Ghost In The Machine:

Understanding Singularity in a Holographic Universe and how it Pertains to

the Nature of our Existence

by

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Introduction

Dear reader, before we dive too deep into the issue at hand, allow me to lead off this treatise on the new, extremely radical, and controversial theory of the nature of our existence known as "The Holographic Principle" with a few simple questions on a theoretically related topic.

When your desktop or laptop computer starts to act up, or glitch out - either from normal use or through the malicious efforts of some unseen attacker - we say it has a "virus." Yes?

And when we awaken said desktop or laptop from a dormant state, we say we are "booting it up." Correct?

And when we discuss the area where the data is stored in these types of "smart" devices that have become so ubiquitous here in the 21st century, we say we are accessing the machine's "memory." Would you agree?

In the interest of expediency, I will answer for you, and say "yes" to all three.

So where am I going with this? I will explain with two final questions. Do these casual anthropomorphisms we bestow upon these devices that we - after thousands of years of civilization - somehow now can't live without, mean we believe the machines are actually alive and can get literally sick, wake up and don boots, and possess humanistic brains with memories like ours? I will be so bold as to answer for you once again and say "no, of course not."

But the real and final question, the one that I have been leading up to with the above preamble, is: Are these slang colloquialisms and everyday personifications, spoken so frequently in the common parlance of our times, actually the verbal harbingers of a fast-approaching future where computers do indeed become fully intelligent, sentient beings, able to literally "think," formulate opinions, and make their own decisions like we do? And will they eventually grow "smarter" than humans? And what happens then?

Exponential Acceleration

In the late 1970's, the world's most powerful computers were so large they took up entire wings of buildings. They were literally as big as houses. They were also extremely costly and had very little actual computing power. To put it in context, The MIT "super computer," in 1979, cost a million times more to make than the iPhone you have in your pocket or purse right now. And your iPhone is a thousand times more powerful. That is a one billion fold increase in the price to power ratio in under forty years. One billion fold. In under forty years.

And scientists throughout the world universally agree that the speed of technological advances is increasing at an even *faster* rate now than it has been in recent decades. In other words, the pace of progress, which was already screaming down the highway at supersonic speed, is still *accelerating*. This is astounding all by itself. But when you then pair it with the fact that our known physical Universe is also not just expanding, (for some reason we have yet to fathom) but actually also somehow *accelerating* in its rate of expansion - a phenomena that has yet to be remotely understood or explained by modern science - well, the similarities transmute quickly from astonishing to downright eerie.

So the Universe is not only expanding for some reason we can't comprehend, (expanding into *what* might also be a pertinent query) but the expansion is accelerating, which contravenes all known laws of physics.

When something explodes, the particles are ejected from the center outward. The rate at which they move is fastest, the closer to the point of origin they are. Put another way, the particles are moving fastest immediately after the explosion, and slow down as they get further away, as the energy diminishes. Makes sense, right? If you light a firecracker, the paper shreds explode and then eventually fall to the ground and stop. Only try telling that to our Universe, which is still accelerating outward billions of years after the alleged Big Bang.

Advances in quantum computing, mapping of the genetic code, and nanotechnology have given a nitrous oxide boost to the already heady pace of technological advancement. Soon, it is thought, perhaps in the next twenty or twenty-five years, computers will be smarter than humans and able to think on their own. In many respects, they already are. Their "memories" are infinite and infallible, they communicate at a tremendously faster rate than we do, and they are able to perform millions of complicated functions simultaneously. What will they do once they achieve "consciousness?"

The Hollywood Connection

    This eventuality has of course been the subject of innumerable books, television shows, and movies. Some of the better-known ones include *War Games,* the *Terminator* series, and more recently, *Ex Machina.* All of these, and dozens more, explore the notion of intelligent machines, and for some reason they all invariably seem to be up to no good. But what does all this have to do with the Holographic Principle? Well, I'm circling around to that…

    Have you ever had the feeling that you're being watched? Only to turn around and find no one there? At least no one you can perceive? Have you ever felt like everything around you is there by design? Like the world around you has been "programmed?" And that even supposedly random events have had their randomness programmed into them?

    Have you ever felt like maybe we are all just part of an experiment being performed by some far superior, alien race? Or that we're merely the pieces and pawns in some sort of game being played by God-like alien children? Even if the answer is yes, if you're anything like me, and I'm pretty sure you are, whenever this happens, your rational side no doubt slowly works itself into your psyche, takes over, and vanquishes such whimsical postulating. Like me, you probably end up calling yourself silly for

thinking such nonsense, and eventually classify the idea as playful folly. We have to, because any other conclusion would be pretty tough to accept, and pretty tough to live with on a daily basis.

Taking this kind of notion seriously sounds like something that should be relegated to the dreaming of ancient mystics, or the scribblings of modern science fiction writers. The stuff of legends that the ancient Egyptians and Babylonians and their ilk passed down in mysterious tales - possibly accompanied by whatever psychotropic compounds happened to be indigenous to the area - even if they didn't call it a "hologram" per say. This idea that our Universe is nothing more than a projection emanating from a great Source being has been around for thousands of years. And it can still be found today in as notable and prevalent forms as the plot of a big budget Hollywood movie. But that is all fiction and myth, isn't it? Certainly nothing to be taken seriously. Or at face value. As an allegory, sure. As an indictment of the superficial and materialistic nature of modern life, why not? Or as a hallucinogenic bedtime story to explain the strange motion of the stars in the sky - gathered around a primitive campfire where the life expectancy was under thirty, the chief drank fifty cups of spiced hot chocolate a day, and wore a bat wing cloak - absolutely.

But to suggest such a thing in an even half-way serious manner, as a viable, rational, sober theory of the nature of *Everything*, would be laughable and ludicrous. Just another crackpot idea to be vociferously derided and scoffed at by modern thinkers and scientists as the stuff of fantasy. Like Santa Claus, or the Tooth Fairy, or Bigfoot.

Well, what if it wasn't? What if this idea that we are all living in a

holographic Universe projected from a two-dimensional plane - not unlike Princess Leia in Star Wars when she is telling Obi-Wan Kenobi that he is their only hope - but on a much grander scale - was actually not only just the newest theory of Everything to come from the best and the brightest scientists on the planet, but is actually the *only* theory of the nature of the Universe that has been able to reconcile the two previous prevailing paradigms: The equations of Einstein, and Quantum Mechanics? Ever. In the history of mankind. What would you say then?

There have been several fictional portrayals over the years of the idea that we are all living inside an elaborate, massive holograph, or some kind of three-dimensional projection that is not in and of itself, "real." The Holodeck on *Star Trek* is an example of this. A room where you can input in any place or scenario you wish and it plays out - allowing you to fully immerse yourself and participate in it - in completely lifelike precision.

The Truman Show is another example of Hollywood playing with this notion. Although Jim Carrey's character is the only one who is unaware that his environment and relationships are completely contrived, and the rest of us are "in on the joke," if we look deeper into the movie's theme we can see the correlations to the Holographic Principle well-apparent throughout. We identify with the watchers, but also with Carrey, the protagonist. We can relate to his predicament in our own lives. Even if it's expressed in as subtle ways as our spouses lying to us, or feeling like our jobs (or even our entire lives) have no real meaning.

Perhaps the best-known cinematic version of the Holographic Principle is the *Matrix* film series - wherein intelligent machines have decided that

humans are only useful as base organic fuel which they process to power themselves. The humans are kept around solely to act as living batteries. The humans are content to do this, or at least don't rebel, (save for our intrepid band of heroes) because they are kept unwittingly suspended in a fully immersed dream-state. They "live out their lives," without ever leaving their pods – their minds navigating through a projected virtual reality as they are sucked dry of their organic energy. They believe they are living normally in a world much like a futuristic Earth, but it is actually nothing more than a manufactured, artificial, three-dimensional projection. The actual real world outside the holographic dream-state is a post-apocalyptic wasteland that was created when the computerized machines totally eradicated our human civilization. A civilization the computers deemed no longer necessary for their survival.

Of course, we take these fictional renderings and entertaining indulgences as nothing more than flashy diversions. But perhaps, given the new information that has recently come to light, we should consider the possibility that they may be more than that. They may be the storytellers' and filmmakers' way of suggesting that this is indeed quite possibly the reality of our own existence – their suggested theories stated without being stated, as they are blended in neatly with the "fictional" plotline.

This general idea that our world is actually nothing more than an illusion projected in three tactile dimensions (plus time) has been around for millennia. The ancient Mayans are perhaps the first to have recorded such ideas, which seems fitting as the Maya did some extraordinarily advanced astrological work with (presumably) nothing more than their

naked eyes. Using the rotations, movements, and orbits of the stars and planets, they were even able to map out a "long count" time cycle calendar which included a term of 63,081,429 solar years, known as 1 Alautun. The mere fact that they could even conceive and think in such terms, let alone calculate the positions of the stars and planets every step of the way is nothing short of mind-boggling. And the Mayan influence reached far beyond their own time and civilization. The Mayan Haab cycle is a much shorter, 365-day cycle which is in fact the basis for the modern English calendar year that we still use today. When you take into consideration that these observations of the sky and resulting time cycles date back to the 5th century B.C., it is food for thought indeed.

The Maya, who were an extremely mystical civilization heavily steeped in myth and mythology, believed that we were all living in the mental projection of a God-Source, and that in fact nothing was "real." And keep in mind that this belief, like the calendars, was imagined by a so-called "primitive" people more than 2500 years ago.

Point being, just in the last few years, the most renowned scientists in the modern world in the fields of astro and theoretical physics, in order to try to reconcile the two prevailing theories that define the fabric of the Universe, have now taken very seriously, and some say are even on their way to proving, the same exact theory the Maya imagined all those centuries ago. One that seems so implausible, so outlandish, so radical, that outside the realm of pure fiction, it doesn't seem possible.

Einstein Vs. Quantum Mechanics

I am not a mathematician, nor a physicist, and neither presumably are you. With that in mind, I am not going to attempt to try to understand myself - or dare attempt to explain - the mathematics behind this main debate. Suffice it to say that Albert Einstein's view of the Universe was the accepted theory for a long time, and to this day still explains the macro Universe at large, particularly his theory of unseen gravitational waves that cause everything - light, the orbits of planets, everything - to behave as it does. Einstein took Newtonian theory one step further and expressed gravity as waves that are sent outward from high mass objects, and that these objects, if massive enough, can even warp the space-time continuum. Einstein's theory of gravitational waves was so revolutionary, it was disregarded and derided by almost everyone in the scientific establishment for nearly a hundred years, until the early 1990's when scientists finally discovered evidence of these same gravitational waves Einstein predicted, but never saw. But there was a problem.

The problem was that at a sub-atomic level, particles do not obey Einstein's laws, and in fact behave in very odd and unpredictable ways. They do not adhere to the laws of gravity, or even to Einstein's universal

speed limit, the speed of light. Without going into too much arcane detail, the sub-atomic world is all backwards and topsy-turvy. For these reasons, Einstein hated quantum mechanics and did his best to discredit and ignore it until the day he died.

The Holographic Principle

Low and behold, cut to modern times and wouldn't you know it? Along comes the ancient Mayan idea of a holographically projected Universe, rearing its controversial head once again, only 25 centuries later. How on Earth, you may be asking, did this come about?

Again, not going too deep into the minutiae, it has to do mainly with the law of Conservation, and black holes. The law of Conservation states that matter is neither gained nor lost, just reconfigured into some other form. The amount of total matter in the Universe can never be altered or diminished. Or added to. It always remains constant. Firewood turns into smoke and ash when burnt, water into vapor when boiled, etc. But if you weigh the wood prior to burning, and then weigh the ash, and can somehow weigh the smoke, unlikely as it seems, it will be exactly equal to the weight of the unburnt wood. As will the weight of the water equal the weight of the vapor. Forests are logged, then turned into houses and furniture and sawdust; lakes evaporate in drought; mountains erode in the rain and the wind; but the amount of total matter never changes. It just gets rearranged.

The same goes for information. And since black holes seem to suck in everything around them, including "information" about the positioning of

stars and planets and particles of light, etc., and since nothing ever re-emerges from a black hole, this information must still exist somewhere. The Holographic Principle theorizes that when a black hole sucks up this information and it disappears into the "event horizon," otherwise known as the "point of no return," that the information is in a sense not disappearing, as this is an impossibility, but rather, "going home." And that this event horizon is actually the gateway to, and basis of, a two-dimensional plane that is "broadcasting" what we perceive as our three-dimensional world. Maybe those crazy Mayans knew what they were talking about after all…

One Step Beyond

The "singularity" is the name that scientists have invented to label the dawn of true artificial intelligence - the moment that computers officially "come to life" or "gain consciousness," if you will. It is theorized that when this happens, technology will start to advance at such a staggering rate, civilization as we know it will never be the same. How will we know when this happens? And how far away are we from this historic, and frightening moment?

The Touring test, designed by famous British scientist, Alan Touring, was designed for just this purpose, as Touring, in addition to cracking the Nazi Enigma code and inventing the computer in the process, prophetically foresaw the day when it would be impossible to distinguish machines from humans. So he devised a test that is designed to do just that. So far, a computer has been able to fool a panel of independent judges that it was an 8-year old Ukrainian boy. But that's as far as it's gotten, although computers can already play chess on the level of the best humans, as has been widely covered in the IBM Deep Blue Vs. Gary Kasparov contests.

In 1996, in a series of matches, world chess champion Kasparov was able to narrowly defeat the IBM super-computer. But a re-match played a year later in 1997 was won by Deep Blue. A computer was officially the

greatest chess player in the world. How much longer will it be before Deep Blue, or a similar machine, is not only able to defeat Kasparov, or anyone, without breaking a virtual sweat, but do it while playing a thousand games against a thousand different opponents at the same time? And win them all easily? Not long, I can assure you. That day may even already be upon us.

And how long after that before these "smart" machines make the final leap from this stage to actually appearing, or even "being" human? At least from a clinical perspective? Well, we don't know exactly, other than that won't be long either. So how does all this tie in together?

Well, when the computers do indeed "gain consciousness," and, if this holographic theory of the Universe turns out to be accurate, how long will it be before the computers figure it out? And are able to prove it? And what will they do then? Or, taking it all even one step further, has this already happened in a different expression of the time-space continuum? Or in another dimension? And are these the very same computers that are projecting the hologram we call our Universe? In some sort of cosmic Ouroboros, have we created ourselves? Or the illusion of ourselves? And if so, why?

Is the expansion of the Universe, and the acceleration of this expansion - which is an undisputed and provable fact - actually the aliens, or the computers of the future, or both, attempting to program more "space" fast enough to keep pace with the efforts of human exploration? Are they furiously writing more code to project further and further out so that our telescopes don't see past the "end?" And our satellites never run into a "wall," much like Jim Carrey's boat in the Truman Show, when he crashes it

into the edge of the enclosed dome he has believed his whole life is actually the open ocean? Is that the reason for the expansion? And does it explain how it can be accelerating? Are the aliens simply programming at a faster pace as their own technology advances? And they grow more worried about us discovering the truth? Or are we programming ourselves? Once the computers get so powerful as to become self-aware, will they reveal that it was indeed them (and us as unwitting accomplices) that have been doing the projecting and programming all along? From the future? Or from another dimension, or dimensions?

Is the Universe as we know it, its expansion, and everything in it, from a garden worm all the way up to the planet Jupiter, all part of a pre-programmed unfolding scenario that was set in motion retroactively from an unknown and unseen Source with instructions to play out "randomly" right up until the day we figure it out? Or, more likely, the newly "alive" computers we have invented figure it out for us? And what then? is the game over? And if so, who wins?

Deus Ex Machina

This phrase, deus ex machina, comes from the ancient Greeks, and refers to the staging of their plays. The actors playing the "Gods" were literally dropped from the "heavens" onto the stage by mechanical cranes. The phrase translates literally to "God in the machine," and has taken on a different meaning in modern times. It has come to be used to describe lazy storytelling, where a movie or play or novel ends by "the hand of God." In this case meaning the ending comes in an arbitrary and "out of the blue" manner rather than the characters figuring their way out of whatever predicament they are in organically, and on their own. Think of an alligator suddenly appearing from nowhere and eating the bad guy, just as he was about to kill the hero. Or a lightning strike accomplishing the same thing. Or a safe falling on his head. Or maybe even like a satellite slamming into an invisible, perfectly vertical wall a zillion miles from Earth… It has more meanings as well.

According to Wikipedia, the "ghost in the machine" is "British philosopher Gilbert Ryle's description of René Descartes' mind-body dualism. The phrase was introduced in Ryle's book *The Concept of Mind* (1949) to highlight the absurdity of dualist systems like Descartes' where

mental activity carries on in parallel to physical action, but where their means of interaction are unknown or, at best, speculative."

In layman's terms, it was an indictment of the idea that the mind and body were separate entities, operating more or less independently. And if there was any connection, it was unclear as to exactly how it worked, and all of it was best left in God's hands anyway. The idea was that the mind and the soul were somehow intertwined, and destined to be elevated upon death to the ethereal realm of "heaven," and as such, they were not of this earth. Thus, they are special and separate from the mortal body. Ryle found this notion foolish and dubbed the idea the "ghost in the machine."

So how is this relevant to our current quest? Well, what if this phrase, and accompanying theory, was extrapolated out into a grander sense? What if there is a connection not just between the mind and body, but all minds and all bodies and all living things due to the fact that they have all been programmed with the same source code?

Software engineers don't write stories, or instructions. They write code. The make-up of all living things is mapped out and pre-determined according to our DNA, or genetic code. There's that "code" word again, used to describe the "instructions" of how living things are made, and also how computer programs are written. Is someone writing our genetic code? Or have they already written it? Or have we somehow written it ourselves? In a far-flung past or future incarnation? Or in another dimension?

Try This At Home

Let's bring all this conjecture into our everyday lives for a minute and try an experiment everyone can do. The next time you're home watching television, as Chandler is making a snarky comment, or Joey is asking a pretty girl how she's doing, or Kramer is bursting clumsily through Jerry's door, or Sophia Vergara is bouncing across the screen saying something funny in a thick Spanish accent - or the White Walkers are invading from the North - or, perhaps more presciently, the highly humanistic, computer-programmed android hosts on the HBO series, *West World* are executing their pre-written storylines to entertain the paying guests with extreme Old West realism - try this…

 Approach the screen of your TV and get as close to it as you can. I know your mother always told you not to sit too close to the TV, but make an exception in this case and put your nose right up against the glass. What do you see? Well, the closer you get, the less of Chandler, or Joey, or Kramer, or Jerry, or Sophia, or the White Walkers, or the android hosts you will see, until eventually they are no longer there at all and all you can perceive is tiny, little, glowing, one-dimensional dots. Lots of them.

These dots, called pixels, are teensy-tiny electrified light bulbs that change color and vacillate from light to dark in seamless cooperation with each other to project whatever image they are told to depict on the screen

at the moment. Individually, they're just tiny dots of light that don't resemble anything at all, except tiny color-changing points of light or dark. But when thousands and thousands of them are lined up together into a rectangular screen, and a patterned signal is sent – a signal that has photographed the actors and sets and props, then broken down that stream of images into millions of tiny points of information and sent it careening down a cable or beamed to a satellite at the speed of light, where it is received by your TV and re-ordered into what appears to be the actual same live people, places, activities, etc. - then they become something more. Together, these pixels broadcast the illusion that there are people and footballs and race cars and dragons and androids moving back and forth in your living room. But there isn't. They aren't really there. No matter how expensive and expansive your television might be, no matter how sharp the picture, or how many pixels it boasts, or how close together they are packed, the principle is the same. They're just a bunch of electric dots working in synchronized harmony to show you an illusion of reality, not totally unlike a modern, high-tech version of the tile mosaics the ancient Greek and Roman artists created so beautifully. Up close, a mosaic might appear to be just a simple, small, square blue tile. But step back a few feet and you realize it's actually a grand portrait of a dozen sailing ships waging war on a raging blue sea. Or whatever it might be.

Well, what if we, or *they*, were able to accomplish this exact same feat, but in three dimensions? Is it really that far-fetched? What if what we consider real, or reality, is just this same concept, projected with an added third dimension? And what we see and feel as matter - people, planets, pillows, everything - is just a 3-D version of "pixels" vibrating at different frequencies? Low vibrations for hard substances, like rock, high vibrations

for lighter matter, like air, and so on, not to oversimplify.

But even if this cosmic projection theory is correct, even if those kooky Mayans were right all along, even if the math that allegedly reconciles Einstein's equations and quantum mechanics for the first and only time, proves to do just that, down to the last fraction and decimal point - inside this highly unusual model of the Universe - even if all that comes to pass, it still begs the question: Who is running the projector? And why? And where did they come from?

Mea Culpa

At this point in our journey of (possible) self-discovery, I feel obliged to take a few lines to apologize to you, dear reader, in case you were expecting some sort of neatly tied-up conclusion, or revelatory resolution, to this cosmic mish-mash of conjecture and observation I am laying out before you. I'm dreadfully sorry, but there won't be one. I have no answers, nor any hard proof or indisputable facts that will definitively – or even partially – prove any of this. If I did, you would likely be watching me, or rather a refabricated two-dimensional image of me, dancing across the pixels of your television at this very moment, accepting my Nobel Prize.

But that is not why I am writing this paper. I'm doing it in the hopes that you - being the true Seeker I know you are - may ingest at least some, if not all, of the ideas presented here like a drug of casually intriguing edification. And that once inside you, you may use them as the seed of an impetus to start to ponder a little bit yourself on these theories - and that you might come up with some nifty cool ones of your own. God knows, I'm not personally capable of solving any of these Big Question type puzzles all by my lonesome. But it doesn't stop me from trying, as I sure am curious about the answers. If there are any.

Non-conclusion Conclusion

When you look close enough at anything - a desk, a tomato, a squirrel, a rock, a sunflower seed - anything at all, living or not, there turns out to be nothing there. Even an elephant, or an airplane, or a mountain, or a skyscraper. No matter how big or how small the object, it turns out they are all made of a whole lot of nothing.

When we use high-powered electron microscopes to examine matter of any kind on a sub-atomic level, what we find is…. nothing. Just a bunch of infinitesimal, indescribable, vibrating strands of… something. We think. And string theorists surmise. We don't really know because we can't see them. Not even with all our fancy technology. We think they're there, maybe, but we don't really know. That's how small they are. Whatever they are, they are something we don't understand and can't comprehend. Something more elusive than obtainable, more intangible than tangible. Something we can neither grasp, nor *grasp*.

According to the Nova website: "The strings of string theory are unimaginably small. Your average string, if it exists, is 10^{-33} centimeters long. That's a millionth of a billionth of a billionth of a billionth of a centimeter. If an atom were magnified to the size of the solar system, a string would be the size of a tree."

That, my friends, is small. So small, I can't really even wrap my head around it, so small as to possibly not even exist. And yet these so-called strings are the "building blocks" of everything. They're what atoms, and the particles that make up atoms, actually consist of. Supposedly.

But whatever these invisible, unidentifiable, cosmic vibrating strands of almost nothingness may or may not be, when they decide to be sociable and get all tangled up with millions and billions and trillions of their vibrating nothingness buddies, they suddenly become *something*. And not just something, but all the somethings that have ever been, or ever will be. They are everything. And yet, they are nothing. They are everything and nothing at the same time. Tricky business, to be sure.

Whatever these vibrating things, or non-things, or almost things may or may not be, when we look at them through the philosophically semi-scientific viewpoint outlined above, I think we can all agree that they are certainly not dissimilar in principle to a three-dimensional version of the pixels in your television, or even the tiles of the Greek mosaics. And perhaps that is why we build mosaics in the first place. And televisions. And computers. Perhaps we are subconsciously attempting to recreate our own core programming, our own "being," through these artworks and inventions. Perhaps we are trying to "figure ourselves out." Or, as eluded to briefly above, maybe in a bizarre, time warp, multi-dimensional Ouroborous-ish kind of way, we already have. Maybe that's why the Ouroboros itself has been such a significant symbol in so many cultures for eons. Maybe the first human who drew one knew something we don't know…

The same way a salmon knows to swim upstream to spawn, or a wolf knows to howl at the moon, or a sheepdog knows how to instinctively herd

sheep, or a bird knows how to build a nest, maybe we are instinctually programmed to eventually become fully self-aware. Perhaps our burning desire to discover the Ultimate Truth of our own existence is coded into our core programming, bubbling up from within ourselves and expressing itself in ever-expanding and evolving ways, simply because it's there. And it can.

Perhaps this is also why humans are prone to gambling. If our entire existence is some sort of self-propagating, randomly fluctuating algorithm, then gambling would be "built in" to our nature, so to speak. You can't throw a rock these days without hitting a casino, Indian or otherwise. Not to mention state run lotteries, scratch-off tickets, sports betting, etc., etc. Taking chances is part of our core being. It's what allows us to evolve.

Because when it comes right down to it, the more we learn, the more we realize we don't know. And all we can do is throw paint on a wall or invent a television or a computer or pull the handle on a slot machine or throw dice for ten straight hours to try to figure it out. Maybe, through these seemingly normal and natural activities, we are actually subconsciously attempting to decipher the mystery of our own natures. And the more our brains develop, the closer we get to discovering the truth.

Gambling may not be just a thrilling, adrenaline delivery system we use as an idle pastime, but a subconscious attempt to reach back to our (digitally coded) "roots." Just like our undying and intense propensity to break down the three-dimensional "reality" we see around us into teensy-tiny pieces, and then recreate it in two dimensions. Which is basically an exact reverse engineering of the Holographic Principle we're discussing.

Do you know how many cell phone pictures are taken every day across the globe? One and a half billion. Every day. 1.5 billion. And growing. Why? Why do we as humans have this obsession with turning our three-dimensional reality into a two-dimensional representation of that reality? Gorillas don't take pictures. Neither to crocodiles or hummingbirds. What are we hoping to accomplish by doing this so frequently? And for no apparent reason? Sure, you can say it's for sentiment, or memories, or the fun of posting on Facebook and Instagram to show off the latest fancy appetizer you ordered at whatever trendy restaurant. And you can ascribe some to art, I suppose. But that only explains a very small percentage. Not 1.5 billion. A day. Every day.

By obsessively taking these pictures, are we somehow subconsciously attempting to solve the conundrum of our own existence? By "running home," so to speak, to a two-dimensional platform? Just as we have theorized the information that gets sucked into a black hole is running home to the two-dimensional motherboard hologram projector? And now that you mention it, *motherboard* is yet another interesting term we use to describe the "brain" of the computer. Mother.

For the same reasons cave men painted the walls of their caves and the Greeks made their mosaics and Galileo dropped stuff off the Tower of Pisa, and Tesla built his coils, and Steve Jobs created the iPhone, and astronomers scan the skies, and physicists fill white boards with impossibly complex equations – as humans we are inherently and relentlessly seeking an understanding of our origins. Buy why? A gorilla has no such desires. They just live. And die.

Has this curiosity been programmed into our human DNA? Or is it an accidental glitch in our pre-determined evolutionary design that makes us question our own natures and constantly attempt to recreate our own creation? Are we supposed to eventually "find out" what we really are, and why? Or do we somehow, somewhere, deep down in the recesses of our coding, already know?

Past Lives and Secret Prayer

This idea that we are nothing more than pre-programmed projections "living" on some kind of massive, three-dimensional, holographic game board has some other interesting applications. For instance, you could use it to explain the concepts of past lives and déjà vu.

All the "remembrances," that some of us with a slight mystical bent call our "past lives" - should you be inclined to believe in such notions - could simply be the digital residue of a past incarnation. It could just be re-ordered digital coding that, like matter, is never lost, just recycled. You may have been a Viking killed in battle in 1033. And when you "died" your code was simply re-absorbed into the master program, where it was eventually re-ordered and reconfigured into a steel worker in 1930s New York, or whatever the case may be.

Along those same lines, when we say someone is an "old soul" maybe they are just made up of older, re-used code that has been around longer than some other people who have been more recently added to the program as the "population" grows. And when you get the feeling that you've been somewhere before, or that you've met someone before, maybe it's because you have. Or at least a certain percentage of you has. And the larger the percentage, the stronger the feeling.

This Holographic Principle theory can also be used to conveniently explain the - up until now seemingly unexplainable - quirky human interaction traits known as chemistry and charisma. Both at the same time, no less.

When you meet someone for the first time and feel like you've known them forever, and/or are instantly attracted to them, the "chemistry" you feel with that person could just be your code being compatible with their code. The same way two of the same versions of an operating system are compatible with each other. But perhaps not compatible with others.

Our same beloved Holographic Principle theory can also be used to finally provide a long-desired scientific definition of charisma. A definition that like so many things, (too many for my liking) modern science has never been able to provide. Someone we find "charismatic" could simply have been programmed with a larger allocation of an "attraction" code than the rest of us. So we have no choice but to be drawn to a Rasputin, or Hitler, or Manson, or J.F.K, or George Clooney. We've been programmed that way. This would also explain why we can't define it, or qualify it, but we know it's there. And being a "good," or conversely, "evil," person has nothing to do with it. Those potentials and proclivities are located in a different section of the code.

"Act boldly and mighty forces will come to your aid." This famous quote is usually attributed to early twentieth century clergyman and author, Basil King. But what does it mean? What forces? Coming from where? Well, maybe the program is "listening." Perhaps, inside the Grand Algorithm, there is coding that dictates that if the "person" in question

behaves in a certain manner, the odds of certain things happening increase. Hence, if you act boldly, it triggers pre-programmed reactions in everyone around you, and they are then just slightly, or maybe even greatly, depending on the situation, more likely to bend to your will.

And on a similar note, while we're speaking of clergymen, this same theory can be used to explain the entire concept of prayer. And concurrently, its most recent disciple, "The Secret." In both cases you are supposed to ask either God, or the Universe at large - depending on your affiliation and belief - for what you want. And then allegedly you will receive it. Well, what if it actually works? But not how we think it does. And the reason it doesn't work instantly - and maybe sometimes seems to not work at all - is because there is no direct cause and effect, but merely an increased chance of a certain outcome. And maybe the "harder" you ask or pray, or the more frequently you do so, the further your odds are increased. Like purchasing multiple raffle tickets.

We've all heard of cases of "miracle cures" that doctors can't explain, and amazing feats of strength performed to save a loved one, and all sorts of "miracles" of one sort or another. Maybe these so-called miracles were just the result of heavy asking (or praying) that was absorbed into the algorithm, thus increasing the odds of that particular outcome and eventually allowing for a favorable spin of the ever-turning fortune wheel.

The same could be said about the concept of karma. The same way the Master Program "hears" our prayers and pleas to the Universe, it also records all of our words and actions. Everything we do or say is inputted into the algorithm and it affects the possible outcome of events. If we do a good deed, it's recorded, and we gain one more chit, or raffle ticket, or what

have you, in whichever fortune wheel sweepstakes we are currently vying for - something we want to obtain, or want to occur. Or not occur.

"Oh, Fortuna, you wretch!"

This concept of all of our fates being intertwined and decided by an otherworldly fortune wheel presided over and spun by a goddess named Fortuna, has been around for centuries. Since Roman times.

A famous Roman senator named Anicius Manlius Severinus Boëthius, in around the year 500 - while serving a term in prison (he was later executed) for allegedly plotting to overthrow the king, Theodoric the Great - composed a book titled, *Consolation of Philosophy* that delved deeply into this concept of Fortuna and luck and how it related to life and death. The book was highly influential when it was written, and remained so for centuries after, right up until this day. It's vast reach and enduring influence is nicely exemplified by its being heavily referenced, to great comedic effect, by author John Kennedy Toole in his Pulitzer Prize winning opus, *A Confederacy of Dunces.*

The Pulitzer was, in fact, awarded posthumously, as Toole - somewhat ironically - given the allusions to Fortuna that pepper and inform the book - committed suicide more than *ten years before* the book's eventual publication. He died never knowing anything of its publication, success, or the adoration and accolades it received thereafter. If it wasn't for the unrelenting pressure and pestering exerted by Toole's highly eccentric and elderly mother, onto an author named Walker Percy - who

was a visiting professor at Tulane University in New Orleans, the Toole's home town - the book never would have seen the light of day. For it was Percy who read the book, more or less against his will, and was so flabbergasted by its humor, originality, and brilliance, he convinced Tulane to publish it under their own auspices – a small university press that had up until then only published textbooks. Without Walker, the now classic novel would have died on the vine, unread, unknown, unseen, and unsung, right alongside its unfortunate and brilliant author.

Is pestering the same thing as praying and/or asking? Did Toole's mother act boldly? I'd have to say absolutely yes, to both. There's that mercurial fortune wheel again, granting an old lady a favorable spin so she could honor the memory of her dead son - a son whose own programming included literary genius, but also a heavy dose of crazy. (Toole became extremely paranoid in his last years and thought he was being followed constantly, which eventually led to his running a hose from his car's exhaust pipe into the driver's window, which caused his death. He was 31.)

Were Toole's genius and insanity related? Are they related in general? This is another question that has been batted around for eons by scholars and pundits. Does being brilliant also make you crazy? Or does it at least considerably increase the odds? Putting it in our terms, does the alien's Grand Algorithm dictate that the "people" who receive the most creative brilliance, also receive the most crazy in their coding?

There sure seems to be a lot of examples of it occurring just that way. Just off the top of my head I can think of Vincent van Gogh, Edgar Allan Poe, Ernest Hemingway, Hunter S. Thompson, Jim Morrison, Curt Cobain, and most recently Soundgarden's Chris Cornell. All geniuses at their craft and all troubled souls to be sure. And that's just a few examples. I could go

on with this list all day. For instance it is widely believed that Newton and Mozart and Beethoven all suffered from severe mental illness, just to name a few more heavies. Mark Twain is known to have struggled with depression as does, self-admittedly to this day, Bruce Springsteen. The list goes on.

Upshot being, did the aliens program us with some sort of "intellectual fairness clause?" Did they think it was fair – or maybe just fun for them to watch – to give certain individuals a large dose of brilliance with a huge helping of insanity right alongside it? It would certainly neatly explain that well pondered and unfortunate phenomena, among the slew of other subjects we have already deconstructed. Check another one off the list…

On that note, let's take a moment here to recap. What have we learned?

Well, we've solved the eternal mysteries of why the Universe is expanding and why that expansion is accelerating. We've explained our origins as humans. We've established why genius and insanity seem to be so closely correlated. We've provided definitions for previously indefinable human interaction phenomena such as chemistry and charisma. We've uncovered the truth about why people wish and pray and what it really means. We've updated the definitions of past lives and déjà vu. We've re-written the age-old concept of karma. We've reasoned out why we are constantly trying to reduce ourselves back into a two-dimensional state, and why we are so inclined to gamble as a species. And we've realized, with at least a mild amount of astonishment, that both the moving pictures on our televisions, and all matter ever created in the Universe, are both constructed from nothing more than large groupings of itsy-bitsy, teensy-tiny, one-dimensional points that don't really appear to be anything at all

until they get together in huge numbers.

Damn. When you add it all up like that it seems like we've done some considerable damage. Matter of fact, I think I may need to retract my earlier apology when I said no conclusions or revelations would be found here. Maybe there's a stinking Nobel Prize in my future after all. You'll have to pardon me for a moment now, I need to go tuxedo shopping and dust off a virtual place on my mantle to place my virtual award…

It all fits together like a puzzle, doesn't it? The whole thing. The pieces are all right in front of us; they just needed to be properly arranged. They were there all the time. We just never looked with the right kind of eyes. At least not up until now. Everything can now be totally understood and unified by this Holographic Principle theory. We've just done it. Questions are being answered. Mysteries are being solved. After thousands and thousands of years of guessing, and wondering, and dreaming about what might be, or will be, or may have been, it all finally makes sense. It's aliens. And computers. Computers and aliens. Of course. Just like we've suspected all along.

Right?

Well dude, we just don't know.

Ghost in the Machine

One thing we do know for sure is that when you break it all down to a small enough scale, everything get real weird, and real creepy, real fast. So what do we do now? Now that we think we might know what we think we might know? And all the while fully understanding beyond any doubt that it's all still purely an exasperatingly unprovable theory.

We do what we've always done. We peer into our million-dollar microscopes, and we bash particles together in our billion-dollar hadron colliders, and we look for answers. And every time we think we've figured something out, it only raises a hundred new questions. But we are not thwarted. We carry on. We stress and we strive and we theorize and we debate. And we search. We search for some sort of pot of gold at the end of the rainbow - some sort of light at the end of the tunnel. And we struggle, and we fight, against our constant frustration at the one indisputable fact, that there's actually nothing there, there. Just the faint ethereal glimmer - nothing quantifiable - just a vague notion of a feeling that there must be some sort of ghost in the machine.