

Am I Too Pixelated?

Alethea Black*

Abstract

In 2003, Nick Bostrom published his highly influential “Simulation Argument” in *Philosophical Quarterly* (Bostrom, 2003), an idea taken so seriously that even Bank of America has sent out alerts to its clients. But what, exactly, would that mean? And, more importantly, why is the idea of a simulated universe not being pursued in regard to cancer—and every other disease? We understand, in magnificently precise, granular ways, exactly what is going wrong in the body. But do we understand, in a coarser way, what the granules are made of? In a holographic universe, the images we perceive are not necessarily what they appear to be; they might exist against a background. But the background would create a context that participates in the image that emerges. Green can be rendered as green. Or as “blue yellow blue” or “yellow blue yellow.” Perhaps the act of rendering generates variables that have been overlooked in our understanding of illness: scale and spin.

Keywords: simulation argument; reality; emergence theory; cognitive science; consciousness; perception; speed of light.[†]

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1. Introduction

This paper will be an exercise in shifting (for a few minutes) the way we view the world, from matter inside space to light inside time. Max Planck was able to demonstrate light behaving intelligently—choosing the shortest path.

Planck: “The photons which constitute a ray of light behave like intelligent human beings: out of all possible curves they always select the one which will take them most quickly to their goal.”

Our foundational models of the cosmos have been based upon circles—orbis.

Matter might be able to travel in a circle. But can light? Once I reach 180°, there is a shorter path for me to take, across the center. If I seek the shortest path, it would be inefficient for me to go around 360°. With time, a more desirable shortcut emerges: the “straight line” path, visible at the eclipse.

Central here is perception—and its limits. We cannot see around corners; for any given observer, a sphere is a dome. If light takes the swiftest route, it cannot travel more than half a circle. For our purposes, the globe is a fiction.

This is just one small, introductory example whereby shedding the presumption that the world is fundamentally matter will shift what we see.

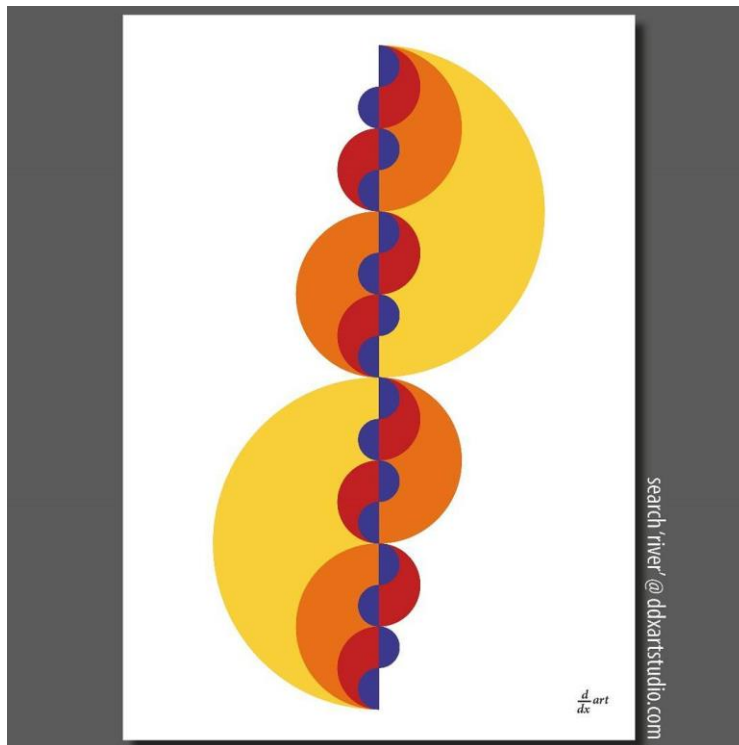


Figure 1 Seeing as light sees. Image: David Lawrence, ddxartstudio.com

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There's exciting work being done by researchers such as Dr. Lisa Mosconi on the relationship between Alzheimer's and changes in the female brain during menopause (Mosconi, 2021). My mother has Alzheimer's, and I am in menopause. Earlier this year, I had my first experience of an atypical cognitive lapse. At the time, I noticed that the veins on the backs of my hands were bulging dramatically. The image that came to me was very precise: *My blood*, I thought. *It's too big. It's too big for my brain.*

Years ago, my mother and I both suffered from Reynaud's—where the tips of your fingers blanch in cold weather—and I have a broad familiarity with the feeling of dissonance between the size of my blood and me.

I will be talking a lot about time, and a possible relationship between time and scale. In a way, the sperm and the ovary perfectly exemplify two opposing models of time. When I was born, in the summer of 1969, I had all of my eggs. “Like a purse full of pearls,” my mother used to say. Sperm, on the other hand, are made new every day; a man can make 1500 sperm every second.

Blood is more like sperm—constantly being re-written and re-made. I make a whole new batch of blood every 120 days. A brain is more like an ovary. It is more fixed in time. If blood and sperm are more like software, the brain and the ovary are more like hardware. Taken together, the two offer a more robust understanding of time than either would provide individually—like knowing a ship's speed as well as its point of origin. But in order to be taken together, the two have to fit. Perhaps, as I age in an expanding universe, my blood and my brain—like a new sperm and a seasoned ovum—are no longer the same scale.

Weyl invariance (scale invariance, whereby the behavior of small pixels and large pixels is ordained to be the same) does not seem to apply to my biology.

We are unaccustomed to addressing scale in our health calculations. How and why might issues of scale emerge? That will be a focus here.

One characteristic of Alzheimer's is insulin resistance. Insulin is the body's chief anabolic (rebuilding) hormone. If my understanding of time is too long, and oscillating too quickly—if I am making myself new too fast—insulin is equal parts solution and problem.

2. Methods/Results

This model is not about reality. It's about the observer. It's not about some shape in space that exists “out there.” It's about images we are creating with our brains (Seth, 2017). The brain is not a passive observer, like a camera lens. The brain actively composes what we see.

Sometimes it is difficult for me to discern if my brain is naming what something *is*, or what it *does*. Would ice accelerating at the speed of fire be hot—or cold? Would fire decelerating at the speed of ice be cold—or hot?

Central here is the idea that the same thing can look different when seen from different directions.

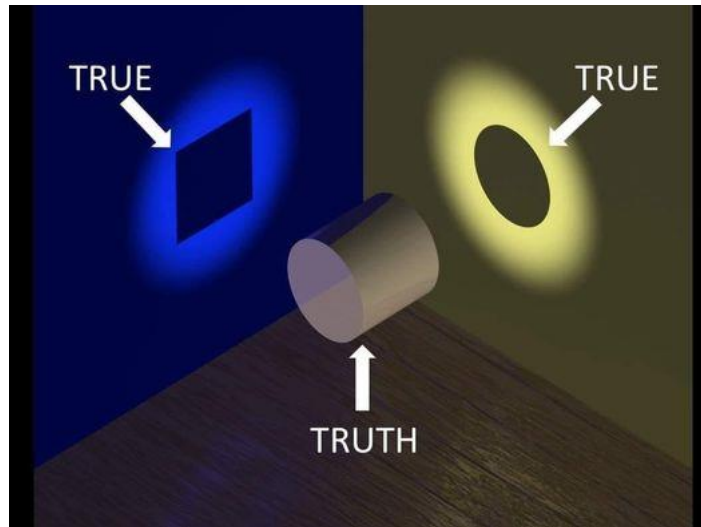


Figure 2 What we perceive is not objective.

In this model, which is holographic (more on that in a moment), the more fundamental perspective will be that of light. The perspectives of matter and energy will be treated as derivatives. Distortions.

Perhaps, in a holographic universe, there are different ways to render the same light. I can be “earth” (so to speak). Or, like an ice skater pulling in for a twirl, I can be “moon inside sun.” When I am moon inside sun, it is as if I am inside myself. No longer the flower, I am the seed and the fruit. The image is no longer whole. Instead of wholeness, there is now a homunculus against a background.

In the vein of Plato, I am likening matter and energy to “shadows” of light. Matter and energy are one degree of remove from light, but two degrees of remove from each other. They are flip sides, mirror images. If we create matter to the left of time, we simultaneously create energy to time’s right.

I will be treating light as the Platonic state; light is green as green. There is neither foreground nor background. Matter is like putting a green dot on a green background—it needs to expand to achieve light’s density. Energy is like putting a yellow dot on a green background—it needs to condense to achieve light’s density.

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In other words, that which is denser than light will expand. That which is more diffuse than light will condense. But who decides where we draw the line?

A shadow is *real*, it's just something that is being rendered. Simulated, you might say. This paper will argue that it is only when light is being simulated, i.e. rendered, that it has speed. In its "true" (Platonic) form, outside of time, light is massless so it knows no distance, therefore can have no speed (see "spooky action" Aspect, 1986). It is being ensouled in matter that gives light speed. The denser the matter, the faster the speed.

In a holographic universe, the part will mimic the whole. Every cell is a miniature observer. But how can an observer perceive that he is too fast if his background has become simultaneously too hot? Earth as earth has the proper density and proper speed. Moon against sun is "too fast against too hot." Venus against Jupiter. Mercury against Saturn.

To our left (the rocky planets), we see light that is denser than light; to our right (the gas giants) we see light that is more diffuse. Was David Bohm, the great champion of wholeness, correct? Are these twin halves of the same coin—the blue half and the red half of our "3D glasses"?

I was four years old when my father, Fischer Black, published his formula for pricing derivatives in 1973. My father's work was to try to tease the truth from the dross. "The effects of noise on the world, and our views of the world, are profound," he said. He believed noise is what makes our observations imperfect. But—imperfect in what way?

In these models, imperfections arise when our perspective deviates from that of light. We need to see the image *as itself*. Not paired shadows of the image—something smaller against something larger. Not the stationary train. And not all of the points of the track at once. Something between the two. The speeding train itself.

Matter is like a small curve looking at a wider curve—it sees expansion. Energy is like a wide curve looking at a smaller curve—it sees contraction. But the truth lies hidden between the two. Matter is like the seed within the fruit. Energy is like the fruit within the seed. Light is like the flower.

The holographic principle was first proposed by Nobel laureate Gerard 't Hooft in 1993, developed by Leonard Susskind in 1995, and has been championed by Stephen Hawking, Juan Maldacena, and many others ('t Hooft, 2000). In 2017, a UK, Canadian, and Italian study provided substantial evidence (Afshordi et al., 2107) that the universe is, indeed, holographic.

We treat what we perceive as frank light—light as itself. I believe it is more akin to light's derivatives. In order to be seen as itself, perhaps light requires the proper background. When the background is too cold, light has to be too fast. When the background is too hot, light has to be too slow.

To our left, we see the rocky planets—cold light against a hot background. To our right, we see the gas giants—hot light against a cold background. But there is something between the two that we don't see.

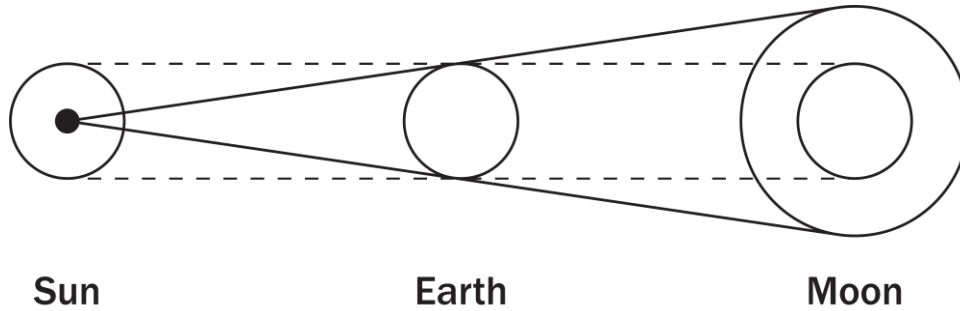


Figure 3 Envisioning time as a width of pipe. Image: John Lunt

There's a brilliant video by Veritasium (19 million views for a reason) that explains very elegantly and succinctly why the speed of light is a round-trip measurement. It's called "Why no one has measured the speed of light."

If light's speed is measured as a round trip, how is the light of day getting to us? Does it go to the moon behind us, then shine forward (expand) as the sun? Does it go to the sun in front of us, then shine backward (condense) as the moon? If Plato were alive today, he might ask us a gasp-worthy question: Is what we call "sun" light that has traveled to the moon and back?

Picture a width of pipe and call it time. When the pipe is more narrow than time (is being squeezed), light "shines forward"—sun; also the fourth state of matter experiment (Kolesnikov, 2016). When the pipe is wider than time (is being stretched), light "shines backward"—moon. When the pipe is just right, light is light. But would we know light qua light (light as light), should we see it? *Could* we see it? Sometimes I wonder if our brains render light as itself—the genuine article, rather than a shadow against a background—as a black hole.

This model—which owes a great debt to cognitive scientists such as Donald Hoffman, Beau Lotto, and Anil Seth—is not about object as object. It's about the expression of light's limits. This is not about black hole qua black hole. It's about a width of light that is "parallel" to our own.

"The black hole at the center of our galaxy, Sagittarius A, has the largest angular size in the sky, followed by M87. M87's black hole is 1000 times bigger, but roughly 1000 times farther away."* —Feryal Özel, Harvard University Black Hole Initiative

This is not a materialist model, where the world is comprised of particles. This is an energetic model, where the world is comprised of forces.

In a holographic universe, should the context against which we make our measurements be that of a vacuum? Wouldn't the background in a holographic

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universe be ... the speed of light? Perhaps the speed of light is a hidden variable, hidden the way it is hidden when the stage spins left while the actor upon it paces right.

The field (the stage) can be naturally, innately inertial. Or it can be a “net” inertia that I am helping to create.

My body wants to maintain homeostasis (balance). When I sense the expanding force (manganese?), I condense. When I sense the condensing force, the magnetic force (iron?), I expand.

But could it be possible to get “turned around”?

What if, when I perceive the expanding force, instead of condensing, I were to expand (Parkinson’s?). What if, when I perceive the magnetic force, instead of expanding, I were to condense (ALS)? In these models, as we will see in a minute, the same limit—the speed of light—can mean different things. *C* has four different varieties of observer: matter, energy, dark matter, and dark energy.

Alternately, could it be possible to “get stuck”—to be effectively locked out of linear time? If my perspective is limited to that of matter, no amount of acceleration is going to get me over the line. It is as if I am trapped behind the speed of light lens from below (ME/CFS i.e. Chronic Fatigue Syndrome?). Or, if my perspective is limited to that of energy, no amount of deceleration is going to get me where I need to go. It is as if I am trapped above the speed of light lens (Autism?). In ME/CFS—this may also play a role in Alzheimer’s—time is faster than I am. In Autism, I am faster than time.

Ideally, we want to be in line with time. In tune, so to speak. We want our light and the light of the world to have the same density and speed.

Are we designed to harmonize with the speed of light? Is there light at the center of every skull? I am interested in the small crystal in the brain called the pineal gland, and the idea that it has an optimum density and degree of dilation. If I squeeze my pineal gland too much, I am too small and the world is too large. If I dilate my pineal gland too much, I am too large and the world is too small. If light and I are the same width, the same density, neither acceleration nor deceleration is required.

When I fly backward in time (east coast to west coast, like diving to the bottom of the ocean), I contract and the world expands. When I fly forward in time (west coast to east coast, like hiking to the top of a mountain), I expand and the world contracts.

We don’t want the pineal gland to be too cold and under too much pressure. And we don’t want the pineal gland to be too hot and under too little pressure. If it is too cold and under too much pressure, I am restricted to seeing with the eyes of matter. If it is too hot and under too little pressure, I am restricted to seeing with the eyes of energy. Ideally, I need to be able to toggle between the two.

There seems to be an issue with the size and flexibility of the blood cells.

If I squeeze my pineal gland too much, the image I create will be too large, and the new RBCs I make will be too large. Once my RBCs are too large, they fit quite snugly within the blood vessel—therefore I have to keep my blood pressure too low. If I squeeze, I deform them. Conversely, if I squeeze my pineal gland too little, the image I create will be too small, and the new RBCs I make will be too small. Once my RBCs are too small, I have to keep my blood pressure too high—I have to squeeze a lot, in order to feel them. I need peripheral resistance; I need to feel the cells within the vessels to have control, to modulate my cardiovascular system.

In other words, once the pressure on my pineal gland is too high, the pressure in my vascular system has to be kept too low—and then I can get trapped like that. Once the pressure on my pineal gland is too low, the pressure in my vascular system has to be kept too high—and then I can get stuck like that.

Once my blood is the “wrong” size—once its scale and the scale of my body are not in line—I can make a whole new set, but it will take me 120 days. According to the Max Planck Center for Physics and Medicine and FAU, the Friedrich-Alexander-Universität Erlangen-Nürnberg (Kubánková et al., 2021), long-term changes to blood cells are triggered by Covid-19 infection. They “were able to prove for the first time that a Covid-19 infection causes significant changes in the size and stiffness of red and white blood cells, sometimes lasting several months. These findings may help to explain why some patients still suffer symptoms long after first contracting the virus (long Covid).”

If my red blood cells are not the right size, it restricts my ability to move around in time. When they are too large, it inhibits my vasoconstriction. When they are too small, it inhibits my vasodilation. If my blood cells are too small, and I vasodilate anyway, I can lose the connection and lose consciousness.

The perception of acidity (e.g. a micro dose of LSD) seems to grant permission for a greater degree of vasoconstriction. The perception of alkalinity seems to grant permission for a greater degree of vasodilation. I have also been able to achieve a greater degree of vasodilation with small doses of niacin. Niacin (niacinamide) on the skin has helped me to prevent skin cancer recurrence.

How do I navigate time? These are my impressions.

To determine what time it is, my pineal gland reads the density of the light in my environment. If it is wider than I am, I expand, by pulling sodium inside the cell. If it is denser than I am, I contract, by pushing potassium outside the cell.

But every cell in my body is intelligent, and every cell reads the density of light for itself. If a cell or a cluster of cells within a local region contracts by a

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full degree of light's speed, they pull back from the boundary and create a fresh "layer" of time—a new speed of light lens.

This fresh lens represents light's limits, but at a smaller scale, which increases my constraints.

From matter's perspective, when I accelerate (vitamin K1, potassium grants permission), if I cross the speed of light lens, I split. From energy's perspective, when I decelerate (vitamin K2, sodium grants permission), if I cross the speed of light lens, I fuse.

Since moving out of a moldy house in 2014, I have had issues with fatigue, orthostatic intolerance, and viral re-activation. Why?

Perhaps being in the presence of mold (matter decaying backward) shifted my brain's understanding of time. In these models, time runs both forward and backward. It runs forward until it reaches a boundary—the speed of light—then it flips.

My Krebs cycle, for instance, does not simply run in one direction, to generate energy. It can also run in the opposite direction, to generate matter. When my Krebs cycle runs in reverse, I endogenously (internally) manufacture oxalate, a crystal found in plants capable of photosynthesis. Oxalate is known to induce breast cancer (Castellaro et al., 2015).

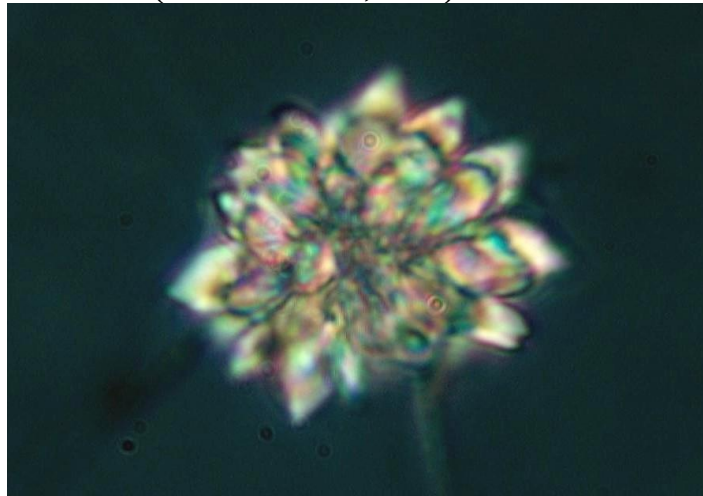


Figure 4 Oxalate crystal: dense light? Image: Facebook, Trying Low Oxalates

The following is from Nick Lane in *Quanta*: “A Biochemist’s View of Life’s Origin Reframes Cancer and Aging.”

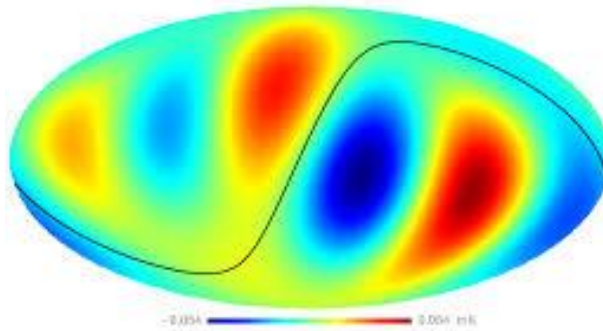
“About 10 years ago, the cancer community was amazed by the discovery that in some cancers, mutations can lead to parts of the Krebs cycle running backward. It came as quite a shock because the Krebs cycle is usually taught as only spinning forward to generate energy. But it turns out that while a cancer cell does need energy, what it really needs even more is carbon-based building blocks for growth. So the whole field of oncology began to see this

reversal of the Krebs cycle as a kind of metabolic rewiring that helps cancer cells grow.”

I believe this metabolic “flip” should be central to how we view our health and the cosmos itself. When observing the universe—and our bodies—we should remember that the same image can look different when perceived from different directions (Lotto, 2017). We do not see reality as it is (Hoffman, 2019).

Do we have any evidence to suggest this kind of “flip” actually exists?

We do. An analysis of our Cosmic Microwave Background data by physicist Craig J. Copi reveals large-angle anomalies (Copi, 2010). These hot and cold regions appear to flip along the ecliptic (at the eclipse). Here is an image of the data.



*Figure 5 Large-angle anomalies in our Cosmic Microwave Background.
Image: Craig J. Copi*

And here is what physicist Lawrence M. Krauss has to say about this image:

“But when you look at CMB map, you also see that the structure that is observed, is in fact, in a weird way, correlated with the plane of the earth around the sun. Is this Copernicus coming back to haunt us? That’s crazy. We’re looking out at the whole universe. There’s no way there should be a correlation of structure with our motion of the earth around the sun—the plane of the earth around the sun—the ecliptic. That would say we are truly the center of the universe. The new results are either telling us that all of science is wrong and we’re the center of the universe, or maybe the data is (s)imply incorrect, or maybe it’s telling us there’s something weird about the microwave background results and that maybe, maybe there’s something wrong with our theories on the larger scales.”

Picture a sphere with a point at its center. Now bisect the sphere somewhere with a flat, 2D plane—let’s say, at the 37th parallel.

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Who is the designated observer in this model? I believe it's the 2D plane. I am likening the point to matter, the sphere to energy, and the plane to light. When Venus is the point, Jupiter is the sphere. When Mercury is the point, Saturn is the sphere.

When my perspective is that of the point, I am too dense in time. I need to expand, but I can't. When I perceive the 2D plane, it functions as the sphere for me. I can't expand beyond it. When I see with the eyes of matter, my pH range is not a true 0-14. I have to fit 0-14 in the space of 0-7.

When my perspective is that of the sphere, I am too diffuse in time. I need to condense, but I can't. When I perceive the 2D plane, it functions as the point for me. I can't condense beyond it. When I see with the eyes of energy, my pH range is not a true 14-0. I have to fit 14-0 in the space of 14-7.

In each of these cases, I have, in effect, lost my ability to move around in time.

What is time?

I am arguing that a universe is a closed system—a singularity—and time is a force that opposes the Big Bang. When the Big Bang expands, time contracts. When the Big Bang contracts, time expands. My brain seems to be always trying to perceive the forces—the energy differential between self and world—in its environment.

Here is how time seems to operate, in me.

To one side of the baseline, time is slower (dopamine). To the other side, time is faster (serotonin).

I can slow time down, using dopamine, up to a point. But if I start to have too much dopamine, I will compensate, by hyper-methylating.

I can speed time up, using serotonin, up to a point. But if I start to have too much serotonin, I will compensate, by hypo-methylating.

This creates problems. For one thing, the feeling of hypo-methylating can mimic the feeling of dopamine. Is time slow—or am *I* slow? Similarly, the feeling of hyper-methylating can mimic the feeling of serotonin. Is time fast—or am *I* fast?

We have assumed that time is like a river whose speed we are strapped to. What if it's more like a current in which we can swim backward or forward—or tread in place? Altering the pH of my brain (e.g. a micro dose of LSD) seems to affect how long I am able to spend in each discrete moment of time. The more acidic, the longer—up to a point.

In other words, if we think of time as being comprised of discrete units—the way an image is pixelated, the way a movie is comprised of frames—my speed need not match time's speed. But if it veers too far afield, I run into problems.

I believe it's possible to be in a state of simultaneous dopamine toxicity and hyper-methylation, and that this may be part of what we're seeing in both

Parkinson's disease and *encephalitis lethargica*—the illness popularized by Oliver Sacks's memoir, *Awakenings*. When time is too slow, light has to be too fast. Ultimately, discrete moments of time whir past me so swiftly, I am blind to them. They are like the bars the panther passes in Rilke's poem.

I believe it's possible to be in a state of simultaneous serotonin toxicity and hypo-methylation, and that this may be part of what we're seeing in Lou Gehrig's disease (ALS). When time is too fast, light has to be too slow.

In fact, I believe these patterns of titration—of compensation—extend far beyond human disease to the cosmos itself.

In the gas giants, light is spinning so slowly, it's burning up. In the rocky planets, light is spinning so quickly, it's precipitating out of solution. Only *at* the speed of light is there “simple” (two-dimensional) homeostasis.

I'd like to propose an alternate model to that of the vacuum. What we observe is taking place inside time. A unit of time has a fundamental length—27,729 days, which is about the length of a human life, and approximately 70×360 plus 7×360 days. This “width” of time defines a margin inside which, light is light. Above and below it, light is no longer light, but matter and energy, respectively.

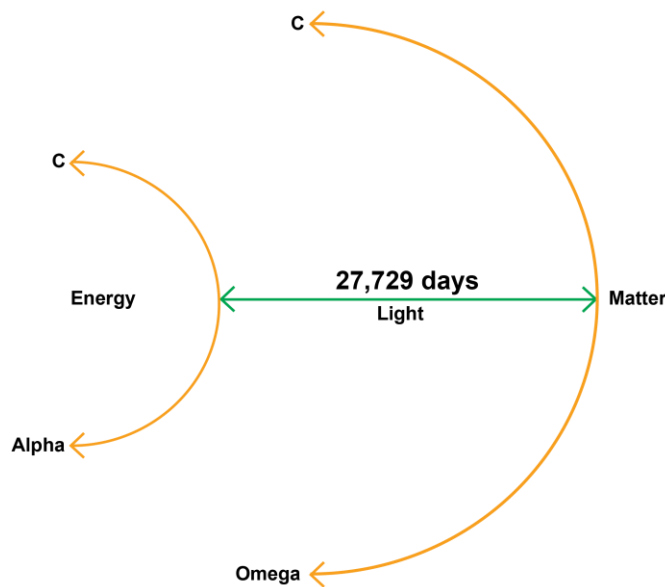


Figure 6 Linear time as bounded by two speeds of light. Image: Ray Vella

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Between c and c , the equation is naturally balanced. Beneath the lower c —which I’m calling Alpha—if I perceive the exploding force, I will apply the condensing force, by moving potassium ions outside the cell. But here’s the problem: if I am condensing, the world will appear to explode. It is possible to get caught in a loop.

Above the higher c —which I’m calling Omega—if I perceive the condensing force, I will apply the exploding force, by moving sodium ions inside the cell. But here’s the problem: if I am exploding, the world will appear to condense. Again it is possible to loop.

It’s a metabolic cul-de-sac, a feedback trap. And its root cause, I believe, is relativity. Perception.

I am pushing Ca^{+} calcium ions back and forth across the cell membrane. But when time is too long, I have to push them too quickly. In this model, time is “long” (relatively speaking) when I am tall, or on top of a mountain. It is “short” when I am deep-sea diving or at the bottom of the ocean.

In other words, time relates to scale—and both relate to disease.

My brain must accurately locate me inside time. At the speed of light—between Alpha and Omega—I have maximum freedom. Above or below the speed of light, my hands are tied. The past is already written; it cannot split. The future is not written yet; it cannot divide.

If my brain locates me in the past (above pH7), I become metabolically trapped. I can no longer move forward in time; I am restricted to creating only chiral images. With chiral (splitting) images, the moments fly away from me too quickly (ME/CFS, Chronic Fatigue Syndrome?).

If my brain locates me in the future (below pH7), I become metabolically trapped. I can no longer branch backward in time; I am restricted to creating only achiral images. With achiral (repeating) images, the moments linger too long (Autism?).

I have a fundamental unit of time to work with—27,729 days. If I spend all my energy going in a circle (space), I have none left to go up and down (time). If I spend all my energy going up and down (time), I have none left to go in a circle (space).

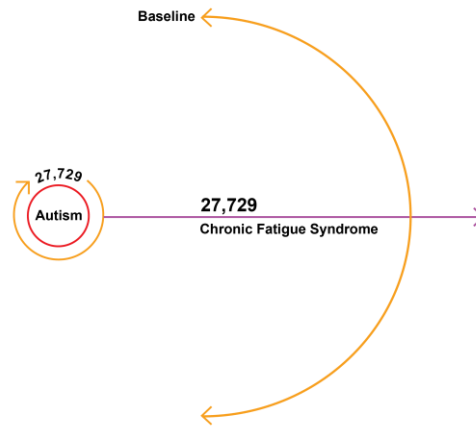


Figure 7 Do our health disorders relate to space and time? Image: Ray Vella

In this model, every arrow of time is enclosed by two speed of light boundaries—two black holes. We are inside the past and outside the future. Behind us is a speed-of-light boundary we cannot escape—because it is already written. In front of us is a speed-of-light boundary we cannot enter—because it is not written yet. I’m interested in physicist Nikodem Poplawski’s theory that our universe is the interior of a black hole inside another universe (Poplawski, 2012). In fact, I wonder if we could be inside a black hole inside a black hole inside a black hole—etc.—where “black hole” is the 2D boundary known as the speed of light. Moving outward from brane to brane, scale increases. Moving inward from brane to brane, scale decreases.

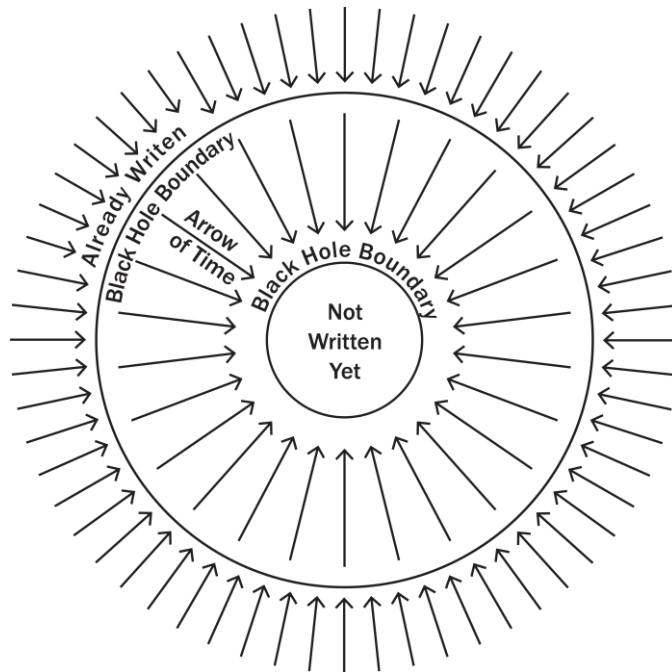


Figure 8 The multiverse as framed by two black holes. Image: John Lunt

It's all well and good to theorize that scale may play a role in disease. But do we have any *evidence* to support this theory?

As a matter of fact, here's something interesting.

The Atacama skeleton, who is human, is from a region of the world known as the South Atlantic Anomaly, where our magnetic field is altered. Earth's inner Van Allen radiation belt comes so close to the surface that it dips to an altitude of two hundred kilometers. Atacama looks alien to us. Perhaps we are not viewing her through the right lens.



Figure 9 Atacama skeleton. Photograph: Dr Emery Smith

What if Atacama's light is "too dense" in the same way the moon's light is "too dense"? Perhaps we are seeing her in the wrong context. Atacama's medium, her environment, was very high energy.

If the world is light—holographic universe—how is my image being rendered? From matter's side—from the left of time? Or from energy's side—from time's right?

What if, when I am spinning left-->right and the basal cells on my shoulder are spinning right-->left, I have cancer. When I am spinning left-->right and the *H. pylori* in my gut are spinning right-->left, I have an *H. pylori* "infection," and perhaps an ulcer. When I am spinning left-->right and the DNA in my womb is spinning right-->left, I am pregnant. But the infant will likely need some vitamin K1 at birth, to help her change perspectives and change direction.

Maybe the speed of light functions like a lens. When observed from beneath the lens, light appears to be branching into many worlds. When observed from above the lens, light appears to be condensing into one world. But, in a sense, these are mirror images. Reciprocal illusions. Noise. At the lens—the "real" world—light is light.

What happens if I insert a new lens—a fresh perspective, new consciousness, a stem cell—into an old environment? If I put new wine into old wineskins, I run the risk of re-setting the metronome. A new lens creates a new 2D plane from which light can condense and then expand—or expand and then condense. It creates a "fresh green," if you will, from which can be derived fresh "blue yellow blue" or "yellow blue yellow." New light is capable of operating at a different time signature—a different scale.

Imagine light as like a fabric comprised of blue and yellow fibers. There are different ways "green" can be rendered. When the fabric is "flat," and the fibers are dispersed homogenously, we see green. If we pull all the blue fibers to the foreground, the background becomes yellow. The image is still green, but to see it as green, we would have to be outside the background and inside the foreground. If we stretch all the blue fibers to the periphery, the foreground becomes yellow. The image is still green, but to see it as green, we would have to be outside the background and inside the foreground. These are different ways of rendering the same image; all that changes is the foregrounding.

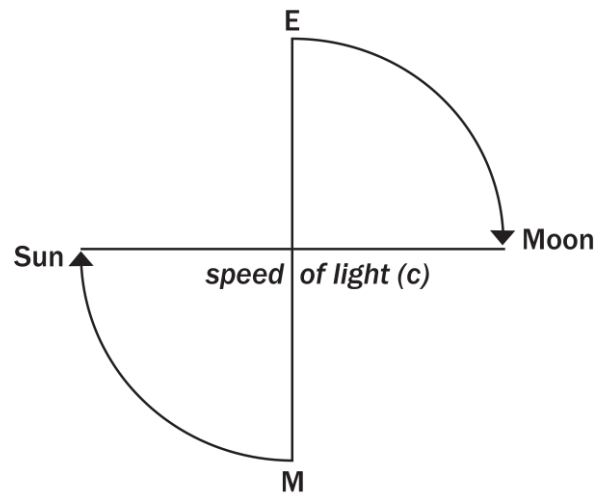


Figure 10 Matter burning and energy precipitating toward the speed of light.

A lens can focus or scatter light—or both, at the same time. When the image becomes too dense, on one side of the lens, it becomes too expanded, on the other.

With cancer, I am deranged on both sides of time—both sides of the speed of light lens. To one side, I am too salty, too bitter. To the other, I am not salty enough. Instead of the flower, I become the fruit and the seed.

My light is splitting too quickly—and not quickly enough. To one side of time, it's so cold, it's burning up. To the other side, it's so hot, it's precipitating out of solution. Instead of "earth," I have become ... moon against sun. Venus against Jupiter. Mercury against Saturn. The image is no longer flat; now there is foregrounding.

Only at the speed of light are we able to see light as itself—the train as the train. Beneath Alpha, we are viewing light as its passenger. Above Omega, we are viewing light as its track.

As I write this, the United States is experiencing extreme weather. Record-breaking cold. Epic snow and rain. Last week, a 7.8 magnitude earthquake struck Turkey and Syria. I wonder if we have crossed a line and have entered a period of contraction.

But, surely, if the earth—the entire universe—were contracting, we would perceive it, wouldn't we?

Not necessarily. Not if what we perceive exists against a backdrop—as would be the case if reality were holographic. Would we perceive contraction if the background were expanding to a commensurate degree? Would we perceive expansion if the background were contracting? I recently read a wonderful piece by Jim Pivarski at Fermilab. "Is the universe getting bigger or am I getting smaller?"

Perhaps what we perceive is a composite image of which we see only half. We see only one side of the speed of light lens at a time. In “sun,” we see only the fire of acceleration—not the dark matter behind it. In “moon” we see only the precipitate of deceleration—not the dark energy that surrounds it.

$E = mc^2$ —mass-energy equivalence—suggests that either matter or energy can play the role of matter or energy.

What if the speed of light is an invisible boundary—a limit, a lens, a curved line or “[dome](#),” like the dome of Genesis—between matter and energy? Matter will expand toward the lens (day, sun). Energy will condense toward the lens (night, moon).

But matter cannot cross the speed of light lens. Only dark energy (energy that is denser than matter) can do that. And energy cannot cross the speed of light lens. Only dark matter (matter that is more diffuse than energy) can do that.

If dark matter is able to dip below the lens, and dark energy is able to eclipse the lens, perhaps the resulting configuration would look something like this:

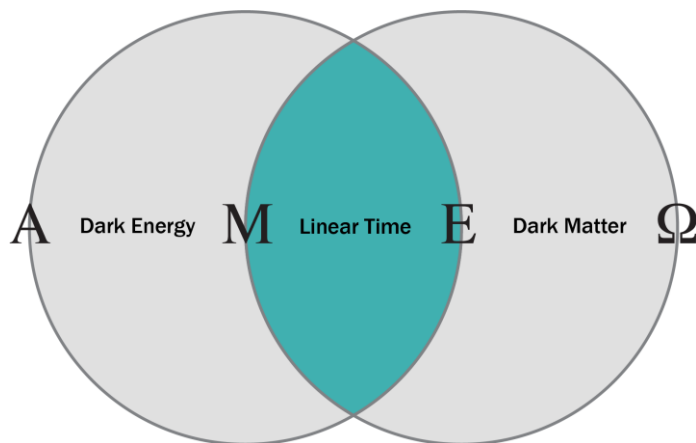


Figure 11 Time as vesica piscis. Image: John Lunt

But here’s the tricky bit. The green region of overlap between two speeds of light, the vesica piscis—which, in this model, represents linear time—will read differently to different varieties of observer. For matter, the speed of light is the ceiling. For energy, it is the floor. For dark energy, it is something to eclipse. For dark matter, it is something to dip below.

Might this variance in how the speed of light can be interpreted have bearing on our illnesses?

3. Conclusion

When my father was dying of squamous cell carcinoma (a tumor at the base of the tongue) at age 57 in 1995—one hundred years after the death of Louis Pasteur—something I had never seen before appeared behind the great man’s eyes. A question. *What is this life?*

What if this life is a story, fresh and ancient, always present and yet ever new? A story that is endless—eternal—that starts with the beautiful phrase: *בְּרֵאשִׁית In the beginning*. A story in which we all get to participate, and no part is greater or less than the others. In fact, all the parts are played by the same consciousness. The same “I.” The same love.

We have not come into being in order to hate and destroy. We have come into being in order to thank and praise and love. I feel happiest, and most alive, when instead of judging or condemning others, I try to imagine what it feels like to be them.

What is this life? Sometimes it feels like a movie I’m watching, in real time, from the inside—a movie entitled “What It Was Like to Be Alethea Black.” And I’m watching it through her eyes, but I’m not really Alethea.



Fischer Black
President of the American Finance Association
1985

Figure 12 Fischer Black

So what is the solution? I don’t know. I’m sorry; I wish I did. I’m hoping that others who understand the human body far better than I might read this, and allow it to shift the conversation a little. Perhaps what we observe on the surface is only part of the story; there are hidden variables we are not seeing: the height and depth of time. Time may be like an iceberg, where we see only

the interface where it intersects with the surface of the water. In a sense, we see only a single MRI slice.

Everyone is different. I am still not 100% recovered. For me, I feel best when I avoid activities that increase intracellular sodium (dark energy): physical exertion, adrenal overload, frightening situations, scary movies. Intracellular sodium causes me to expand, and it feels as if I am already too expanded—too pixelated.

After living in a moldy house, one of the lingering problems I had was orthostatic intolerance—when your body can't adapt quickly enough to changes in blood pressure. When I tried micro dose psilocybin for cluster headaches (it worked), I noticed it also helped with my orthostatic issues. I could feel that I suddenly had access to a greater degree of vasoconstriction, and found that I could stand near elevator banks without feeling I was going to pass out. I could drink flat water without feeling vertigo and dizziness. I could be in sunlight without acute photosensitivity. I could read (could tolerate artificial light) after sundown. Around this same time, I saw a patent application for LSD to treat Alzheimer's, and began to ponder life's big questions in a deeper way, as well as the promise of psychedelic medicine.

Please bear in mind that one of the underlying principles of this model is that no one needs to be "fixed." Inside every child and every person is an extraordinary gift. We are all perfect, just as we are.

4. Bonus Track: The Speed of Light and *Pi*

God said: Let there be light. Might this truly be a holographic universe, as predicted by Leonard Susskind, Stephen Hawking, Juan Maldacena, Gerard 't Hooft, Michael Talbot, and many others? I don't know. But if it is, a better understanding of light's behavior will surely benefit our attempts to decode our diseases.

Perhaps, to an observer wider than it is, light will expand. To an observer denser than it is, light will condense. To an observer who is the same width... . But if it does nothing, would it be visible? We have witnessed light behave in mystifyingly inconsistent ways depending on the presence of an observer in the double-slit experiment.

I promised you a paper not about matter inside space but about light inside time. What does that even mean?

The issue is one of perception. From the vantage point of the stationary train, our eyes see the track. From the vantage point of the track, our eyes see the stationary train. But the truth is speeding between the two. We are used to seeing eggs or chickens. We need to see the chickenegg.

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Time is a chickenegg. It is both one and many. “Now” (the present) is neither past nor future; it is the middle point—Wednesday. Many Wednesdays look back to a single Monday. But many Fridays look back to a single Wednesday. The same point looks singular when viewed from the future but myriad when viewed from the past.

The perspectives of past and future are both noise. The “truth” (now as now) is the dotted line hidden between the two.

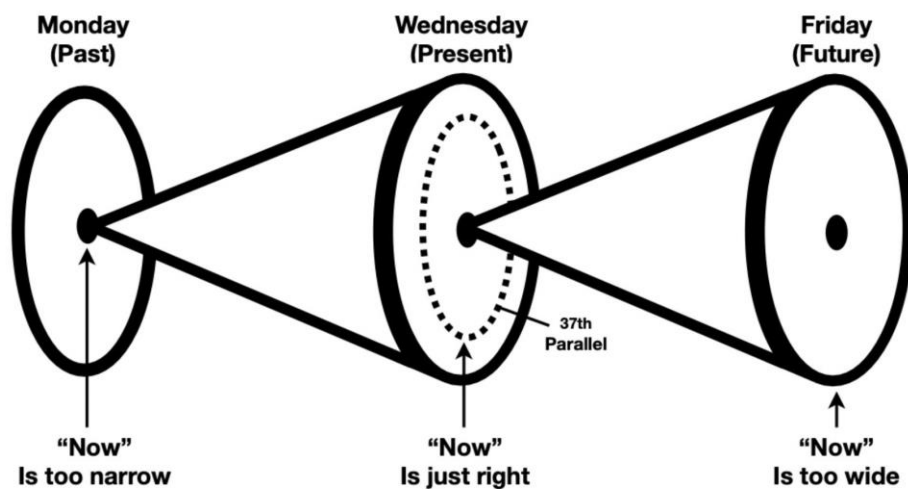


Figure 13 Past and future are distortions. Image: Haley Blevins

Time is not a cone. That is the optical illusion, the visual effect. It appears to narrow when we look toward the past, and to widen when we look toward the future. But I believe it does neither; more accurately, it can be likened to a width of pipe that is the width of the earth. The width of the moon would be too narrow. The width of the sun would be too wide.

Or, at a smaller scale, the proper width is the 37th parallel. The center of the earth would be too narrow and the circumference of the earth would be too wide.

This paper is called “Am I Too Pixelated?” because it is about an ancient idea: the world as image. When the amount of pressure is just right, there is wholeness. When the amount of pressure is too high, the image is no longer whole; instead of wholeness, there is now a homunculus against a background—something smaller inside something larger—a kernel, and a context. To the left of time, I am denser than light. To the right of time, I am more diffuse.

When I had breast cysts, and ovarian cysts, I could feel what this was like. It felt like cake batter, in a bowl, where instead of being dispersed homogenously, all the flour had been squeezed to the center, creating a liquid background. When I was the size of the bowl, as evenly dispersed as the bowl, I was pH7. When I was being squeezed, I was sodium inside potassium.

Once I become sodium inside potassium, watch what happens. Let's say the mandate in a holographic universe is pH7, "purple." When I am sodium inside potassium, when viewed from the outside and the inside simultaneously, I am still pH7. From one side, I am seeing red through a blue lens. From the other side, I am seeing blue through a red lens. Because of this, I become metabolically trapped. I write more about this in a series of articles on the Hormones Matter website, one of which is called "Perception, the Key to Disease."

To return to the batter in a bowl analogy, if the center is too dense, how can I add water? Then the whole bowl will be too watery. If the periphery is too diffuse, how can I add flour? Then the whole bowl, the batter will be too thick. I am stuck, because I need to do two things at once. If we are talking about an actor walking toward the left while the stage spins right, I need them both to change their speeds in tandem.

But, see, this is the very heart of the problem. They *are* changing their speeds in tandem. If the actor is running, and the stage is spinning quickly, to their eyes, everything is in balance. If the actor is standing still, and the stage is standing still, to their eyes, everything is in balance. We want the actor to walk in an easy stroll as the stage gently spins. The more he feels the condensing force, the "squeezing" force, the faster he will run.

When I was being squeezed too much, it felt like too much vasoconstriction, like a localized niacin deficiency. Nicotinamide (niacin) increases lipid metabolism and ROS-induced energy disruption in triple-negative breast cancer, and is being investigated for its drug potential as an anti-tumor agent (Jung et al., 2022). In my opinion, the niacin is needed locally—not globally. Garlic, too—another famous cholesterol-lowering vasodilator—has demonstrated "profound" anti-cancer activity, but only when injected, not ingested (Li et al., 2018): "Although very simple, the profound anticancer property of the injected RGE [raw garlic extract] has not been reported in the literature."

There seems to be an issue linking the pH of my brain with the amount of vasoconstriction or vasodilation it will permit. When my brain is too acidic, it will not let me vasodilate as much as I'd like. When my brain is too alkaline, it will not let me vasoconstrict. When I was living in a moldy house, I had a lot of orthostatic problems and balance problems.

To have maximum metabolic freedom, I need to increase my acidity—and my alkalinity. But how can I? If I increase both at the same time, I am simply a

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“larger” pH7—a bigger mixing bowl. When this happens, I am too expanded, too homogenous, too pixelated.

When my image is too large, I vasoconstrict too much, and loose feeling in my hands and feet (neuropathy). I vasodilate too much, and get a migraine. I do not understand the proper values for time’s floor and ceiling. The poles of my pH range are too far apart.

Bizarrely, when I was very sick, I could not drink water. It did not give me a lever, in either direction. I could not expand in response to bitter nor condense in response to sweet. Water is not bad for you, obviously; it is good for you. The problem was not with water—it was with me.

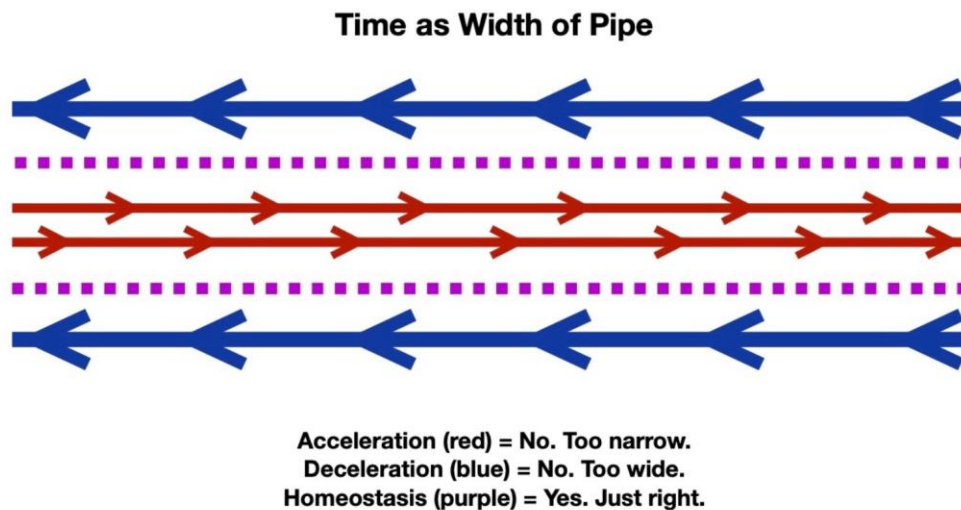


Figure 14 Scale and time. Image: Haley Blevins

With many illnesses, we are achieving the appropriate speed of time inefficiently. To be “accelerating inside deceleration” (red on blue) or “decelerating inside acceleration” (blue on red) is not the same thing as standing still (purple). To be doing both simultaneously will result in too many worlds—cancer. A fundamental unit of time that includes both Monday and Friday will be both too narrow for the pipe at one end and too wide for the pipe at the other. This is a violation of time; it is not one but two universes. A single arrow of time cannot contain both purple “red and blue, superimposed” and “red and blue, separate.” This is not “now;” not light; not a true Wednesday. It is Monday→Friday. Time, in other words, is too long. When time is too long, too alkaline, it has to oscillate too quickly. Sometimes I am able to “shorten” time—to make it more acidic, and therefore able to oscillate

more slowly—with a micro dose of LSD “acid” or psilocybin. Melatonin does the opposite.

My circadian rhythm has been shifted for many years—since childhood. I like to stay up late at night and sleep late into the day. My brain, I have noticed, does not seem to treat darkness as darkness. It treats it as light that is wider than light.

The behavior of light is interesting. If I stand in the middle of a flashlight beam and face the source, I can see light. But if I face away from the source, can I see light? I can see whatever light might *hit*. But that is not the same thing as seeing light *itself*.

Light’s speed is measured as a round trip. So what if Jim is creating light’s speed by running around a track, and Susie is creating light’s speed by running to the center of the track and back? (Is the speed of light evinced in the π ratio?) It doesn’t matter if you’re a doctor or a coder: if, within one system, we have two different definitions of the same thing, it’s a problem.

In a holographic universe, what we call light could be genuine light. But it could also be light that is at a remove from itself. If we treat light as a derivative, all that we need to do to call something light is establish a pH floor (matter) and ceiling (energy). In these models, which owe a debt to Klee Irwin and Garrett Lisi’s quasi-crystalline E8 models, light can be removed from itself by up to eight degrees.

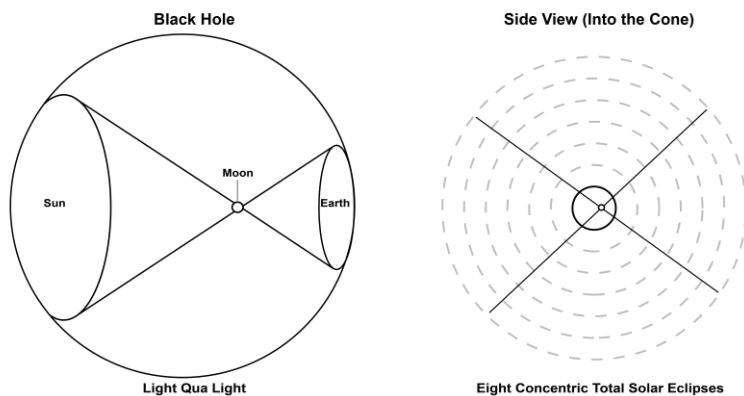


Figure 15 Eight degrees of light’s speed. Image: Ray Vella

Many of us think of today as being *sui generis* and unique. But today could be iterative—eternal. Tomorrow, today will happen again. I no longer think of time as running in linear fashion, from one day to the next and the next. I think of all the days as running simultaneously.

“Everything is temporary” we are fond of saying. This essay sings a counter-note. Everything is eternal. If time—the Big Bang—is eternal, all of it

already exists. Although we experience it progressively, layer by layer, the whole thing is present. The future is exploding in many directions at once. The past is co-happening behind us. But both are here, now. What we were, we are. What we will be, we are. We am.

Acknowledgements

Everyone likes to believe they are open-minded and willing to entertain new ideas. But old ideas possess a certain gravity; they have been published in papers, in textbooks; people have built their careers and their tenures around them. The best new ideas display a humility that acknowledges that everything serves a purpose in the grand scheme, and they seek not to abolish but to complete. My goal is to spark someone else's torch.

For a new idea that challenges the way we have seen ourselves for a long time to break through the noise does not merely require a free-thinker with a laptop and a reader with an open mind. It also requires an editor with intellectual and moral courage—*con le palle*. I have been lucky enough to find such an editor not once but multiple times, and would like to wholeheartedly thank Fabrizio Maturo and Chandler Marrs.

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