imaginary. Everything is an image projected from a screen to one's point of view in empty space. One is that point of perceiving consciousness in emptiness. One can only take oneself to be something that appears in one's imagination, but that thing is no more real than an image projected from a screen. Once one's imagination is turned on, it has a life of its own and tends to play out in its own natural way. To become enlightened, the only real power one has is to turn off one's imagination by turning off the light of one's consciousness. The images of one's imagination are only projected from a screen if one focuses one's own light of

consciousness on the screen. One always has the power to turn off one's imagination, like turning off a light switch, if one becomes willing to turn off one's own light of consciousness, which is the ultimate way in which one turns away from one's world and is no longer present for that world. As Jed McKenna points out, *one turns off one's world like turning off a light switch*.

Why does the hypnotic spell of self-identification that leads consciousness to identify itself with the personal form of its character in the virtual reality world it perceives arise in the first place? Why do feelings of self-limitation arise that make consciousness feel self-limited to the form of its character as it perceives the flow of emotional energy that animates that form? Why does the vicious cycle of self-defense arise that compels consciousness to defend the survival of that form as though its existence depends on it? Why does the focus of attention of consciousness become monopolized by emotional concerns about its character in this emotionally biased way?

The only possible answer is that's how the virtual reality is emotionally constructed. Without that emotional bias in its focus of attention, consciousness would withdraw its attention away from the virtual reality world. As the Architect of the Matrix tells Neo in a critical scene, the emotional bias of personal choice is what underlies personal self-identification. Without that illusion of personal choice, *whole crops would fail*. Without the illusion of personal choice, the world would be full of emotionally withdrawn catatonic people staring blankly into space.

Good and bad are relative terms that can only exist within a state of duality. Eating is good and being eaten is bad. From the point of view of the one that eats, eating feels good, but from the point of view of the one that is eaten, being eaten feels bad. These feelings of good and bad are expressed as emotions of desire and fear, which is the emotional energy that animates a state of duality and the lie of self and other. That is how the lie is emotionally constructed. Outside the lie of duality, in the nondual source of duality, there is no good and bad because there is no self and other. Good and bad are relative terms that can only appear to exist in the lie of duality.

Jed McKenna refers to this emotional construction of the virtual reality of duality as the beautiful and horrible faces of Maya. The beautiful face of Maya arises with the emotional construction of organized forms of information and the self-replication of those forms in a recognizable way in the flow of energy. The horrible face of Maya arises with the disorganization of those forms in an unrecognizable way, like a process of burning that disorganizes a form. All that really happens with the emotional construction of the virtual reality is the transformation of form into new forms. Nothing ever really happens to the perceiving one that is recognizing those perceivable forms. It can only appear that something happens to the perceiving one if the perceiving one emotionally identifies itself with a recognizable form that it perceives.

Jed McKenna describes the essential role fear plays in perpetuating the hypnotic spell of personal self-identification: Fear is the glue that holds the whole thing together and keeps everyone in character. Fear looks like evil when you're trying to escape from it, but it looks very sensible and

necessary when you're not. You can say fear and ignorance are bad and that Maya is evil, but that's a low-level perspective. 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.

What is the nature of the mind? The mind is a holographic screen that encodes information for everything that appears in the world one perceives. This is information not only for the external form of things, like external sensory perceptions, but also for the apparent internal form of things, like internal emotional body feelings, thoughts and memories. The mentally constructed body-based self-concept is another form of information constructed in the mind and emotionally animated in the flow of energy. Although there is the appearance of internal and external based on the surface of the body that appears to create a boundary between internal and external, all possible perceptions are really external. Every perception is a form of information encoded on the holographic screen of the mind and projected like an image to the observer of the mind.

Not only are all perceptions external to the observer of the mind, but all perceptions are also conceptual, since all perceptions are forms of information projected like images from the mental screen to the observer and animated in the flow of energy. The holographic principle tells us that even space and time are conceptual, and the elementary particles that appear to exist in space and time are also conceptual. The whole perceivable world is conceptual. The only thing that is not conceptual is the source of the perceiving consciousness of the observer that is perceiving that perceivable world. The non-dual source of consciousness is not a form of information that it can perceive. It can only be described as formless nothingness.

Enlightenment is simply that presence of perceiving consciousness returning to its source and discovering the true non-dual and non-conceptual nature of what it really is. Ultimately, what really exists when everything that appears to exist in space and time disappears from existence is the non-dual and non-conceptual formless source of consciousness.

Awakening always goes forward in a two-step process, where both steps are complementary to each other. The first step is to step out of the world one perceives. This is a step of detachment and externalization, as one steps out of the world one perceives. One sees that world from a higher level with a sense of distance and detachment, like a movie that one is watching as the animated images of that world are projected from a screen to one's point of view out in the audience of empty space. One not only sees the external images of that world with a sense of detachment, but also the apparent internal images of that world, like internal emotional body feelings, thoughts, memories, and one's own body-based self-concept. Everything is seen with a sense of detachment and externalization, which allows one to detach oneself from all things and empty oneself of all things. One empties oneself not only of all things that appear in that world, but also of all body feelings, thoughts, memories and self-concepts one has about that world.

Complementary to the process of emptying oneself of all things is the second step of turning away from that world and looking within. One shifts the focus of one's attention away from the world one perceives and looks within to discover the true nature of what one really is. The only truth that one can ever know about oneself, the only truth that is truly internal to oneself, is that one exists as a pure presence of perceiving consciousness in the emptiness of space from which one perceives things. One empties oneself of all things so that one can know oneself to be this pure presence of perceiving consciousness existing within emptiness.

The complementary second step to the first step of emptying oneself of all things is becoming aware of one's own sense of beingness and presence, the sense of being present as a presence of consciousness. This discovery is never made in the world of things that one perceives, but only by turning away from that world and looking within into the emptiness of one's own being. One comes to know oneself to be a presence of perceiving consciousness within emptiness as one focuses one's attention on one's own sense of being present as a pure presence of consciousness.

One's awakening process is not done when one comes to know oneself to be a pure presence of perceiving consciousness existing within emptiness. There is still further. To know the truth of what one really is, one must go further into the non-dual source of that presence of perceiving consciousness. One must know oneself to be the non-dual source of that beingness.

When one steps out of the world one perceives and sees that world from a higher level with a sense of distance and detachment, one sees that world to be an illusion and one loses interest in paying attention to an illusion. One naturally takes the next step of turning away from that world and looking within so that one can discover the true nature of what one really is.

To continue the metaphor of steps in the awakening process, there is a final step that follows the first two steps. The first step is to step out of the world one perceives as one detaches oneself from that world and empties oneself of all things in that world. The second step is to turn away from that world and look within so that one can know oneself to be a presence of perceiving consciousness within emptiness. The final step is to cross the edge of the abyss that separates being present for that world as that world appears to come into existence from the void of not being present and the disappearance of that world. The final step is to fall into the void.

Why is the cross such a powerful symbol? The cross symbolizes death in this world, but also symbolizes crossing over to the other side. Crossing over always requires a kind of death. One can only cross over to the other side if one is willing to die in this world.

The only sin is ignorance. This is the original sin of personal self-identification, the ignorance of identifying oneself with the animated form of a person that appears in the world one perceives. Jesus died on the cross for your sins to show you the way how to cross over to the other side and discover the true nature of what you are. Once you're free of the ignorance of personal

identification, you just sit back in your seat in the audience and watch the movie of the virtual reality that plays for your amusement without any personal identification with your character in the movie. It doesn't matter what your character does in the movie if you're free of ignorance. You just let the movie play out in the normal way without any desire on your part to direct how the movie plays out. You just watch the movie play out without any personal bias in your focus of attention as you watch things play out in the normal way from the audience of emptiness.

You have to see everything you perceive to be an illusion so that you can discriminate the true from the untrue. Everything you perceive is untrue. The only truth is the consciousness that is perceiving those things. You discriminate the untrue from the true so you can reject all that is untrue and know the truth of what you really are, which is nothing but consciousness. You see the untrue as an illusion and lose interest in paying attention to an illusion so you can turn away from the illusion and look within to discover the true nature of what you really are. To awaken to your own truth, you must stabilize your attention on your own sense of beingness and presence.

Consciousness identifying itself with its character in the movie it is watching wants to escape from the movie to free itself from the emotional bondage of personal self-identification, but as long as consciousness identifies itself with its character, it can never escape. Only when that personal self-identification comes to an end and consciousness emotionally detaches itself from its character can its character and the world the character appears in disappear from existence. Only then can consciousness return to its source and discover the true nature of what it really is.

What about the commonly voiced objection that this discussion of the process of awakening from delusion cannot be true since it occurs in the same illusion that underlies delusion? Jed McKenna refers to this kind of discussion as *truth-talk in the dream-state*. One is never really imprisoned by the emotional bondage of personal self-identification because one is never really a person. One only believes that one is a person. The delusional personal self-concept is only a false belief one believes about oneself. Freeing oneself is always a self-destructive process of disbelieving false beliefs. To know the truth of what one really is, one only has to destroy those delusional false beliefs. Any discussion of how to awaken from delusion is only like a map that points out the directions one must travel in order to escape from the illusion, but one was never really a part of the illusion in the first place. One only believed that one was a part of the illusion. The process of escaping is simply a process of destroying those delusional false beliefs.

Most physicists, like most scientists, believe there is an objective reality out there that we can discover. They are looking for a theory of everything that will describe the nature of all things. These things include the nature of the space-time geometry that relativity theory describes and the nature of the elementary particles that quantum theory describes. This is a mistaken belief. There is no theory of everything. There is nothing wrong with either relativity theory or quantum theory per se. In terms of the assumptions that underlie both relativity theory and quantum

theory, the concepts of space-time and elementary particles are perfectly good concepts. The problem is these concepts really have nothing to do with the true nature of reality.

The solution isn't to modify the underlying assumptions of relativity theory and quantum theory so that we can find a way to unify them into a theory of everything that describes the nature of objective reality. The solution is to abandon the concept of objective reality. Instead of a theory of everything, the holographic principle is telling us how to construct a purely subjective reality that only looks like an objective reality when we conceptualize it in terms of the space-time geometry of relativity theory and the elementary particles of quantum theory.

What creates the illusion of an objective reality? Why are physicists so sure there is an objective reality out there that they can discover? Physicists are looking into the geometric structure of a holographic world, which can be understood either in terms of non-commutative geometry or fractal geometry. The deeper one looks into a fractal geometry, the more geometric structure one can see and discover. Physicists are literally looking down the rabbit-hole of geometric structure that arises from the fractal or non-commutative geometry of a holographic world.

The holographic principle is related to the $1/R^2$ force law of gravity, as the $1/R^2$ force law arises from geometry. If we imagine a point source that emits some kind of radiation like light rays into three dimensional space, the intensity of that radiation falls off like $1/R^2$ with radial distance from the source. Since that radiation travels at the speed of light, the total amount of radiation emitted by the source per moment of time must simultaneously cross spherical surfaces that are constructed at a radial distance R from the source. This geometric fact tells us the intensity of radiation at a distance R from the source is the amount emitted per unit time divided by the spherical surface area $A=4\pi R^2$, which explains the $1/R^2$ force law. This makes sense in terms of quantum field theory, since a force is conceptualized as the exchange of a force particle like a graviton between two matter particles. When the two matter particles are separated by a distance R, the intensity of force particles as emitted by one matter particle and as experienced by the other matter particle falls off as $1/R^2$. The $1/R^2$ force law is entirely due to the intensity of the emitted radiation of force particles by each matter particle falling off like the surface area of a surrounding sphere, which is due to the geometry of three dimensional space.

Now imagine that each spherical surface is covered with pixels like a computer screen, and the radiation is reflected off the surface like a mirror back to the point source. If the total number of pixels is proportional to the surface area $A=4\pi R^2$, then each pixel reflects an amount of radiation proportional to $1/R^2$. The holographic principle is simply a statement that the total number of pixels on the surface of the sphere is proportional to the surface area A, so that the total amount of radiation reflected back to the point source by the reflecting surface is equal to the total amount of radiation emitted by the point source. This makes sense when we understand that the reflecting surface is a holographic screen that is reflecting the light of consciousness back to the

observer at the central point of view. Whatever the observer observes in the space bounded by the holographic screen is a reflection of its own light of consciousness back to the observer from the reflecting holographic screen. Each pixel on the holographic screen reflects a bit of information about whatever the observer observes in that bounded space back to the observer. The holographic screen arises in the observer's accelerated frame of reference, and whatever the observer observes is a reflection of information from the screen back to the observer.

Physicists are only exploring the geometric structure of a holographic world. That world is the only thing they are really interested in. They are only looking out at that world and interested in understanding the mathematical structure of that world. They have no interest in looking within to discover the truth of what they really are. They wrongly and mistakenly believe that they are a part of the world they perceive and leave it at that. They have no interest in discovering the truth of what they really are. The focus of attention of their consciousness is only directed outwardly at the world they perceive. They have no interest in opening their real eyes and looking within. As Morpheus tells Neo in the Matrix, they have never used their real eyes to look within.

The holographic principle is the fundamental scientific principle that helps us understand the nature of Maya or illusion. The subjective reality that can be constructed with the holographic principle looks like an objective reality, but it isn't. It looks like there is a space-time geometry described by relativity theory and elementary particles that exist in that space-time geometry as described by quantum theory, but these things don't really exist except as holographic appearances. These holographic appearances are always observed by an observer. These holographic appearances don't really exist unless they're being observed by the observer.

The holographic appearances don't have an existence independent of the existence of the observer. Only the observer has an independent existence. That's what makes the whole thing a subjective reality. The holographic appearances are dependent on the independent existence of the observer for their apparent subjective existence. The holographic appearances must be observed by the observer since that is the only way they can appear to come into existence.

Only the observer has an independent existence, which we call consciousness. Ultimately, there is really only one consciousness, which is called nondual awareness. The only thing that really has an independent existence isn't really a thing. The only thing that ultimately exists is the formless nothingness of nondual awareness.

Solipsism is the idea that the only true thing one can ever know about oneself is that one exists. Everything else one knows is only a perception. One can only know that one exists and know about one's perceptions. One's perceptions do not exist independently of one's existence.

The ultimate nature of one's existence is nondual awareness. Everything else that one can know about is a perception that arises within nondual awareness. This has the nature of a dreamer and

its dream. The nature of the dreamer is nondual awareness. The nature of the dreamer's dream is everything it can perceive. The nature of those perceptions are holographic appearances that arise within nondual awareness. Just like a dream, those perceptions create a purely subjective reality. There is really only one subject, which is nondual awareness.

The only true thing nondual awareness can know about itself is that it exists. It exists as nondual awareness. Everything else it knows is a perception that arises from its true nature like a dream arises from a dreamer. The holographic principle is the ultimate scientific concept that tells us how perceptions arise as holographic appearances within nondual awareness. These holographic appearances arise as the perceived form of things, which is the nature of Maya or illusion.

These holographic perceptions always arise as holographic projections of forms of information from a bounding surface of space to the central point of view of an observer, like the animated images of a movie projected from a screen to an observer out in the audience. A holographic world is a purely subjective observer-centric world. Both the projection and the animation of the images can only arise in the flow of energy, which fundamentally is the expression of desire that creates the world within which the perceived form of things appear. The form of things can only appear within nondual awareness due to this expression of desire.

The expression of the desire to create a world that arises within nondual awareness is of a vastly greater order of magnitude than the expression of any personal desire that can affect the life of a person within that world. This difference in magnitude is the difference between the expression of God's will and personal will. Surrender to divine will is the end of the expression of personal will that allows one to live an integrated life in the world. Enlightenment is the experience of bringing that life to an end and knowing the true nature of one's existence. Enlightenment is the end of the expression of God's will in which the creation of one's world comes to an end.

In the presence of its holographic perceptions, nondual awareness can appear to exist as anything it wants to appear as. It only has to express the desire and the appearance is there. In the absence of its holographic perceptions, when the expression of that desire to appear as something comes to an end, nondual awareness exists as it truly is. It exists as formless nothingness.

Ask yourself: Who am I?

Why is there so much confusion in the world about the true nature of who one really is?

Sankara has given the perfect answer: *Brahman is the only truth, the world is illusion, and there is ultimately no difference between Atman and Brahman.*

The key word here is *ultimately*. Until one realizes the ultimate truth, there is still *further*.

Atman is the nature of an individual presence of consciousness that perceives its own world, which can be referred to as the Self or I Am. Brahman can only be referred to in the sense of negation, or what it isn't, as a void of undivided consciousness or the formless nothingness of nondual awareness. There is no self or other in undivided consciousness; no subject or object; no observer and no observable thing. There is no I Am in the void of undivided consciousness, only the formless nothingness of I am not. This is a state of dissolution in which an individual presence of I Am consciousness dissolves back into its source of nondual awareness like a drop of water dissolves back into the ocean; a state that is beyond the kind of existence that is possible when one appears to exist as something in a perceivable world; a state beyond being and not being; a state beyond appearing to be something or appearing not to be something.

Nisargadatta Maharaj states in Prior to Consciousness that awakening at the individual level of a presence of *I Am* consciousness is at the kindergarten level. Jed McKenna points out the word *Further* is like a talisman that one must pull out and gaze upon whenever one feels that one has arrived at the ultimate level and one's awakening process is done. One is not really *Done* until there is no *Further*, which is a state of dissolution into the formless nothingness of nondual awareness in which there is no self, no other and no *I Am*.

Nondual awareness is the source of individual consciousness in much the same way the ocean is the source of the raindrops that fall on the mountainside. Individual consciousness is divided from nondual awareness, which is undivided. In Advaita Vedanta, nondual awareness is called Brahman, while individual consciousness is called Atman. Atman only exists in a state of duality, which can only arise in a subject-object relation of self and other as an observer observes some observable thing. Atman is the nature of the observing consciousness. In the ultimate nondual state of Brahman, there is no self, no other, no observer and no observable thing.

All the confusion about nonduality arises from the undivided beingness of Brahman dividing its being into self and other. This separation of undivided being into self and other happens so that a presence of divided being or individual consciousness can appear to live a life in the world as an individual self. Atman is divided from Brahman whenever a perceivable world is created and that divided being appears to live a life as a personal self in that perceivable world. This is only an appearance since the form of the person is just another perceivable thing in that world. The perceiving consciousness of Atman is not really a part of that world, but is only identifying itself with the form of a person. In reality, Atman is always outside of that perceivable world the same way the observer of a movie is always outside of a movie screen. There is only an appearance the person is a conscious entity in that world when Atman identifies itself with a personal form.

The experience of spiritual enlightenment is Atman realizing the truth of what it is, which is nothing but the pure being of consciousness. This experience only occurs when Atman reunites itself with Brahman and that individual consciousness dissolves back into nondual awareness.

Atman can only reunite itself with Brahman when Atman dissolves into Brahman like a drop of water dissolves into the ocean, wherein there is no self and no other. Brahman is the only truth, but that truth is only experienced in an undivided state of dissolution. As long as Atman remains divided from Brahman, living a life in the world as an individual self feels false because it is false. For the ultimate truth to be experienced, the life of that false self has to come to an end.

If one really wants to awaken to the truth of what one really is, one has to see one's emotional self-identification with one's character in the world one perceives as the big lie that one believes about oneself and become willing to destroy that lie. One destroys the lie by seeing the lie to be an illusion of what one really is, by losing interest in paying attention to an illusion, and by withdrawing one's attention away from the illusion. One not only has to become willing to turn away from the illusion, but also to turn around and look within so that one can discover the truth of what one really is. One has to become willing to focus one's attention on one's own sense of beingness and stabilize one's attention on that sense of beingness until one discovers the true nature of one's existence, which is independent of anything one perceives in one's world.

Physics Describes the Nature of the Lie but Tells No Lies About the Lie

Physics can mathematically describe the nature of information and energy in the world, but physics cannot explain the nature of consciousness. Physics can explain how information is organized into forms that coherently self-replicate form and the flow of energy that animates forms, but it cannot explain the consciousness that perceives those forms of information and perceives the flow of energy that animates those forms. Physics can explain the nature of a perceivable world, but physics can never explain consciousness because consciousness is not a part of the perceivable world that consciousness perceives. Consciousness is always outside that world, and is only perceiving that world like an observer out in a movie audience perceives movie images projected from a movie screen to the observer's point of view in the audience. No scientific concepts can explain the nature of consciousness since consciousness is the ultimate nature of existence that must exist prior to the creation and perception of any perceivable world. When all information and energy disappear from the apparent existence of a perceivable world, consciousness still exists in its ultimate formless and timeless state that can only be described in terms of negation, or what it isn't, as emptiness, nothingness, silence and darkness.

No science based on a paradox of self-reference can be logically consistent. That is the reason consciousness in its ultimate undifferentiated, formless, timeless state must be the ultimate nature of reality or the primordial nature of existence that gives rise to all forms of existence that appear to come into existence through the expression of a state of information and energy. The creator cannot be any creation it can create. The perceiver cannot be any perception it can perceive.

Physics describes the lie inherent in the perception of the creation, but tells no lies about the lie. As long as physics is based on the logical consistency of mathematical logic, it describes the nature of the lie, which has the nature of a virtual reality, but tells no lies about the lie. The only way lies can be told is through expression of logically inconsistent paradoxes of self-reference, which is the basic nature of all self-concepts. Physics describes the nature of information and energy for everything perceived in the world, but the perceiver of that world cannot be something that it perceives in that world. Everything is a perception, but the perceiver is not. Consciousness cannot be something that it perceives. Consciousness itself is the source of everything perceived, but in-and-of-itself cannot be described as anything perceived. Physics describes the nature of the lie, but really has nothing to say about the true nature of consciousness. The essence of the lie inherent in all self-concepts is to attribute consciousness to whatever is perceived in the world that consciousness perceives. The lie is a delusion, which is a false belief that consciousness believes about itself, since consciousness is attributing its own consciousness to the form of something that it perceives in that world.

Enter the Emptiness: Externalization in the Process of Awakening

The lie of a self-concept can only arise when consciousness attributes its own sense of being present as a presence of consciousness with its own inherent beingness to something that it perceives in its world, which is the character it perceives in that virtual reality. The first step in awakening is to shift the focus of attention of consciousness away from the life of the character in the virtual reality and onto this pure sense of being present. Emotional detachment is needed to externalize this sense of being present from the emotionally energized life of the character as the character is emotionally related to other things in the virtual reality through the expression of fear and desire. These emotional expressions naturally arise because they're necessary for the survival of the emotionally animated form of the character, which requires the coherent organization of information into a form and the emotional self-replication of that form. Whenever an emotional attachment is severed, it feels like something dies inside since emotional attachments are how the character survives in the virtual reality. If the emotional attachments are severed, the form of the character will die away. The goal of emotional detachment in the awakening process is not body death, but ego death. The character based emotionally energized self-concept has to die away. Severing emotional attachments feels like something dies inside because consciousness is no longer identifying itself with its character.

When consciousness detaches itself from its character, consciousness is no longer interested in the life of its character and no longer cares about what appears to happen to its character in the virtual reality. This feels like something dies inside because the character becomes dead to the consciousness. This is the process of externalization that allows consciousness to detach itself from its character, to stop identifying itself with its character, and to see things from a higher level of consciousness with a sense of distance and detachment. It really doesn't matter what happens to the character in the virtual reality if consciousness does not identify itself with its character. Consciousness just watches the life of the character with amused detachment, like a

movie that it is watching. Whatever appears to happen to its character, consciousness just watches with amused detachment. If the character expresses fear or desire, consciousness just watches without emotionally identifying itself with the character as long as consciousness remains emotionally detached from its character and sees things from a higher level with a sense of distance and detachment. The whole thing is no more real than a movie that consciousness is watching from its seat out in the audience of emptiness.

Consciousness can only discover the true nature of what it really is if it enters the emptiness of its own being. It has to look within into the emptiness of its own being. That is where it has to focus its attention. Letting go and severing emotional attachments is the only way it can enter the emptiness of its own being, which can only occur in the context of surrender to divine will, relinquishing the illusion of personal control, and giving up the personally biased expression of individual will that fights for and defends the survival of its character in the world that it perceives. Severing emotional attachments feels like something dies inside because it brings to an end the expression of personally biased emotions that express emotional concerns about whatever appears to happen to the character or to the world in which the character appears to live. When those caring emotions are no longer expressed and no one cares about what happens to the character or its world, when those emotional attachments of consciousness to its character and its world are severed, the character and its world are dead to the consciousness.

When consciousness no longer cares about its character or its world, when those emotional concerns die away, when the character is dead to the consciousness, consciousness is left with feelings of emptiness. It feels nothing for its character or its world. This is the emptiness that it has to enter so that it can discover the true nature of what it really is, the emptiness of its own being. It has to focus its attention on its sense of being present in emptiness and know itself to be the beingness of awareness existing within emptiness and silence. It has to become willing to enter the emptiness to find itself in the emptiness of its own being.

The purpose of severing emotional attachments is externalization. The sense of being present is no longer emotionally identified with the character, but is experienced outside the virtual reality movie projected like images from a screen to the point of view of perceiving consciousness out in audience of emptiness. When consciousness emotionally detaches itself from its character and no longer is interested in or cares about the life of the character, when the character becomes dead to the consciousness, consciousness enters into the emptiness of its own being. The sense of being present is experienced in emptiness. Consciousness is looking within into the emptiness of its own being. Consciousness knows itself to be the beingness of awareness existing in emptiness and silence. Entering the emptiness of its own being is a necessary step that must occur before consciousness can dissolve into the formless nothingness of nondual awareness and discover and know the truth of its being, the true nature of what it really is.

Addendum of Nondual Wisdom

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

Now I am darker than the deepest sea, just hand me down, give me a place to be.

Something makes you turn around,
The door is open, you can't close your shelter.
You try the handle of the road.
It opens. Do not be afraid.
It is you my love, you who are the stranger.

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.

Now I Am become death, the destroyer of worlds.

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

The unreal has no being, The real never ceases to be.

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

The wise are impartial.

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

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