Cause and Effect Reconsidered

By Clark M. Thomas

ABSTRACT

We think we understand the relationship between cause and effect, when in fact we may be mistaking correlation for causation. There is so much more going on herein. This relationship is a surprising portal to understanding many deep aspects of philosophy and physics.

In elementary school students are first introduced to the basic concepts of cause and effect, often in terms of how sentences are constructed around everyday events. Most adults still embrace this sequential level of causal understanding as being "all they need to know" about what really is a slippery subject.

This brief essay reveals some dialectical aspects about cause and effect that people of all ages could and should understand. The ideas of cause and effect appear to be simple and clear. Most of us casually ignore the true mystery of such dualism – which is where the philosophy of physics should begin.

We turn now to what thinkers in the past have said, and to what thinkers in the future should and may say:

Aristotle was the most famous ancient Greek thinker about causality. However, the earlier Zeno of Elea[1] is more seminal. Because causality requires motion and time, any discussion of causality that supersedes time is provocative. Such was Zeno and some other followers of his mentor, Parmenides. We should not fail to mention Heraclitus who famously said we cannot step into the same river twice. Every thing is thus in motion, which leads to dialectics, evolution, devolution, physical and chemical combinations, emergence, creation (the ultimate "cause") – and to thermodynamic chaos within closed systems, not really the end point of cause and effect, as there is no ultimate closed system.

Seemingly all religions have incorporated aspects of causality into their visions of paradise and punishment. Conveniently, we humans appear as shadow dancers and value prizes for the gods. Such anthropocentrism is quaint, but it still rules religion.[2]

Some religious theory attempts to create a realm above and beyond causality. It is the realm of Aristotle's unmoved mover, and all sorts of Hindu and Buddhist deities and mystical forces. When we look at most of these religious texts, the authors of such texts are still trapped inside causes and effects while they attempt to transcend those very ideas. Still quaint, but fun to embrace when the cloak of confusion is sufficiently beautiful.

There is one concept that allows us to escape the solipsistic view of it all. If we can equate cause and effect, then we can approach a paradoxical "time where there is no time," even in the absence of measurable infinite regression and progression.

I refer to ***renge*** (pronounced ren'-gay). It is the core of the Buddhist *Lotus Sutra,* along with the unknowable and mystical idea of *myoho* (pronounced mee-yo'-ho). *Renge* simply refers to the <u>simultaneity</u> of cause and effect. Without one-thing-follows-

---

[1] https://astronomy-links.net/zenoandsufis.html

[2] https://astronomy-links.net/Mystical.law.and.science.pdf

another, there is no sequencing, which truly challenges historical physics theory, and confuses standard social philosophy.

Pure physics equations contain the equal sign (=). This implies that direction can go either way. If so, then cause can be effect, and also the opposite. It is easy to see that today's cause may be from yesterday's effect. Today's effect may become in time tomorrow's cause.

Things get really interesting when "individual" causes and effects are seen within the total context of all interacting causes and effects within all dimensions of Unity. We are not just talking about the so-called butterfly effect.[3] We are talking about every thing that was and will be within the interpenetrating physical universe of universes, independent of local frames of reference.

I referenced the idea of a time when there is no-time. That would be when the too-beloved Second Law of Thermodynamics plays out and all becomes entropy, or chaos. Short of entropy is negentropy, or order within action. Entropy has nothing beyond random motion among its smallest units. This idea preserves the Law of Conservation of Energy and Matter, but without sentient lives anything like our own.[4]

For this discussion we are not embracing any *deus ex machina*, or god(s) before and beyond "creation." Thinking of a seminal god essence in that way is to falsely conclude that there was a time before time. Just as a lesser cannot fully embrace a greater, we mortals cannot conceptually embrace and prove the existence and nature of creative immortality beyond cause and effect, at least on a scale that we can measure.

However, there is a way to unify cause and effect within the concept of *renge*. For this unification to be comprehended we need to understand how our experimental instruments are limited

---

[3] https://astronomy-links.net/Butterfly.effect.climatology.pdf

[4] https://astronomy-links.net/Universe.pdf

to measuring within physical dimensions close to our own. On the larger scale our 4D visible universe is about 26 positive logarithmic dimensions of ten meters larger than our own bodies. The multiverse of 4D universes may be two or three dimensions larger, but we can never measure how many.

On much smaller scales than our own bodies, theory discusses the Planck Limit, which is minus 35 logarithmic meter dimensions below ours, and where below is supposed to be unmeasurable chaotic quanta beyond any conceivable instrument. We can image with photons individual atoms, but that's only down to 15 dimensions smaller than our own, which is still 20 dimensions larger than the Planck at 10^-35 meters. Seemingly, ancient physics theory ended at atoms, and modern physics begins with atoms and smaller.

In pure math theory there is no smallest dimension, because there is always the forever-receding zero dimension which is thus unreachable, as Zeno explained. In reality, there is a smallest dimension of actual physicality, and that's precisely where we find unitary *renge*.

String theory was an outgrowth of General Relativity. It has multiple math dimensions and universes quite unlike the four post-Newtonian dimensions expressed within our standard-model visible universe. One version of string theory, M-theory, envisions a universe of universes totaling some 10^500 full universes.

Considering there are "only" an estimated 10^70 hydrogen atoms inside our visible universe, modeling the very much larger number of full universes is absurdity. Just because we need so many hypothetical universes to "solve" string theory equations does NOT prove they exist, other than inside our deficient maths.

There is an elegant solution to the equally deficient 1D and 2D models of string-theory strings. Consider that Euclidean plane geometry requires ideal forms (which Plato and the idealists embraced). In my youth I perceived that any structure of less

than 3D cannot physically exist. For example, a 2D structure has length and width, but zero height. Multiplying any three dimensional numbers, where one of them is zero, always yields zero. Adding a fourth dimensional vector over time does not help, because there is nothing to move anyway. Therefore Euclidean plane geometry cannot exist except as ideal math.

Bead-like 3D physical strings can and do exist within 4D local space-and-time universes, and thus within the 4D multiverse. The fourth dimension is vector movement, which implies temporal cause and effect. Real strings are composed of extremely tiny *yin/yang* (matter/energy) Coulombic (electromagnetic) spheres; which arrange themselves initially into strings and rings, and ultimately into every structure from small to immense in the 4D physical multiverse.

Within each tiny yin/yang sphere (which I estimate is at the 10^-37 meters dimension, but they could be smaller) there are both positive and negative simultaneous charges, which co-exist as *renge* according to *primary* electromagnetism. What we call EM, or electromagnetism, is therefore *secondary* EM. Primary EM does occur outside and among juxtaposed individual yin/yang spheres, but nearly everything we experience is secondary EM.

It is quite the testament to raw human intelligence that genius thinkers more than two thousand years ago could infer without modern science that there is at the root of all moving phenomena a pervasive simultaneity that defines and defies lazy everyday ideas of cause and effect. Modern ideas of quantum mechanics superposition also relate to this ancient paradigm.

Therefore, *renge* exists both at the smallest physical scales (y/y spheres), and at the largest physical scale (the multiverse). What apparently correlates as local cause and effect can only be understood and appreciated within the omni-dimensional, causal whole of multiversal timelessness.